



REGIONAL OFFICE FOR EDUCATION IN AFRICA (BREDA)

*GUIDE TO TEACHING AND LEARNING
IN HIGHER EDUCATION*

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The expansion in scope saw the entry of four additional modules into the Guide. Saddled with the task of crafting the modules were Peter Okebukola, Adedayo Olarewaju, Tony Kola-Olusanya (The Profile of the Higher Education Teacher), Eunice Okeke, Yinka Ogunlade and Mercy Ogunsola-Bandele (Empowering Women for Success in Higher Education), Taoheed Adedjoja, C. Abosi, ??Sarr (Empowering Students with Special Needs), and Peter Okebukola (Teaching Large Classes). A powerful review team from Addis Ababa University, Ethiopia, University of Cocody, Cote d'Ivoire, Rand Afrikaans University, South Africa, Indira Gandhi National Open University, India, University of South Carolina, USA and Open University of Hong Kong, Hong Kong, made useful comments for the review of the Guide. The review process also benefitted from the comments of participants at the regional workshops collated by the workshop coordinators: Peter Okebukola (Ibadan, Nigeria), ????? (Abidjan, Cote d'Ivoire), Carlos Machili (Maputo, Mozambique), Amare Asgedom (Addis Ababa, Ethiopia), and Susan van deVingt and Salim Akoojie (Johannesburg, South Africa).

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INTRODUCTION

In 1994, the UNESCO Regional Office for Education in Africa (BREDA) working through its Higher Education Unit, initiated a project to improve the delivery of higher education in Africa. The impetus for this initiative was the pursuit of the BREDA vision of ensuring qualitative education at all levels of the educational system in Africa, in this case, at the higher education level. The term 'higher education' is taken to embody **all organised leaning and training activities at the tertiary level**. This includes conventional universities (i.e. those with the conventional arts, humanities and science faculties) as well as specialised universities (like institutions specialising in agriculture, engineering, science and technology). The concept also includes conventional post-secondary institutions (like polytechnics, colleges of education, and "grandes ecoles"). Under the umbrella of 'higher education' come all forms of professional institutions drawing from the available pool of persons who have completed a variety of forms of secondary education: institutions for the military, the police, nurses, agriculture, forestry, veterinary workers, catering services, tourism, secretarial services and other possible combinations of programmes.

The BREDA initiative under the leadership of Professor Pai Obanya translated into a project which received funding support from the Episcopal Conference of Italy and implemented by the unit of higher education at BREDA. The main objective of the regional project is to improve the relevance and quality of higher education in Africa. Two main strategies were employed in order to achieve this objective. These were institutional capacity building in teaching, and improvement of the learning environment.

Phase 1 of the project started in 1995 with two needs assessment surveys; one in francophone countries and the other in anglophone countries. The needs assessment surveys recommended the organisation of training workshops for university management and heads of pedagogic units on the need for promoting teaching and learning in higher education in Africa. In response to this recommendation, BREDA organised 3 sub-regional workshops:

- * Francophone: Dakar, Senegal, May 1996

- * Anglophone: Nairobi, Kenya, November 1996
- * Portuguese speaking countries in Luanda, Angola, July 1997

One of the major outcomes of the sub-regional training workshops was the recommendation that BREDA should explore appropriate strategies to reach as many institutions as possible and to help them improve teaching skills and the learning environment. In response to these recommendations, Professor Obanya proposed the development of a *Guide on Teaching and Learning in Higher Education*. Consequently, Phase 2 of the project focused on the preparation and the production of the Guide. This phase had the following activities:

- * Preparation of a draft outline of content containing five modules.
- * Experts' workshop to prepare a first draft of the guide, on the basis of the proposed outline of content and the materials produced during Phase 1 of the project.

The experts proposed two additional modules: Modules 6 and 7. After two weeks of intensive work, the experts produced a first draft of the Guide containing 7 modules (These are modules 1 to 7 of the draft guide). There came the need to test and enrich the draft guide in order to take into account the needs, expectations and vision of the entire higher education community in Africa. Strategies were designed to conduct a series of national workshops in countries with relatively large number of higher education institutions. The first national workshop was held in Ibadan in September 1998. The workshop recommended adding Module 8: Gender Issues and Student with special needs. The production of the second draft guide was made effective under supervision of Professor Peter Okebukola.

Another workshop followed in Abidjan, Cote d'Ivoire, in May 1999 under the coordination of BREDA/IDRC. It recommended splitting Module 8 into two and including issues of 'Large classes' in higher education. The fourth workshop was held in Kenya in Eldoret, in May 1999. Another short meeting was held in Maputo, in June 1999. This was followed by the workshop in South Africa at Wits University from 13-17 September, 1999. So far, we have mobilised over 500 academics drawn from various areas of learning and reflecting the entire higher education system in Africa.

In the process of discussion of the *Draft Guide* the participants to the various workshops were able to identify the major areas which require urgent reforms in order to

improve the relevance and the quality of higher education systems in Africa. These areas include policy issues, management practices, funding strategies and research. BREDA is planning to publish a resource book in order to document these issues.

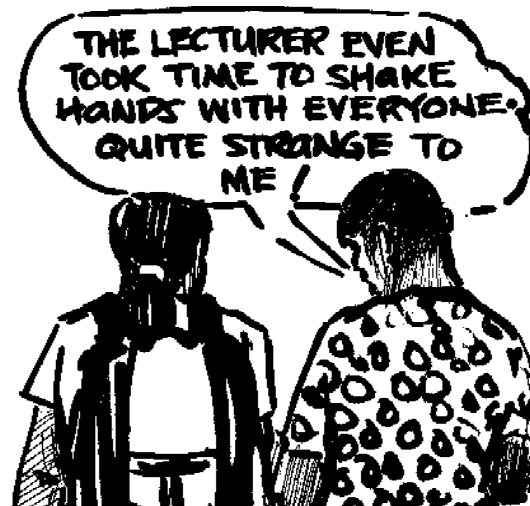
The finalisation of the Guide using comments from the various national and sub-regional workshops and a wide array of experts in the field was undertaken under the coordination of Professor Peter Okebukola. The Guide is published in three languages- English, French and Portuguese.

In order to reach as many academics and institutions as possible, follow-up national, zonal and institutional workshops are being encouraged. It is our hope that organisers and participants at these workshops will use this Guide as one of the resource materials. This way, we will be on course towards improving quality and relevance of higher education in Africa.

Module

1

Understanding the Higher Education Learner





Reflect on the following as you work through this Module

The Forum of students associations in Africa formulated the following proposals for action, which constitute the students' vision on the role of higher education in the construction of a new society.

IMPROVING THE RELEVANCE OF EDUCATION

- The forum urge Member States to establish educational programmes capable not only of responding effectively to the constant changes in the labour market, but also of anticipating rather than enduring them.
- Taking into account the saturation of employment opportunities in the public service and the worsening of the phenomenon of graduate unemployment, the forum recommends the establishment of appropriate higher educational systems to train graduates who can constantly update and improve their knowledge and skills and also create jobs.
- The forum also recommends that necessary measures be taken by Member states to enable graduates willing to create jobs to secure funding for their projects.
- The forum considers that, in carrying out their mission of providing services to the community, higher educational institutions should give greater importance to civic education so as to promote human rights, tolerance and a culture of peace and democracy.
- The forum recommends the establishments of partnership between Faculties/Schools and enterprises to enable the higher educational institutions to take account of enterprises' needs and provide students opportunities for research, and internships in the enterprises.
- The forum recommends that higher educational institutions organise periodic tracer studies and conduct surveys among employers to ensure a regular adaptation of curricula to the expansion of knowledge and the changes in job market.
- The forum stressed the need for higher educational institutions to help students secure funds for research as well as access to the new information and communication technologies.



Source:
HIGHER EDUCATION FOR A NEW AFRICA: A STUDENTS' VISION FORUM OF STUDENT ASSOCIATIONS IN AFRICA ON HIGHER EDUCATION IN THE 21ST CENTURY, ACCRA (GHANA) 23 – 25 MARCH, 1998

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- The forum considers that it is necessary to set up appropriate mechanisms for monitoring and assessing the accomplishment of missions set for higher educational institutions.

ENHANCING THE QUALITY OF EDUCATION

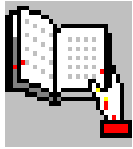
- The forum recommends that each member state set up and/or strengthens structures to monitor and assess the quality of services provided by higher educational institutions as part of their functions.
- The forum recommends that higher educational institutions set up mechanisms for the assessment of the academic staff by students.
- The forum recommends that member states take necessary measures to ensure that the entire university community, including students, enjoy more conducive living and working conditions.

Article 10. Higher education personnel and students as major actors

- c. National and Institutional decision-makers should place students and their needs at the centre of their concerns, and should consider them as major partners and responsible stakeholders in the renewal of higher education. This should include student involvement in issues that affect that level of education, in evaluation, the renovation of teaching methods and curricula and, in the institutional framework in force, in policy-formulation and institutional management. As students have the right to organise and represent themselves, students' involvement in these issues should be guaranteed.

Extracted from the:

*DECLARATION
OF THE UNESCO
WORLD
CONFERENCE
ON HIGHER
EDUCATION
(1998)*



1.0

Introduction and General Objectives

Introduction

An understanding of the characteristics and needs of the learner is a key factor for success in higher education. Using an agricultural analogy, knowledge of the nature of the soil and climatic conditions of a farming area is an important ingredient for success for the farmer. As yield is dependent on such data, so is the effectiveness of teaching largely dependent on the nature of the learner. We need to factor into instructional planning, such learner variables as demographics (e.g. age and gender), psychological characteristics (e.g. motivation and self-concept), sociological characteristics (e.g. friendship and social linkages), cultural background, religious affiliation, quality of preparation at the secondary school level, marital status and family background.

It is probably a tall order to ask the lecturer to know these characteristics for every student in the class. In a class of 200 for a term of twelve weeks or a semester of fifteen weeks, it is obviously a steep task. However, it is possible even for a larger number of students and for a shorter period, to attempt an understanding of the general profile of the class on these characteristics. Armed with these profiles and with the knowledge of outlying cases, the higher education teacher can then meaningfully plan and implement a course of instruction for students.



In this module, you will

- ❑ review the status of the learner in transition from secondary to higher education;
- ❑ identify the psychosocial characteristics of learners in higher education;
- ❑ describe the factors affecting the psychosocial development of higher education learners;

**GENERAL
OBJECTIVES**

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- ❑ develop instruments for measuring some learner characteristics; and
- ❑ identify the exit profile of the learner.

1.1

The Higher Education Learner in Transition

Introduction

Secondary education is over. With the necessary entry requirements and funds, it is now time to proceed for further studies within the higher education sub-system. The port of call could be a University, Technikon/Polytechnic, College of Education or other institution that falls within the higher education description. The shift from secondary to higher education begins with a **period of transition**. The transition period is characterised by a lot more freedom – no more school uniforms, assembly at 8.00 a.m., lights out, punishment by seniors and inhibition from attending parties. Prospective higher education learners bring with them various social and educational experiences. We expect that our interventions would foster desirable changes in behaviour and enhance positive characteristics. Improved understanding of our learners' antecedents at the point of entry would help us select appropriate educational experiences as well as provide adequate guidance and counselling services.

At the end of this Unit you will be able to:

- ❑ describe the academic and social antecedents of the higher education learner;
- ❑ determine the factors which impact on the learner's ability to learn; and
- ❑ assess the selection/admission procedures of your institution and department.



**SPECIFIC
OBJECTIVES**

The Concept of Transition

The formal education system in all countries of the world is segmented into **cycles** – primary, secondary and higher. Within each cycle, there is movement from one level to another e.g from primary 1 to 2 or from secondary class 2 to 3. This is **intra-cycle**

Is that you Wambui?
Congratulations on your admission to the university.
What course were you admitted for?

Olu, thank God I got admission this year after two trials. I was admitted to read Medicine. I heard you were admitted to read Science Education.



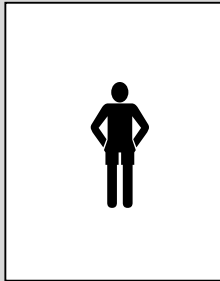
transition. There is also **inter-cycle transition.** This is from primary to secondary or from secondary to

higher education. As the learner moves from one level or cycle to another, there are changes that are noteworthy for the teacher. At the period of transition, there are physical, psychomotor, socio-affective, emotional, intellectual (cognitive) and aspirational changes. As lecturers, we want to take the learner through the change process in a smooth, gradual and painless way. We want the interphase between the end of secondary education and the freshman year to blend. No bumps, no dramatic shifts and no agonising changes. To achieve this, we need a deep

understanding of the characteristics of learners at the two poles – end of secondary education and the fresh student year.

In Box 1.1 is a summary of the findings of a self-report survey of a final year secondary school student. Similar data are presented – Box 1.2 for a fresh student in a university after a week of lectures.

Box 1.1



I have just finished my University Matriculation Examination I am 16 years old. I attended a boys-only school. I was a day student and had to leave home at 6.30a.m to catch the bus to school. Many of my friends in the science class want to read medicine. I made pharmacy the first choice of course since my parents cannot afford the cost of medical school. At school, the teachers hardly give individual attention to students since the classes are large. We do afternoon lessons to improve our understanding of topics taught in the morning. I am looking forward to going to the university for my degree in pharmacy. From the stories I have heard, as an undergraduate I will have my freedom from my parents and I will have more time for other things.

Box 1.2



Lectures, tutorials and field trips are new to me. We did not have such labels when I was in secondary school. New titles also-Professor, Dean, Vice-Chancellor/Rector/Provost. Oh! The university is sweet; a world of its own. We are told that now, we have “academic freedom”. I have found that the freedom is exhibited in different ways – what students and lecturers say and write, how students dress and how students interact. In our hall of residence, male students are free to come into our rooms between 10.00 a.m and 7.30 p.m. I have to adjust to this as no male student can enter our hostel when I was in the secondary school. My God, I have a lot of adjustments to do especially in my study habits and social relations. I am sure things will be OK.

Academic and Social Antecedents of the Higher Education Learner

Who are prospective higher education learners? The majority are young male and female adults aged between 16-26 years who have had 12-14 years of formal education. They would have obtained the school leaving certificate with the minimum pass grades to earn them places in higher educational institutions. As primary and secondary school pupils, their academic and social life would have been organised and sometimes regimented by principals, teachers, and prefects. They would have been expected to obey laid-down rules and regulations without question as well as recognise and respect the school's hierarchical structure of authority. Those who may have had the privilege of attending boarding schools would have experienced even greater management of their time and indeed of their lives. Graduates of single-sex schools often have additional problems of adjustment in their interactions with the opposite sex.

Our learners' typical school day could be broken into several very short periods during which various subjects would be taught in typically under-resourced classrooms, and by teachers with extremely low morale. With few exceptions, the learners would have been exposed to predominantly traditional methods of learning and teaching. These will be discussed in detail in Module 3.

With regard to assessment, the educational system of most countries now favour **continuous assessment**. The message that emerges is that schools are about testing. This has implications for learners' attitudes towards learning and teaching. An important part of our learners' school experience is the rather frequent strikes by teachers who feel over-worked and under-paid and are justifiably demoralised. Our adult learners would have lost several school hours and learned much less than they should have because of such strike actions. Parents who can afford it would arrange private lessons for their children to make up for inadequacies caused by strikes or "go slow". Even more devastating is the experience of some adult learners in war-torn areas, for example, Liberia and Sierra Leone where educational opportunities came to a stand still for long periods.

“

As primary and secondary school pupils, their academic and social life would have been organised and sometimes regimented by principals, teachers, and prefects

”



Reading 1.1

Higher Education in Francophone Africa

Ousseynou DIA

The responses of higher education to a changing world should be guided by three watch words which determine its local, national and international standing and functioning, relevance, quality and internationalization. “UNESCO Policy Paper for Change and Development in Higher Education” Executive Summary, Section V. In the context of these new orientations, every higher education policy should fit into the particularly complex social dynamics of the training and/or research institutions (Universities, Teacher Training Colleges, Institutions...) that have interfaces with secondary or “pre-university” education on the one hand and with the world of work and the development concerns of the States on the other. Set at the extremities of the educational system, these two entities exert pressure and lay down conditions that cannot be ignored. Hence, such a policy will emanate from a dynamic compromise between the external demands and the tasks which the states assign to these institutions.

In this regard, the relevance of higher education should be perceived in terms of its role and place in society, its mission as regards training and research and the resultant services. It should also be seen in terms of its linkages with the world of work (in the widest sense), its relationship with the State and sources of funding as well as its interactions with other levels and forms of education.

Holders of the “Baccalaureat” (Advanced Level School Certificate) continue to knock at the doors of universities thereby creating qualitative and quantitative problems at that level. Three questions have become topical issues in many countries: What is the real standard of the baccalaureate holders? Does this profile correspond with the standards envisaged through the secondary school syllabus? At present, the Baccalaureat serves as school leaving certificate and passport to higher education. Should these two functions be separated? How is the transition to higher education operated? Is there a direct access or a kind of selective admission or controlled admission?

Downstream, i.e at the end of the higher education studies, the number of graduates knocking at the doors of the labour market in a legitimate search for employment raises other issues in both qualitative and quantitative terms as well: how many graduates does the labour market require? What should be their profiles and in which fields? Do graduates of higher education have the requisite qualification for employment?

Set between the two extremities is the higher education process characterized by its own internal problems of which a few aspects determining its relevance, efficiency and the quality of its training will be mentioned through the educational policy objectives of the states which have achieved independence since 1960 (i.e to become credible institutions, train competent professionals for development, organize development-oriented research, render services to the community and diversify graduate profiles and training programmes).

However, under the impact of significant external trends (economic globalization, high population growth rates, technological innovations and serious financial constraints), the higher educational institutions are now in crisis in a crucial phase of their development. Beyond the negative trend (decline in the internal and external training efficiency) the basic issue is to know what type of institution the states need. Generally speaking, there is an urgent need for higher educational reform for the purpose of maintaining and strengthening quality standards among other concerns. It is more than necessary to develop a new perception of education and training in order to adapt and enhance the system’s relevance, efficiency and quality.

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Excerpted from:

Dia, O (1998). Quality of Higher Education in Francophone Africa. In J. Shabani (Ed.). *Higher Education in Africa: Achievements, Challenges and prospects*. Dakar: UNESCO BREDA.



Exercise 1.1



Summarise the main points in Dia's paper. Comment on his view that there should be a match between the profile of the higher education learner and the world of work.

Lifelong Higher Education For All in Sub-Saharan Africa

Juma SHABANI



Reading 1.2

In the last two decades, the trend of higher education in Sub-Saharan Africa was mainly characterized by a rapid increase in student enrolments and financial constraints that culminated in a decrease in public expenditure per student. In most developing countries, higher education is the education sector that experienced the most rapid expansion in the course of the last two decades. During that period, student enrolments in higher education was much faster in Sub-Saharan Africa than in any other part of the world.

However, in spite of this rapid increase in enrolments, certain indicators showed that, of all the regions of the world, Sub-Saharan Africa presents the least developed system of higher education.

- (i) Higher education enrolment ratios: In 1993, the enrolment ratios of the 18 to 23 age group was 2.4% in Sub-Saharan Africa against 18 in Latin America, 13.2% in the Arab States, 8.2 in South-Eastern Asia and 51 in the developed countries.
- (ii) Number of students per 100,000 inhabitants: In 1991, this number exceeded 5,000 in North America and 2,500 in practically all the developed countries. In Sub-Saharan Africa, this ratio was less than 100 students per 100,000 inhabitants, which means that the chances of young people pursuing higher education were 25 times lower in Sub-Saharan Africa than in the developed countries.

These figures suggest that Sub-Saharan Africa should increase student enrolments considering, especially, the ever-growing demand for access to higher education, and the established correlation between the development of higher education and socio-economic development. However, it seems that such a strategy should not be implemented within the current structures of higher education if African countries do not want to worsen the decline in the quality of education and graduate unemployment. Actually, taking into consideration the job saturation in the civil service, the low level of development of the private sector and the rapid changes in the job market, it seems that in the near future, demands for higher education will mainly focus on the training of entrepreneurs, the updating of knowledge and upgrading of skills for trained personnel. Under the circumstances, a good portion of higher educational institutions should be organised as centres for lifelong education for all for the purpose of updating and improving knowledge and academic qualifications. It is noticed that the increase in enrolments did not occur at the same pace in the different regions of Sub-Saharan Africa. It was much faster in French-speaking Africa. Indeed, between 1960 and 1983, the enrolments were multiplied by 40 in French-speaking Africa and by only 16 in the English-speaking countries..

The rapid increase in student enrolments in the Francophone countries is due to the combined effect of at least four factors namely:

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- the rapid increase in the number of secondary school leavers;
- the lack of selection at the time students enter universities;
- the low internal efficiency;
- the generous student-aid policy which encourages students to extend their stay at university because of the uncertainty of finding job upon completion of the courses.

Of course, such a quantitative expansion should be matched with a corresponding increase in infrastructures, facilities, teaching staff and scientific and instructional materials so as to meet the requirements of quality with respect to training and research. Unfortunately, that has not been the case. For example, during the 1991-92 academic year the University of Yaounde in Cameroon, which opened its doors in 1960 with 500 students, had 45,000 students with facilities planned for 5,000. In Francophone Africa, it is usual to see a lecture hall designed for 800 students crammed with as many as 3,000. It is also noteworthy that such lecture halls hardly provide an enabling environment for teaching as they have more in common with markets or sports stadia than with places for reflection. Under the circumstances, access to knowledge is largely determined by the students' ability to arrive 3 or 4 hours in advance to occupy the best place so as to hear the lecturer.

As a result of the limitation of academic infrastructures and shortage of human and material resources, the quality of education has declined. Indeed, several institutions were already forced to cancel practical and field work. More recently, the University of Benin in Lome, Togo decided to cancel the requirement of a master's thesis at the end of University studies at the Faculty of Economics and Management.

Excerpted from:

Shabani, J. (1998). Lifelong Higher Education for All in Sub-Saharan Africa. In J. Shabani (Ed.). *Higher Education in Africa: Achievements, Challenges and Prospects*. Dakar: UNESCO BREDA.



Examine the merits and demerits of Shabani's position on increasing access to higher education and compare with Dia's position in Reading 1.1. on matching access with available job opportunities.

Exercise 1.2



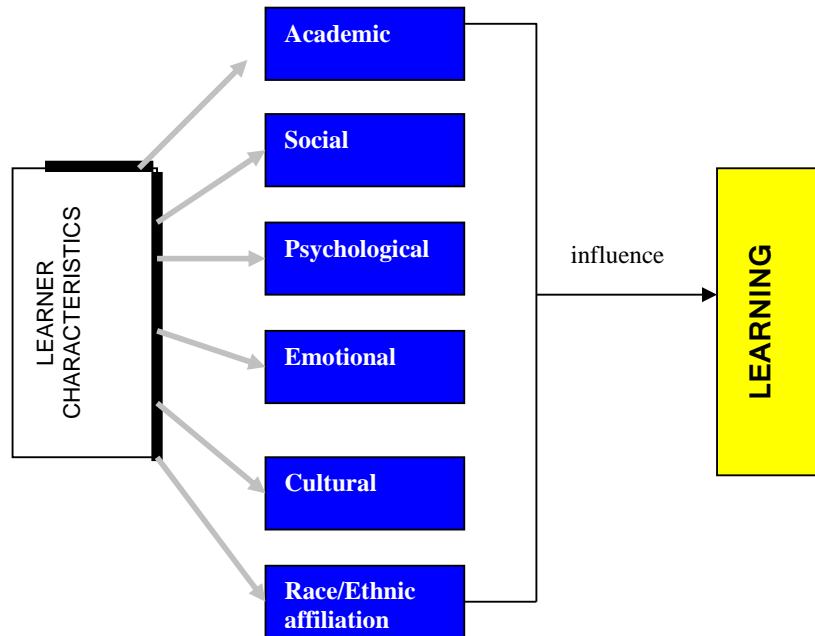


Fig. 1.2: Learner Characteristics Influencing Learning

Factors Affecting Learning

During the period of transition, the **freshman** brings in several characteristics and attributes that could impact on learning. Some of these characteristics and attributes are discussed in this section.

Home background

Many learners come from a rural setting. Some have grown up in polygamous homes characterised by many children and scarce resources. They would speak one or more of the indigenous language as well as English, French or Portuguese which are major media of teaching and learning in higher education in Africa. The language question has further implication because education in a foreign language places the learner at a disadvantage.

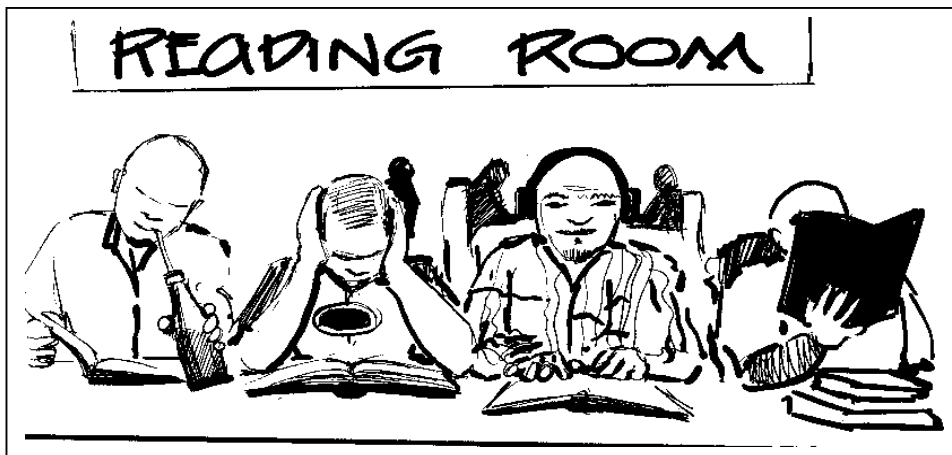
Note:

Freshman is used in a generic, non-sexist sense in this text to mean a *student (male or female) who is enrolled in the first year in a higher institution*

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He or she is required to master that language before battling with content in education. The decline in proficiency in English in anglophone Africa has hampered teaching and learning.

A small group would come from the middle class and would have experienced the benefits of growing up in urban areas. Some in this group would have travelled widely outside their homeland and had access to information and various forms of educational materials and technology. Some others would have enjoyed the benefits of pre-school education and would be proficient in English, French or Portuguese.



A very small percentage of learners would have had post-secondary school work experience in either the private or the public sector. They would therefore have acquired skills, which would serve them well in their future learning. Further they would have had greater control of their lives and resources than learners who enter higher educational institutions at a younger age.

- 1 State whether or not the above discussion has encouraged you to modify your perception of learners in the first year.
2. Discuss your reactions with members of staff of a discipline other than your own



Activity 1.1



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Impact of prior experiences on the learner's learning

Contrary to popular opinion, our learners are not blank states on which imprints can be made, nor are they empty vessels to be filled. On entry, they would normally have knowledge and skills acquired from their earliest **socialisation** in appropriate means of constructing the world around them and creative approaches to solving problems. Further they are expected to be largely at the Piagetian stage of **formal operations** in their cognitive development and could therefore be expected to operate at that level .

These positive gains notwithstanding, experience shows several deficiencies which could constrain the ability or desire of higher education learners to function effectively in the learning/teaching situation in institutions of higher learning . For example, they are expected to manage their time as well as do independent work (conduct investigations in their areas of study). They must also have a view of learning which emphasises construction of knowledge, creativity and problem solving. Their school experiences, characterised by external controls, traditional teaching and learning styles (notably rote learning) and threatening learning environments have certainly not prepared them to take responsibility for their learning.

With regard to their readiness for work at higher institutions, attention has already been drawn to the deficiencies which result from time lost in strikes and “go slow”. Lost time means that syllabuses are not adequately covered. In addition, poorly qualified, non-resourceful teachers ensure that the learning that takes place falls far short of what is required at that level. Further to augment their salaries, some teachers teach certain topics only during private lessons so that those pupils who cannot afford such classes are deprived of relevant knowledge. The nature of the school leaving examinations has the tendency to encourage regurgitation of rehearsed opinion and dictated notes rather than evidence of ability to analyse and synthesise. This impedes the ability to apply knowledge, think critically, solve new problems by responding in creative ways and reflect on their learning. This situation sends wrong messages to the students and create enormous obstacles for learners who gain admission to institutions of higher learning.

A point that must not be ignored as we consider the nature of our adult learners, particularly those under twenty is their possible inability to handle emotional and other adjustment problems because of their stage of development. While several of the problems envisaged

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could be handled in guidance and counselling sessions. The lecturer would certainly have to devise relevant learning/teaching strategies to ease the learners transition from secondary to higher education.



Most of learners' behaviours on entry can be explained with

Activity 1.2



reference to their background. Can you think of instances where other factors would have to be explored ?

State as many adjustment as you can that you might have to make in your teaching style to meet the learning needs of the new learner in your discipline.

Selection/Admission criteria and procedures

All institutions of higher learning in Africa have selection procedures designed not only to ensure that only the best of candidates are admitted, but also because of constraints imposed by diminishing financial resources, deterioration and inadequacy of the physical structures and inadequate staffing of departments. As a general rule, prospective learners have to meet university requirements, which may be credit in five subjects including English and Mathematics, in the appropriate international examination. Some departments may also demand a high level of attainment in certain subjects other than those preferred by the learners to facilitate good performance in the major areas. This means that merely meeting matriculation requirements does not always guarantee learners a place.

Some institutions, notably Nigerian universities, administer a general university entrance examination, conducted by the Joint Admissions and Matriculation Board (JAMB). Success in this examination may earn a candidate a place in one university, but not necessarily in another because admission is offered on the basis of level of performance. Another university college until recently sent interview panels to the schools in the major towns to recruit learners and guide them in their choice of disciplines. Finance continues to be one of the biggest constraints because not all parents can afford the cost of education at the level and governments are no longer willing to bear the cost alone. However, in some countries like Nigeria, tuition is free for higher education in federal institutions.

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A recent phenomenon is the Remedial Initiative for Female Teachers (RIFT) at Gambia College, the Gambia, which is intended to correct the gender balance in education by helping adult female learners who cannot meet the selection criteria to do so by the end of the programme. These learners are admitted on the basis of performance in a special college examination. They are then given remedial course of the programme to increase their chances of passing the international school leaving examination before certification. There are other reported instances of admission of learners who are under qualified at the beginning but who became highly proficient after attending specially arranged remedial classes. The major constraints in Francophone universities are space and finance. Once learners obtain the baccalaureat, they are qualified to enter any institution of higher learning, except the so-called “Grande Ecoles” which impose additional requirements. However, as with their anglophone counterparts, the Government cannot award scholarships to all qualified students and so a significant proportion of students fail to take advantage of higher education provisions.

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...universities often have to take affirmative action. The process of selection/admission can therefore be seen as evolutive, based on the priorities of the period.

”

At this point, it is worth mentioning the affirmative actions at Makerere University, Uganda, and the University of Dar-Ed-Salaam in Tanzania. As Shabani (1997) remarked, “...at the university of Dar-Es-Salaam, female candidates are admitted at up to 1.5 points lower than male candidates but not lower than the university entry requirement. As a result, the enrolment percentage for girls rose from 17% in 1995/96 to 29% in 1996/97.

Selection procedures are also influenced by equity and gender issues, societal demands in terms of human resources, and the need to give access to education to special groups for example military personnel and their dependants. Provision is also made in some institutions for mature learners. To satisfy these and similar categories universities often have to take affirmative action. The process of selection/admission can therefore be seen as evolutive, based on the priorities of the period.

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Do you think the selection/admission criteria and procedures are fair, given the paucity of educational outlets for the school leaver?



- What would you say are some of the arguments for retaining or modifying the current criteria and procedures. How far do you support or oppose them?
- Would you agree that if we must select at all our criteria should be less stringent especially as some of our rejects do well in foreign lands?

Activity 1.3



1. What are the entry requirements for your institution ?
What are the departmental requirements ?
Do you think they are adequate in the light of the above discussion ?
2. In which related disciplines would a learner have to be proficient to graduate in your department ?
Are these school subjects ?
If not is there any provision for remedial work ?
What would you see as being its nature ?
3. Supposing your Head of Department (H.O.D.) told you that he was giving admission to four mature learners and six female learners who have had no instruction in the sciences. What would be your reaction ?
Prepare an introductory lesson for these learners. Use it as a demonstration class for your colleagues in the department and ask for comments.
4. Imagine that you are chair of the admissions committee of your department, Electrical Engineering or Management. This year, no candidate has met the departmental requirements for admission, yet you must admit learners ; but applicants are from different backgrounds, educationally, socially, work experience etc. What new criteria would you devise for use?



Activity 1.4



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STUDENTS' VISION OF HIGHER EDUCATION AT UNESCO CONFERENCE Paris, October 8, 1998 {No.98-219} –



Reading 1.3

Students from around the world voiced their fears, frustrations and hopes during a lively panel titled “Higher Education for a New Society: A Student Vision,” held at UNESCO during this week’s World Conference on Higher Education.

Baroness Tessa Blackstone, Minister of State for Education and Employment (UK), moderated the first two panels of the debate and warned participants she intended to restrict it to students. The students responded en masse, enumerating concerns that ranged from freedom of expression to exclusion of students based on their ethnic origin, gender, disabilities or inability to pay tuition. Most students, both on the panel and in the audience, advocated fair access to education financing and urged governments to continue funding state university systems. “Investing in education is equal to investing in the future,” said Danish panellist Peter Søndergaard, representing the National Unions of Students in Europe. Students also pressed for more of a say in education policy and university administration. But it was clear from students’ comments that problems in some countries are far more basic. Representatives from Angola and the Autonomous Palestinian Territories reminded the audience that students in their countries were still dying in gunfire. “We are also seeking to disseminate a culture of peace among university students,” said Abdallah Al Najjar of the General Union of Arab Students. “Professors are badly paid and they have other things to do” - besides proctoring exams and showing up for class - said panellist Florence Nsumbu. Her group, the Mouvement International des Etudiants Catholiques in the Democratic Republic of Congo, tries among other things to pressure professors to do their jobs.

Both male and female students worried that women and girls do not have adequate access to education in many developing countries. “Tradition restricts girls’ access to education,” said panellist Agus Salim of the International Forestry Students Association in Indonesia. “People in rural areas think that girls are there to handle the kitchen,” he added. Panellist Rajia El-Huseini of the Union of Progressive Youth (Egypt), pointed out that only 35 percent of university students in her country are female, while girls and women make up more than half the population.

An “Entrepreneurs” panel focused on the transition from university to the world of work. Panellists, including several successful recent graduates, urged universities to include practical experience during the course of study through for-credit internships and work-study programs.

Roughly 300 students from non-governmental organisations as well as national student unions and international student movements were accredited to the Conference. The student representatives submitted a set of recommendations to the UNESCO drafting committee early in the week but do not know which of their suggestions will be incorporated into the final Declaration to be adopted on Friday. Many students eager to share their enthusiasm attended the debates, but not all were able to talk in the time allotted. Most of the students generally thanked

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We are not clients, apprentices or passive objects of education; but rather, we are active partners in our learning and contribution to society.

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UNESCO for letting their voices be heard during a conference with massive participation of ministers. But they also voiced hope that government ministers would take their concerns into consideration when drawing up the Declaration and Framework for Priority Action. UNESCO Director-General Federico Mayor, responding to the general concern that an affordable education be guaranteed to all people, encouraged the audience: "Dare to share." He added that the Conference's main aim was to ensure higher education institutions do provide an education for those who are denied one. "Don't feel excluded," he said. "Now you can catch the next train."

In her closing remarks, Baroness Blackstone said that while she was "very moved and touched by the (students') idealism (...), there is no free education. Somebody has to pay." She left open the question of how to organise an equitable system of financing higher education.

Student representatives reiterated their main goals and gripes during a news conference today.

Recalling that education is a "fundamental human right" that should be provided by the state, a panel of eight representatives of student organisations from all over the world said its goal was to improve what they called the "lack" of financing, of free access to education and of participation in university administration. In a statement read aloud by Kathrine Vangen of the National Union of Students in Europe, the students summed up their concerns: "We would like to assert the right of all students to autonomous representation and recognition. (...) We are not clients, apprentices or passive objects of education; but rather, we are active partners in our learning and contribution to society."

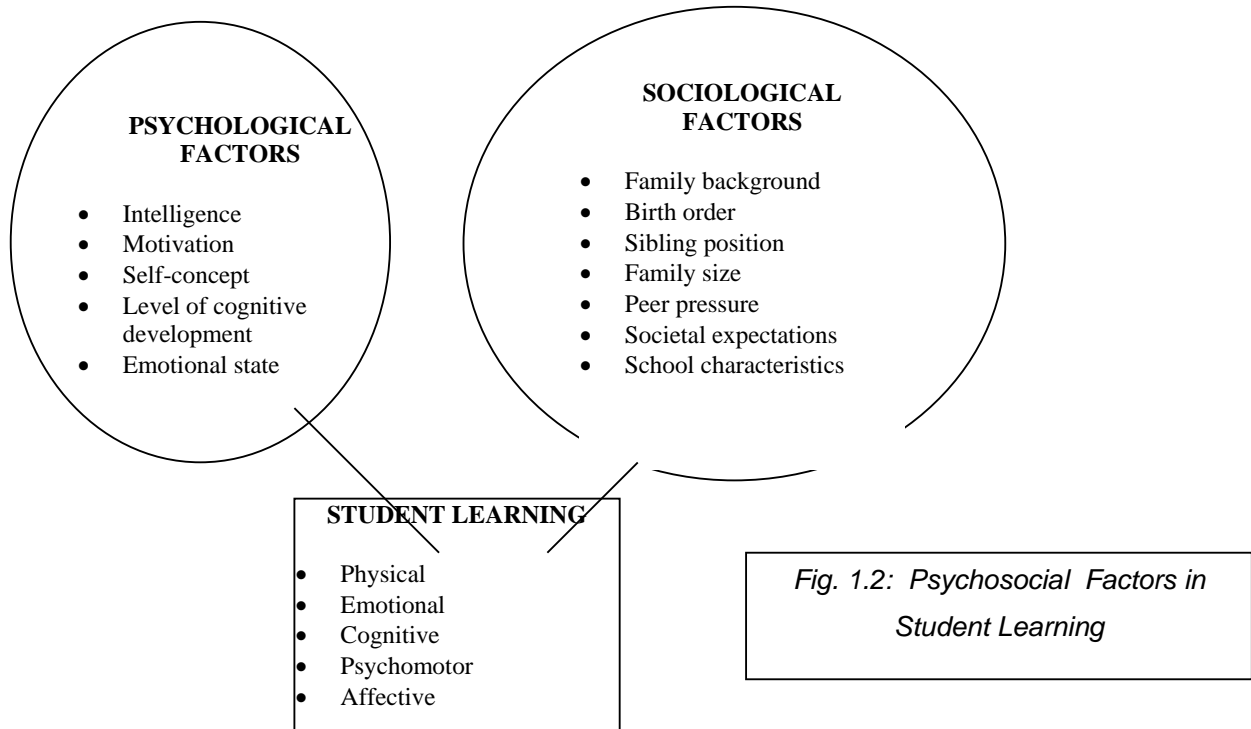
1.2

Psychosocial Characteristics of the Higher Education Learner

Introduction

Psychological factors are normally resident within the learner. These include intelligence, motivational level, self-concept and emotional traits. Sociological factors on the other hand, are usually resident within the external environment. The environment in this case includes the family, peer and the community. Sociological factors include family background, peer group influence, school setting and societal expectation. The interaction between these two groups of factors (psychosocial) is important in student learning (see Fig. 1.2).

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On completion of this unit you will:

- ❑ use knowledge of psychosocial characteristics to diagnose learning difficulties;
- ❑ assess learners behaviour on the basis of their biodata of adult learning;
- ❑ identify psychosocial characteristics of adult learners;
- ❑ indicate how these might impact on learning and teaching; and
- ❑ carry out exercises on adult learners' characteristics that are related to learning/teaching issues in your subject area.



SPECIFIC OBJECTIVES

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Biodata of the adult learner

The focus of the previous unit was on learners' background and antecedents as a way of determining their degree of readiness for higher education. In this Unit we shall consider their characteristics with emphasis on the psycho-social, to see:

- a) how far these reflect their background; and
- b) how they might affect learning and teaching in higher education



Fill in the sample questionnaire below those characteristics of the students in your class you deem important for better understanding of the students.

Exercise 1.3

SAMPLE

STUDENT BIODATA QUESTIONNAIRE

Name of Student:
Course:
Year of Study:

Age			
Gender			
Father's occupation			
Mother's occupation			
My expectations for this courses			

Some biodata of our hypothetical learners could look like what we have in the box below:
Box 1.3

Age 16 - 26 and over
Gender - about 10% of 90% male

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It is assumed that the learners in the 16-year bracket would be those from privileged homes who have had the benefit of early schooling and an excellent education. Those in the 26-year bracket would have sought employment after school for one of several reasons.

- their parents could not afford to pay for them in the absence of state scholarships,
- on the job training was required for admission into the Faculty ;
- little motivation to pursue higher education earlier.

With regard to the distribution of learners along gender lines, the box reflects the general picture (see Module 8). However it must be noted that in higher education institutions in Swaziland women out-number men. Similarly in some of the Eastern States in Nigeria, women show more interest in education than men. In Sudan, there are single sex universities. We might consider what new problems of learning and teaching this might cause and how they could be overcome.

Most of our learners would not have reached the stage of maturity in all areas required for higher education. Indeed in previous decades some of them would have been considered children. However, we must bear in mind that our learners are not homogeneous. Even though the above characteristics can be generalised, there could be marked individual differences among members of any given group. This has implications for learning and teaching which will be explored further.

1. State whether or not the above discussion has encouraged you to modify your perception of learners in the first year.
2. Discuss your reactions with members of staff of a discipline other than your own.
2. How would you describe the attitude to work of a typical 16-year old?
3. What might be the reaction of a 30-year old to adverse criticism of his work by a 16-year-old?
4. How might the women react to criticism of their work in a male dominated teaching environment.
5. How might you react in terms of finding solutions to all the above problems?



Activity 1.5



Activity 1.6



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Psychosocial Characteristics

While some researchers urge updating of research in psychology for better understanding of the adolescent in Africa, others have concluded that there is little correlation between psycho-social characteristics and performance at the higher education level (UNESCO, *Report on the State of Education in Africa*, 1997). However, what is clear, from casual observation is that psycho-social characteristics do provide some general explanation of learners behaviour. We might also look in other areas for explanations which might be helpful in illuminating learner characteristics. As you work through this section you might give some thought to this.

The following list represents some of the areas that should be explored in relation to the learners psychosocial characteristics on entry into higher education:

- * cognitive development
- * learning patterns preferences/patterns
- * social development
- * motivation
- * expectations
- * attitudes
- * friendship patterns and linkages
- * self-perception/esteem.concept
- * political orientation
- * religious orientation
- * beliefs and world view
- * values
- * psychology of learner's unrest

This list is not exhaustive. You can make additions from your experience

From your understanding of learners' background experiences indicates in a tabular form what is characteristic of them in each of the areas. For example, for "learning patterns" which is second on the list you might have, "learning by rote" and for "motivation" and for "social development", anti-social. When you get to the end of your list react to the pattern that emerges



Activity 1.7



Describe how might you help a learner who has difficulty in conceptualising events and concepts in your discipline? You might use specific examples.

Points to consider 1.2.

1. In your view could the above have any bearing at all on learning and teaching? How?
2. In your opinion should studies of learner characteristics be left only to faculties of education, sociology and psychology departments in particular?

Determinants of Psychosocial Characteristics

The dominant characteristics of our adult learners in any given period have their roots in the environment in which they live. The nature of this environment is itself determined by the prevailing internal and external factors. Okebukola (1996) characterises pre-70's learners as being more mature, having a better attitude to work and being highly motivated, in contrast to learners of today who are portrayed as less mature, having a poorer attitude to work and being poorly motivated. This marked difference reported by Okebukola (1997), can be explained with reference to the relatively stable and enabling environment of the earlier period .

Table 1.1

Relationship between learner characteristic and his environment

Environment	Characteristics pre 70s	Post 70s
Stable and enabling	More mature, better attitude to work, highly motivated	
Unstable		Less mature, poor attitude to work, poorly motivated

You may wish at this point to reflect on (a) the post 70's environment and suggest some factors which have influenced it and (b) relate these factors to the psychosocial characteristics of our learners

Another category of determinant is hereditary/biological factors which can also have a significant influence on learning and teaching although this influence may not be as crucial to

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the group as to a small percentage of its members. Hereditary/biological factors can either hamper or accelerate the learning process. Factors that could exert a negative influence include physical disability, mental retardation, diseases, for example, sickle cell anemia. A high intellectual co-efficient on the other hand and a healthy body could have very positive effects on the learners' learning.



Point to Ponder

Have you ever used hereditary/biological explanations for learners' behaviour in the teaching/learning context? How might such considerations influence your behaviour in specific situations, for example, raising self-esteem or satisfying the learning needs of both high and low IQ members of your group?



Below is a list of some of the other factors which may impact on learner characteristics. It is by no means exhaustive and you are encouraged to make addition.

Factors affecting psychosocial characteristics:

- Socio-economic
- National economy
- Global economy
- Socio-cultural
- Peer group
- Political climate
- Migration
- Historical factors/colonisation

Let us examine some of these factors closely. (You are encouraged to discuss the others with colleagues in your Department).

Socio-economic Factors

An important factor which could significantly influence learner behaviour is the socio-economic status of their parents and indeed of people in their community. Let us take the case of a learner who is born of illiterate subsistence farmers. Such a learner is likely to have lived on the edge of poverty where the social services of the state do not penetrate. The learner's home background would not only be polygamous but it would also be part of an extended-family structure. This typical socio-economic background would certainly have negative effects on that learner's learning experience. Lack of adequate financial support

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and necessary learning materials would be frustrating on the one hand and might lead to poor motivation and general disenchantment on the other.

As indicated in Unit 1, there is a small percentage of learners who come from a more privileged socio-economic background. We can well imagine the feeling of anger which could sometimes erupt in violence, generated by the stark division between the "haves" and the "have nots" in any given learning situation.

National Economy

The national economy of most African countries is unstable with huge external debts, high rates of inflation and both a dependent and a declining currency (Nwana 1996) Neo-colonialism symbolised by the World Bank and the International Monetary Fund control most of the national economies in the region and structural adjustment programmes imposed by such bodies spell even more hardship for the least developed nations. Our hypothetical learner is affected by the low status of the country's economy. Structural adjustments mean that the price of essential commodities will rise stretching the ever-dwindling financial resources to its limits.

Whatever else may be the impact of this factor, it is true that an ailing economy cannot provide adequate support for education. The learners become disgruntled because neither their parents nor the institution can provide a facilitating environment for them. This may engender in them a poor attitude to work and indifference to higher learning. More importantly, it might create a reversal of values as was and still is the case in Sierra Leone where the survival of the individual is placed above the collective good. Of even greater concern is the general decline of values and specifically the devaluing of the benefits to be got from education. The following anecdote shows one instance of this: A young man in his thirties who had acquired a lot of wealth was asked whether he did not experience any feelings of inadequacy because he had left school in Form IV. The young man quickly replied that his only regret was that he had not left in form two, since no amount of education could have provided the affluence which he now enjoyed. Many adult learners have to combine learning with other activities to meet their financial needs. The impact of this on their learning could be enormous. Lecturers at this level would have to create situations to motivate such learners.

Historical factors/colonialism

One factor which will continue to exert its negative influence for a long time to come is the colonial experience of the region. As a colonised people we came to see ourselves through the eyes of the coloniser, whose purposes were served by diminishing our culture, customs, traditions and our ability to respond creatively to problems which affect us. In recent decades we have tried to liberate our minds with some measure of success. Our educational systems which are based on European models have suffered from this

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experience. We have tended to tinker with them rather than overhaul them, and this only to accommodate changes approved for use, for example in Britain and France. Instructional methods handed down from generation to generation are still current in some of the countries - a case in point is rote learning, which is encouraged by dictation of notes. The lecturer will have a mammoth task, fighting this phenomenon which stifles creativity in our learners.

The Socio-Cultural Factor

This is a strong factor which could influence learner behaviour. For instance higher education lecturers in societies with strong Islamic tradition should not be surprised to receive from the higher education learner demand to respect time for Jumat prayer on lecture or examination time table or request for permission to suspend studies to be able to perform hajj. Higher education lecturers should take cognisance of socio-cultural behaviours of the learners in his dealing with them.

Peer Group

Peer group influence is a very strong factor influencing learners behaviour. Due to peer pressure many higher education learners have become drug addicts, chain smokers and cultists etc. They engage in all these because they want to be acceptable to their peers, they want to impress the opposite sex and they wish to be recognised by the school authority. The deplorable state of the learning environment of many African Institutions of Higher Learning is exploited by the learners to perpetrate these vices. The higher education lecturers must be ready to contend with these problems in the teaching process.

Political Climate

Political instability occasioned by incessant military coups is the greatest problem of most African countries. Within the short period of many African nations' independence they have passed through several republics. The unstable political climate has plunged many African nations into civil war including Sierra Leone, Liberia, Congo, Burundi and Angola.

Under political climate characterised by instability of government, enough commitment is often not shown by successive governments to the implementation of educational policy formulated by a previous government. This is why in a country like Nigeria the implementation of 6-3-3-4 educational policy is suffering serious set back due to poor funding. The vocational aspect is pathetically neglected which is why most products of the system who should have gone vocational seek admission into the universities to do degree. In such a situation the higher education lecturer should expect to meet learners of

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varied ability and enthusiasm to learn and he or she should devise a means of coping with this challenge.

We have now discussed six factors, which may affect learner characteristics. You may, (a) reflect on these and from your own experience, try to make further suggestions of how they may influence learner characteristics in your discipline (b) rank them to show which might exert the most influence and give reasons.

1.3

Exit Profile of the Higher Education Learner

Introduction

At the end of the higher education programme, the learner is expected to have satisfied Senate or the Academic Board “in learning and character”. The knowledge, skills and attitudes that are specified in the curriculum are expected to have been developed/acquired by all those who had passed through the programme. The exit profile of the higher education learner has these as descriptors as well as all knowledge, skills and attitudes that



had been picked up from the hidden curriculum.

After completing this Unit, you will be able to :

- ❑ describe the anticipated exist profile of the learner;
- ❑ compare entry and exist profiles to give reasons for any positive changes; and
- ❑ suggest ways of determining success.

**SPECIFIC
OBJECTIVES**

Anticipated Exit Profile of the Learner

If we were asked to give one reason for the publication of this text we would say that it is to help institutions of higher learning achieve that aspect of internal efficiency which is measured by the success rate in learners' transition from one level to another. The degree of success is dependent on several factors but the overriding one would seem to be the

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effectiveness of our learning/teaching strategies for bringing about the transformations we expect to see in behaviour over a period of time. A reliable indicator of our achievement is the nature of the learners' exit profile as compared with what it was on entry. In this module we have emphasised the crucial part played by knowledge of the learners' psychosocial characteristics on entry in designing, the curriculum-selecting appropriate teaching styles/learning tasks, materials, learning/teaching aids and evaluation procedures. Equally important is its role as a measure of changes that might have occurred in the learners' characteristics following their educational experiences. An improved quality of the exit profile as compared to the characteristics on entry is adequate indication of success.

We should expect to see changes in two broad areas - the cognitive and the affective. We indicated earlier that higher education is not merely a means of improving one's chances on the job market. It must also aim at the holistic development of learners so that they can be responsible members of society. It is for this reason that attitudes and values as well as social skills are stressed. Moreover, to benefit from participatory approaches to learning, social skills are essential. Without them the learner cannot engage effectively in collaboration learning.

Below is a set of exit characteristics which we should be proud to say we helped nurture in our learners.

Classify them as follows :

- a) those related to improvement of knowledge skills and abilities for cognitive functioning
- b) those that reflect desirable attitudes and values for personal development
- c) those that reflect developed social skills :
 - critical thinking
 - lateral thinking
 - pride in the dignity of labour
 - self reliance
 - adaptable
 - problem solving skills
 - positive attitude to work of all kinds
 - tolerance
 - assertive
 - creative
 - co-operative/capable of team work
 - democratic style



Activity 1.8



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- high self esteem
- imagination
- commitment
- motivation

You may of course add to the list.

CONNECTION BETWEEN ENTRY AND EXIT PROFILES

Earlier in this Unit we highlighted the use of the entry profile in determining the quality of the exit profile. If you reflect on the entry profile given in Unit 2 you will notice significant differences in comparison to the exit profile given here (We are assuming of course that our interventions would result only in positive changes!). The observed transformations may be due to a variety of reasons - positive role models, healthier financial circumstances, positive support from peer group and the late developer syndrome - but we would like to believe that our strategies selected on the basis of the learners background played a part.



Activity 1.9



1. Compare entry and exit profiles and suggest interventions which may have influenced changes.
2. Do you think that such dramatic results could occur from your teaching strategies?
3. How far do you think you can effect changes in

behaviour?

You may discuss your answers with a colleague

IS IT POSSIBLE TO KNOW FOR CERTAIN HOW THESE CHANGES COME ABOUT?

No doubt there are scientific methods of measuring change. However, we would recommend informal assessment as observed in performance of learners. The enthusiasm that they show in your courses or the testimonies that they make about you, sometimes long after graduating from your institution. Anecdotes abound about learners who can recall exactly when our strategies transformed them from, for example, information sectors to lateral thinkers; how they were able to realise their full potential because of one lecturer's willingness to provide guidance and counselling services, and how a particularly insightful presentation of Wilfred Owen's poem, « Dulce et decorum est pro patrie mori » influenced their attitude to war and conflict resolution in positive ways. Please discuss with colleagues and add to the list of experiences. You may be encouraged to approach your learning/teaching tasks with even greater enthusiasm.

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Summary

In this Module, we

- o reviewed the status of the learner in transition from secondary to higher education and found changes in demographics that could impact on the attitude of higher education students to learning;
- o identified major psychosocial characteristics of learners in higher education and discussed how these could be factored into the opportunities given to students for learning;
- o described the factors affecting the psychosocial development of higher education learners including home background, national economy, and political climate;
- o identified the exit profile of the learner and how this could be influenced by the “treatment” given to students during the period of higher education; and
- o justified the study of the learners background and antecedents as a prelude to providing curricular and co-curricular experiences which form the content of the next Module.

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(to be typed)

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For further reading

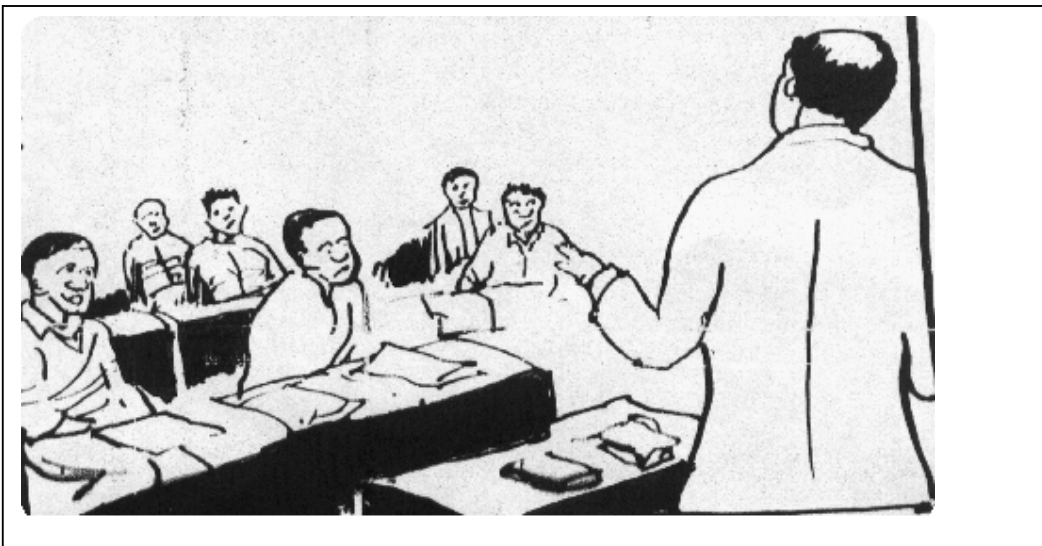
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Module

2

Profile of the Higher Education Teacher

A teacher can make little progress in understanding others until he or she has mastered the art of self-understanding.





Reflect on the following as you work through this Module



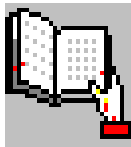
Article 1. Mission to educate, to learn and to undertake research

We affirm that the core missions and values of higher education, in particular the mission to contribute to the sustainable development and improvement of society as a whole, should be preserved, reinforced and further expanded, namely, to:

- a. educate highly qualified graduates and responsible citizens able to meet the needs of all sectors of human activity, by offering relevant qualifications, including professional training, which combine high-level knowledge and skills, using courses and content continually tailored to the present and future needs of society;
- b. provide opportunities (espace curvert) for higher learning and for leaning throughout life, giving to learners an optimal range of choice and a flexibility of entry and exit points within the system, as well as an opportunity for individual development and social mobility in order to educate for citizenship and for active participation in society, with a worldwide vision, for endogenous capacity-building, and for the consolidation of human rights, sustainable development, democracy and peace, in a context of justice.
- c. advance, create and disseminate knowledge through research and provide, as part of its service to the community, relevant expertise to assist societies in cultural, social and economic development, promoting and developing scientific and technological research as well as research in the social sciences, the humanities and the creative arts;

Extracted from the:
*DECLARATION
OF THE UNESCO
WORLD
CONFERENCE
ON HIGHER
EDUCATION
(1998)*

- d. help understand, interpret, preserve, enhance, promote and disseminate national and regional, international and historic cultures, in a context of cultural pluralism and diversity;
- e. help protect and enhance societal values by training young people in the values which form the basis of democratic citizenship and by providing critical and detached perspectives to assist in the discussion of strategic options and the reinforcement of humanistic perspectives; and
- f. contribute to the development and improvement of education at all levels, including through the training of teachers.



2.0

Introduction and General Objectives

Introduction

There are two main actors in the enterprise of teaching and learning – the teacher and the learner. In Module 1, our focus was on the learner. Starting with the learner is indicative of the centrality of learners to teaching. Without students, we will be out of job as teachers. Since we discussed actor No. 1 (the learner) in Module 1, we will take on actor No. 2 (the teacher) in this module. Our plan is for you to gain some understanding of the learner and the teacher before working through the processes involving the two actors in subsequent modules.

Why do we need to gain understanding of the higher education teacher? Perhaps the straightforward answer can be found from a quote from Julius Nyerere “It is by gaining insight of our potentialities that we understand others better”. When we know who we are as teachers, our strengths and weak points, we become well positioned

to appreciate our students and to carry out our teaching tasks more meaningfully. Profiling the higher education teacher is the central goal of this module.

As we work through this module, issues concerning training of higher education teachers begin to emerge. The argument that 'teacher training' is trivial and technical for teachers in higher educational institutions has been hard to sustain. Where once some saw learning to use an overhead projector as the pinnacle of professional development, such trivialisation is no longer the case. The mastery of technical skills now takes a back seat to the development of the teacher as a self-reflective, ethical and continuously developing, competent practitioner. Far from providing 'tips for teachers', professional programmes emphasise the value laden nature of teaching and the ethical position of the teacher.

There is a sophisticated discourse concerning teaching and learning in higher education that many practitioners never appear to interact with. A likely reason is that academics see themselves as professionals in their own discipline-based research area, rather than as professionals in the area of university teaching. They qualify and are credentialed by research in a discipline area and they undertake continuing professional development in that research area by reading relevant journals and attending conferences. It is important that academics consider themselves to have a dual professional allegiance: to their professional (disciplinary) responsibility as a university researcher and to the profession of teaching. The latter role can be successfully accomplished with teacher training experience.

The professionalisation of teaching is little more than a century old. During its development, teaching progressed from a primitive, relatively unskilled trade, to an occupation requiring vocational training, and finally to a profession demanding

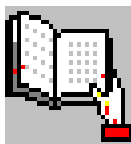
thorough, specialised preparation. The preparation of the teacher is viewed increasingly as a continuous process that extends throughout his or her tenure. This Guide is essentially to enhance your preparation for more effective teaching.

At the end of this module, you should be able to:

- describe the general characteristics of the higher education teacher;
- give a detailed profile of his or her teaching responsibilities ;
- state the expectations of students and the administration of the research abilities of the teacher;
- state the expectations for community service of the higher education teacher; and
- develop and use an instrument for measuring the profile of the higher education teacher in the areas of teaching, research and community service.



GENERAL OBJECTIVES



2.1

General Characteristics of the Higher Education Teacher

At the end of this unit, you should be able to:

- list the general characteristics of the higher education teacher; and
- describe in detail the various elements of each of the characteristics.



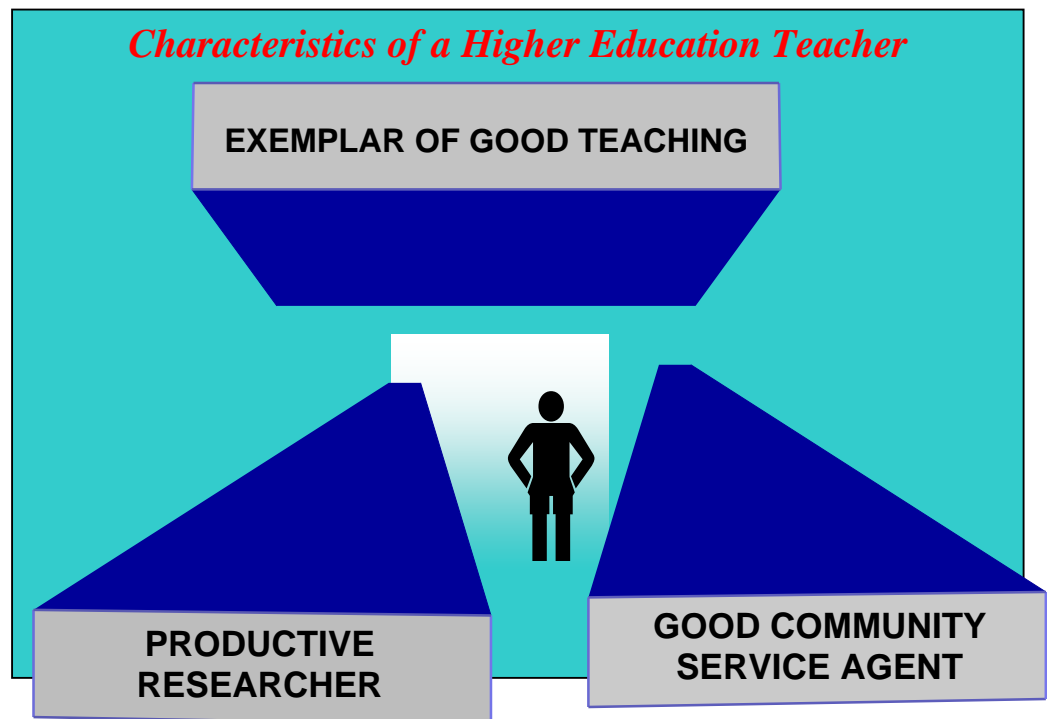
SPECIFIC OBJECTIVES

General Characteristics of the Higher Education Teacher

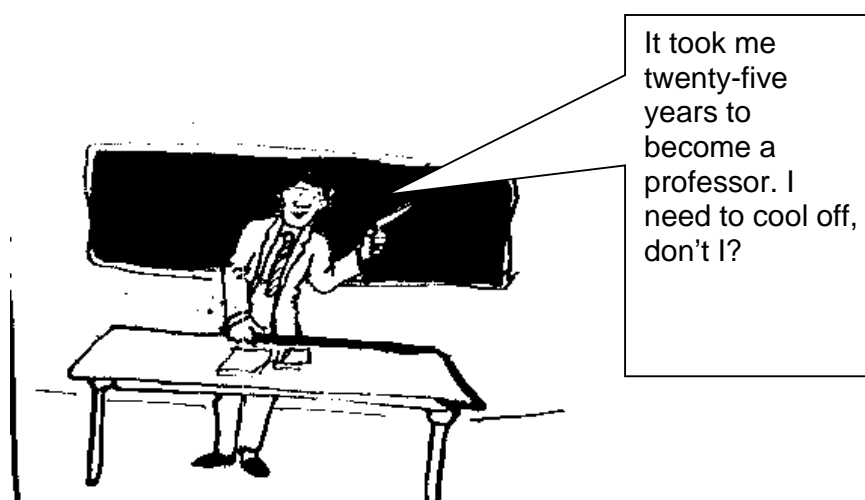
Traditionally, the higher education teacher is expected to be an exemplar in:

- ❑ teaching
- ❑ research; and
- ❑ community service.

Advertisements for academic positions in a university, polytechnic, technikon, college of education, or other tertiary institutions generally reflect this tradition. On assumption of duty, the new employee is further expected to cling to these three strands of responsibilities for upward advancement. Thus, the higher education academic is expected to be an exemplar of good teaching, a productive researcher and someone who can provide good quality extension service to the institution and to the larger community. With a respectable record in these three



areas of focus, the rise to the esteemed post of full professor that is much sought after by academics could be painless and short.



Activity 2.1



Teaching, research and community service are the three, traditionally known clusters of duties of the higher education teacher. Think of the work you do and the work expected of you by your students, the community, and the administration of your institution. Is this work covered by the three traditional areas? If your answer is no, provide a list of those activities that are not so covered.

Profile as a Teacher

What **teaching** characteristics are we expecting of a teacher in a higher institution? A listing of some of these characteristics is provided below.

1. An understanding of how students learn.
2. A concern for students' development.
3. A commitment to scholarship.
4. A commitment to work with and learn from colleagues.
5. Continuing reflection on professional practice.

In displaying these characteristics, the expectation is that the teacher should have:

1. designed a teaching programme or scheme of work from a course outline, document or syllabus;
2. used a wide and appropriate range of teaching and learning methods effectively and efficiently in order to work with large groups, small groups, and one-to-one;
3. provided support to students on academic issues in a way which is acceptable to a wide range of students;
4. used a wide and appropriate range of assessment techniques to support student learning and to record achievement;
5. evaluated their own work with a range of self, peer and student monitoring and evaluation techniques;

6. performed effectively their teaching support and academic administrative tasks;
7. developed personal and professional strategies appropriate to the constraints and opportunities of their institutional setting

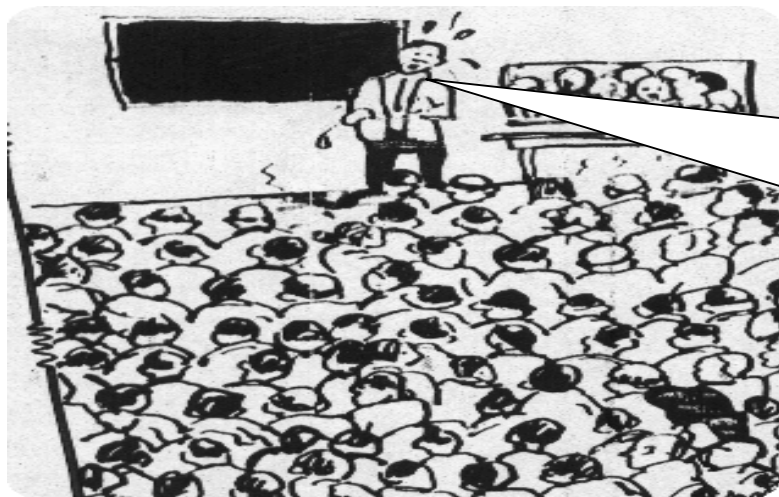
Higher Education Teaching

A list of the major goals of higher education teaching would include such objectives as changing students' factual knowledge and competence in the course material, strengthening various cognitive capacities (e.g., study skills, reasoning, writing and speaking skills), and fostering intellectual appreciation of the subject matter. For many, imparting knowledge and skills to students is the major objective of higher education teaching.

Teaching offers singular opportunities for the realisation of many important, intrinsic values in life. It enables, indeed requires the teacher to engage in a never-ending pursuit of knowledge. The world of the teacher is a world of learning. The opportunity for self education and for satisfying intellectual curiosity is unmatched in any other profession. It is in the education of others that the teacher finds the secret of his/her own. The teacher's role in educating others is becoming increasingly profound. We have traditionally thought of the teacher as a dispenser of information. Today he or she must be conceived as something far more than that. The knowledge explosion has forced upon us, fortunately, a new concept of the teacher. It is no longer possible to dispense during the school years all the knowledge that students will need in their lifetime, so we have come to stress "learning how to learn" as the essence of modern education. Thus the new role of the teacher becomes that

of stimulating the learner's curiosity, sharpening powers of independent intellectual discovery, and strengthening the ability to organise and use knowledge. In short, helping the learner acquire lifelong powers of self education.

The teacher has often been spoken of as an exemplar of fine scholarship, a model scholar whom students may emulate, the very embodiment of his or her discipline. This new role of the teacher as exemplar, far more profound than a role as mere dispenser of information, extends the impact of the teacher on the modes of thought and methods of study of the student throughout life. Thus the teacher is sustained by the challenge of implanting this important intellectual vestige in others. To help in guiding another generation's chance to grow is perhaps the noblest form of human expression. This is immortality beyond compare and as Obafemi Awolowo remarked, it is "as near to having a share in eternity as one can come in this earthly setting". This is indeed a difficult calling and a high calling. The teacher is blessed with the opportunity to answer this call each day.



Teaching, no doubt is a difficult calling. It is also an interesting calling, I assure you!

How well have you used this opportunity as a teacher? Table 2.1 gives a comparison between effective and ineffective behaviours of teachers that can be used for self assessment of how well you are answering the call as a teacher.

Table 2.1 Effective and Ineffective Behaviours of Teachers

Effective behaviours	Ineffective behaviours
Is alert, appears enthusiastic	Is apathetic, dull; appears bored
Appears interested in students and classroom activities	Appears uninterested in students and classroom activities
Is cheerful, optimistic	Is depressed, pessimistic; appears unhappy
Is self controlled, not easily upset	Loses temper easily, is easily upset.
Likes fun, has a sense of humour	Is overly serious, too occupied for humour
Recognises and admits own mistakes	Is unaware of, or fails to admit, own mistakes
Is fair, impartial, and objective in treatment of students	Is unfair or partial in dealing with students
Is patient	Is impatient
Shows understanding and sympathy in working with students	Is short with students, uses sarcastic remarks, or in other ways shows lack of sympathy with students
Is friendly and courteous in relations with students	Is aloof and removed in relations with students
Helps students with personal as well as educational problems	Seems unaware of students' personal needs and problems
Commends effort and gives praise for work well done	Does not commend students; is disapproving, hyper-critical.
Accepts students efforts as sincere	Is suspicious of pupil motives
Anticipates reactions of others in social	Does not anticipate reactions of others in

GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

situations	social situations
Encourages students to try to do their best	Makes no effort to encourage students to try to do their best
Classroom procedure is planned and well organised	Procedure is without plan, disorganised.
Classroom procedure is flexible within overall plan	Shows extreme rigidity of procedure, inability to depart from plan
Anticipates individual needs	Fails to provide for individual differences and needs of students
Stimulates students through interesting and original materials and techniques	Uninteresting materials and teaching techniques used
Gives clear, practical demonstrations and explanations	Demonstrations and explanations are not clear and are poorly conducted.
Is clear and thorough in giving directions	Directions are incomplete, vague
Encourages students to work through their own problems and evaluate their accomplishments	Fails to give students opportunity to work out their own problems or evaluate their own work
Disciplines in quiet, dignified, and positive manner	Reprimands at length, ridicules, resorts to cruel or meaningless forms of correction.
Gives help willingly	Fails to give help or gives it grudgingly
Foresees and attempts to resolve potential difficulties	Is unable to foresee and resolve potential difficulties

Let us examine the qualities of the higher education teacher in a little for detail.

Qualities of the higher education teacher

A teacher must, of course, have those intellectual qualities associated with his or her role as exemplar of fine scholarship. These include

- intellectual curiosity

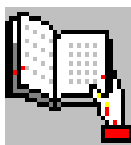
- ❑ mastery of his or her field of knowledge and its methods of inquiry
- ❑ respect for truth
- ❑ intellectual honesty, and
- ❑ fundamental understanding of the learning process.



Activity 2.3



1. Make a critical self-evaluation to determine your standing as a teacher using Table 2.1 and the list above as criteria.
2. Summarise the laws of your state which deal with tenure, salaries, and retirement.
3. Describe the best teacher you had in the university, stating the characteristics which stand him or her out..



2.2

Getting Teaching Off to a Good Start

At the end of this unit, you should be able to:

- state steps to be taken by the higher education teacher to get the class to a good start; and
- give details of what the teacher could do to achieve success at every step.



SPECIFIC OBJECTIVES

Getting the Class to a Good Start

The following suggestions, intended to help you get your class off to a good start, address the three important tasks of the first day: handling administrative matters, creating an open and friendly classroom environment, and setting course expectations and standards.

Visit the classroom before the first meeting. Locate and figure out how to work the lights, the blinds, and the ventilation. Check any audiovisual equipment (microphone, slide or overhead projector) you will be using. Find out how to obtain help if a bulb burns out or a piece of equipment malfunctions. Try speaking in the room and see how well your voice carries. Make sure your handwriting on the chalkboard is legible from the back row.

Build a sense of community in the classroom. In general, students learn more and work harder in classes that spark their intellectual curiosity and allow for active involvement and participation. For the first day, plan an activity that provides opportunities for students to speak to one another or solve problems. Students also tend to work harder and respond more positively if they believe the teacher views them as individuals rather than as anonymous faces in the crowd. From the start, then, make an effort to get to know your students and express your interest in working with them during the semester.

Address students' concerns. Students enter a new class with several questions: Is this the right course for me? Does the teacher seem competent and fair? How much work will be required? How will I be evaluated? Use the

first day to help your students understand how the class will serve their needs, and demonstrate your commitment to help them learn.

Set the tone for the rest of the semester. Greet students when they enter the classroom. Start and finish class on time. Encourage questions, and give students the opportunity to talk. Stay after class to answer questions, or invite students to walk with you back to your office.

Taking Care of Administrative Tasks

Take attendance. Call the roll or ask students to sign in. Have a contingency plan if more students than you can accommodate want to enrol. Check with your department to see whether policies exist for preferential enrolment. If your course is an elective, plan on admitting a few more students than you can comfortably accommodate; a small number will end up dropping your course.

Review any prerequisites for the course. Let students know what skills or knowledge they are expected to have and whether alternate experience or course work will be accepted. Is help available for those who do not have all the prerequisite skills? If computer work is part of the course, will training be provided?

Define your expectations for student participation. Besides turning in all written assignments and taking exams, what do you expect of students during class?

Hand out and discuss the course syllabus. Have students read the syllabus and then form groups to identify questions about the course or the teacher. Hearing these questions on the first day lets the teacher know immediately what concerns are uppermost in students' minds.

Review safety precautions. If your course requires lab work or fieldwork, review safe practices for using equipment and supplies and discuss emergency procedures. Show students how to use equipment safely and appropriately.

Review emergency procedures. Let students know what to do in case of fire, evacuation, or other emergency.

Bring copies of the required texts to the first class meeting. Know which stores besides the campus bookstore stock the texts. Are used copies available? Is the textbook on reserve in the library?

Creating a Positive Classroom Environment

Introduce yourself to your class. In addition to telling students how you wish to be addressed, say something about your background: how you first became interested in the subject, how it has been important to you, and why you are teaching this course. Convey your enthusiasm for the field and the subject. For many students, the teacher's enthusiasm about the course material is a key motivator for learning.

Ask students to fill out an introduction card. Have students indicate their name, address, telephone number, electronic mail address, year in school, and major field. You might also ask them to list related courses they have taken, prerequisites they have completed, other courses they are taking this

semester, their reasons for enrolling in your course, what they hope to learn in the course, tentative career plans, and something about their outside interests, hobbies, or current employment.

Begin to learn student's names. By learning your student's names, you can create a comfortable classroom environment that will encourage student interaction. Knowing your students' names also tells them that you are interested in them as individuals. As you call roll, ask for the correct pronunciation and how the student prefers to be addressed. If your course enrolls few students, call the roll for several class meetings to help you learn names. During the term, call students by name when you return homework or quizzes, and use names frequently in class.

Setting Course Expectations and Standards

Discuss the objectives of the course. As specifically as possible, tell your students what you wish to accomplish and why, but also ask for what they want to learn from you and what sorts of problems they would like to tackle. Be sure to acknowledge all contributions—your attentiveness to students' ideas will encourage student participation throughout the semester.

Ask students to list the goals they hope to achieve by taking the course. Have students, in small groups or individually, list three to five goals in the form of statements about knowledge, skills, appreciation, interests, or attitudes. Students can also rank their goals in terms of how difficult they may be to achieve. Use these lists to identify your class's interests and anticipated problem areas. (Source: Angelo and Cross, 1993)

Describe how you propose to spend class time. How will sessions be structured? How will discussions be organised? Will a specific time be set aside for questions, or may students ask questions as they arise? Should questions requiring a lengthy response be saved for office hours?

Give your students ideas about how to study and prepare for class.

Study strategies are especially important in an introductory class. Give examples of questions students might wish to think about or strategies for approaching the material. Tell students how much time they will need to study for the course, and let them know about campus academic support services.

If appropriate, give a brief diagnostic pretest. Explain that this "test" will not be graded but is designed to give you information on topics students have mastered and areas in which they need additional review. You could present a list of key concepts, facts and figures, or major ideas and ask students to indicate their familiarity with each. In a writing course you might assign a short essay that will allow you to identify students' strengths and weaknesses.

Some Hints to Enhance the Profile of the Teacher

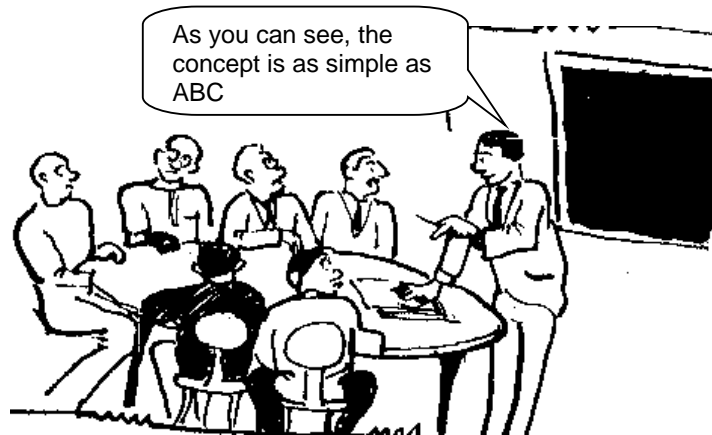
Provided below are some suggestions to enhance your profile as a teacher.

Giving Clear Explanations

- Use concrete, real-life, and relevant examples.
- Present practical applications and experiences.
- Use illustrations, graphs, and diagrams where appropriate.
- Use relevant audiovisual aids (films, tapes, maps, slides, etc.).
- Develop effective metaphors or analogies for difficult concepts.

GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

- Suggest mnemonic aids for memorising complicated ideas.
- Paraphrase technical explanations in understandable language.
- Define unfamiliar terms.
- Write key terms on the blackboard or overhead.
- Repeat difficult ideas in diverse ways.
- Speak more slowly for difficult or particularly important ideas.
- Ask if students understand before proceeding.



Making Clear Presentation

- Speak in a clear, well-paced, and expressive manner.
- Use appropriate teaching aids effectively (e.g., blackboard, overhead projector, handouts, ...).

Effective Speaking

- Speak at suitable rate, not too fast for understanding and note-taking.
- Speak loudly enough for the room.

- Pronounce words distinctly.
- Modulate voice; speak expressively rather than in a monotone.
- Speak fluently, without excessive pauses or "ums" and "ahs."
- Speak naturally without over reliance on verbatim reading (outlines can help).

Effective Nonverbal Presentations

- Use facial expressions (e.g., smiling, laughter), bodily gestures, and movement.
- Avoid distracting mannerisms (e.g., playing with chalk, rocking).
- Make eye contact with students.
- Move about the classroom, do not fix on a desk or lectern.
- Display a relaxed manner.
- Include humour.
- Use blackboards, other audiovisual aids, and a variety of methods.
- Be enthusiastic and dynamic.

Promoting Student Interest

- Describe relevant personal experiences.
- State your point of view on issues.
- Demonstrate interest in the subject matter and in teaching.
- Present challenging and thought-provoking ideas.
- Examine controversial issues.
- Introduce topics in novel and interesting ways (e.g., a mystery or paradox).
- Point out practical applications and interesting examples.
- Relate subject matter to current events and student interests or activities.
- Encourage new ideas from students.
- Use varied activities, media, and formats (e.g., guest lecture, panel discussions).

Openness to Ideas

- Be open to different opinions and points of view.
- Let students feel free to question you, to think independently, and to express dissenting views.
- Present and explore points of view other than your own.
- Be flexible in your thinking.
- Contrast the implications of different theories.
- Let students be creative (e.g., generate alternative explanations).
- Demonstrate and encourage original and independent thought.

Promoting Rapport

- Be reasonably available for consultation.
- Talk with students before, after, and outside class.
- Learn student's names (e.g., use class cards).
- Show interest in how students are doing.
- Show interest in students and their ideas.
- Be sensitive to student progress and motivation (e.g., know when students are having difficulty or are bored).
- Show concern that students understand and learn the subject matter.
- Take action when students lose interest or have excessive difficulty (e.g., use more examples, modify requirements?).
- Make students feel welcome (e.g., announce availability for help, be approachable).
- When students seek help, be understanding, patient, helpful, and not overly critical.
- Be tolerant of other points of view.

- Provide opportunities in class for questions.
- Engage in give and take with students.
- Show approval for student ideas (e.g., positive comments, praise, smile, nod head).
- Respect thoughts, opinions, and rights of students and others.

Effective Communication

- Prepare clear objectives for the course.
- Communicate objectives, course requirements, and grading criteria.
- Reduce barriers incidental to student learning (e.g., undesired ambiguity).
- Give students sufficient information to prepare for evaluations.
- Provide detailed instructions and sample questions for evaluations where appropriate or necessary.
- Perhaps remind students of dates and identify important topics for evaluations.
- Use clear and reasonable evaluations. (e.g., tests that reflect course materials).
- Grade assignments fairly and consistently across students.
- Considering class size, grade work promptly and provide helpful feedback.
- Provide answers as feedback for objective assignments.
- Use enough evaluations for adequate feedback and a fair measure of student learning.



Activity 2.3



Review the checklist below with some of your colleagues and students. Use it to assess yourself, and other teachers in your department.

CHECKLIST FOR ASSESSING THE TEACHING PROFILE IN HIGHER EDUCATION

Sensitivity to, and Concern with, Class Level and Progress:

- teacher communicates effectively at a level appropriate to students' understanding
- textbook is of appropriate difficulty for the student
- teacher seems to be concerned with whether students learn the material
- teacher determines if one student's problem is common to others
- teacher realises when students are bored or confused

Preparation; Organisation of the Course:

- teacher is well prepared for class
- teacher organises the course in a logical manner
- the course organisation assists students in developing basic concepts
- new information is presented logically, and is related to ideas already introduced
- students perceive the teacher as well-organised
- lectures are easy to outline

Knowledge of the Subject:

- teacher demonstrates comprehensive knowledge of his/her subject
- teacher knows the current research and literature in his/her field
- teacher knows his/her field of specialisation very well

Enthusiasm (for Subject or for Teaching):

- teacher seems interested in teaching the course
- teacher's ability to convey interest and enthusiasm for subject matter
- teacher is dynamic and energetic

Clarity:

- teacher explains clearly and attempts to answer all questions
- students are able to follow and understand class lectures/presentations
- teacher relates concepts in a systematic manner that helps understanding
- teacher uses well chosen examples to clarify points
- teacher summarises major points
- teacher interprets abstract ideas and theories clearly

Availability and Helpfulness:

- teacher encourages students to see him/her if in difficulty
- teacher is readily available to students outside class for consultation
- teacher has rapport with students
- special 'group help' sessions are provided for students who need it
- teacher is conscientious in keeping appointments with students
- teacher is willing to give personal assistance

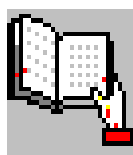
Impartial Evaluation of Students; Quality of Examinations:

- concepts emphasised in class are those emphasised in exams

GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

- exams cover material on which students expect to be tested
- exams require student to do more than recall factual information
- exams allow student to adequately demonstrate what was learned in the course
- exams require synthesis of various parts of the course
- the teacher tells students how they will be evaluated in the course
- grades are based on a fair balance of course requirements and content
- students are satisfied with the way they have been evaluated
- students are quizzed frequently
- teacher announces tests and quizzes in advance
- teacher uses more than one type of evaluation device

These phrases could be useful in putting together a mid-term course evaluation while there is still time to make improvements. Collecting feedback at the end of the course is useful as feedback and for evaluation, but mid-term evaluations often are more useful in improving instruction.



2.3

Research and Community Service

Research and Community Service Profiles of the Higher Education Teacher

We devoted the last unit to examining how we can discharge our duty as teachers. As you would have noticed, a great part of this module, profiling the higher education teacher, is devoted to discussing teaching functions. Noting that this guide is on

MODULE 2: Profile of the Higher Education Teacher

2.25

teaching and learning, the time investment on discussing teaching would appear justifiable. Yet, research and community service are equally important. Indeed, research is underscored in employment and promotion of academic staff in higher institutions, much more so than teaching and community service in many cases. The ‘publish or perish’ or ‘publish or be damned’ entreaty to academic staff of higher educational institutions, rests largely on the plank of research activities. “Town meets gown” phrase projects community service. We turn attention in this Unit to the attributes of the higher education teacher in research and community service areas.

At the end of this unit, you should be able to:

- state the importance of research to improving the profile of a higher education teacher;
- describe attributes of a good researcher;
- state the importance of community service to improving the profile of a higher education teacher; and
- outline ways by which the higher education teacher can offer good quality community service.



Research Profile of the Higher Education Teacher

Introduction

Among the core goals of a higher institution is to extend the frontiers of knowledge through research. The academic staff of the institution are in most cases, given the mandate to pursue this goal. Thus, aside from teaching, the institution expects its academic staff to be actively engaged in research that is ground-breaking. We take

research here to mean the process of inquiry leading to the solving of a problem. The problem may be in the sciences, engineering, environment, medicine, social sciences, education or other disciplines.

Importance of Research to the Higher Education Teacher

Research is important to the higher education teacher in three major ways. First, it enhances the quality of instruction. A teacher who does little or no research falls back on his or her old lecture notes year after year. Newness is brought about as a consequence of research. Research results generated by the teacher or others in the field form the basis for updating content of lectures and practical work.

Secondly, engagement in research ensures that the teacher is able to supervise research by his students more effectively. We are called upon every year to supervise the research of our students for undergraduate and/or postgraduate studies in partial fulfilment of a degree or diploma. Changes in research methods, materials, analysis procedures and current literature can only be known by the teacher who is up-to-date in research. Thus, our work and those of the students we are supervising will benefit tremendously by our active engagement in research.

The third point of note regarding the importance of research to the higher education teacher has to do with promotion. As stated earlier, we are expected to “publish or perish”. Promotion is largely based on contribution to knowledge through research and publications. No ‘papers’ no promotion; no research, no ‘papers’. To move up the ladder, we have to be steep in productive research. Productive research here means that which result in articles in refereed journals, books and other scholarly documents.



Activity 2.4



1. Reflect on your life as staff in a higher institution. What role(s) did research play in your (a) teaching; and (b) promotion?
2. Describe ways by which your teaching and promotion would have been enhanced if you had greater opportunity to undertake research.
3. State other ways by which your service as a teacher has been influenced by your research activities.

Characteristics of a Good Researcher

The following are some of the characteristics of a good researcher:

Ability to identify problems

Research is about problem solving. Thus, the ability to identify, state and define the boundaries to problems is an important characteristic of a researcher. Premium is placed more on problems of concern to the immediate environment of the researcher. For example, an educational researcher will be



applauded for seeking solutions to pressing educational problems within the local community or country. Same goes for agricultural scientists addressing problems faced by farmers in a region or country.

Ability to design an efficient method of solving the problem

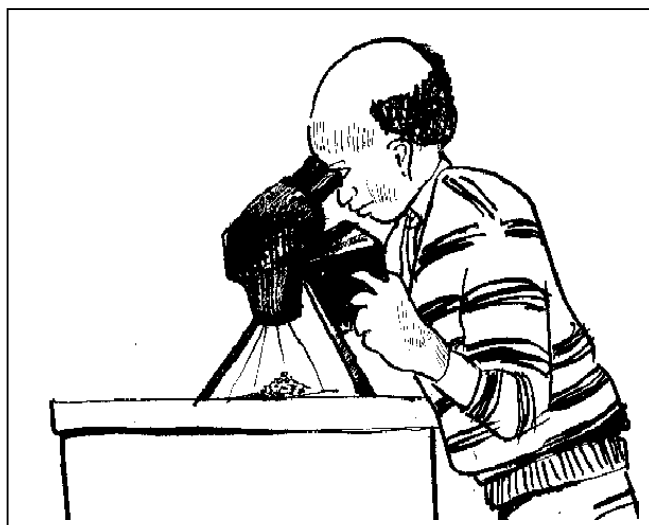
Problem identification is one thing; the methodology for solving the problem is another. The researcher needs to have the ability to employ an efficient and parsimonious design for solving the problem.

Resourcefulness in implementing research plan

No research design or plan is foolproof. During implementation, some unforeseen events may occur demanding changes or modifications to the original plan. The good researcher should be resourceful in making such modifications or changes. Perhaps equipment needs to be improvised or techniques adjusted. It is the good researcher who is able to respond quickly to these challenges.

Objectivity

Research is the pursuit of truth which comes about as a result of an objective quest. In his or her procedures, data collection and interpretation, the researcher must exercise objectivity, that is, no bias throughout the implementation of the research plan.



Honesty

Honesty has to do with reporting one's observations as truthfully as possible. Data adjustments and fudging to suit pre-conceived theoretical positions are hallmarks of the crooked researcher.

Perseverance

The researcher ought to keep going on the research plan in spite of delays and disappointments. Difficulties do arise. The researcher never gives up until all the evidence needed for decision making are in.

Willingness to collaborate with others

Solo efforts in conducting research are good. Joint and co-operative efforts are better, after all, 'two heads are better than one'. A good attribute is for the researcher to be able to work as part of a team. He or she should be able to bring knowledge, experience and expertise to bear on a segment of the research project to complement knowledge and skills of the other members of the team. It has been observed that collaborate group research projects receive better evaluation than individual projects.

Ability to supervise others

A researcher should be able to effectively supervise the research work of students and junior colleagues.

Skills in writing winning grant proposals

Most high-quality research projects are funded by the institution or agencies external to it. Funding agencies receive several proposals for funding from which only a few

are chosen. The competition generated by the process demands that researchers are able to write proposals that have high likelihood of winning grants.

Skills in reporting for publication

On concluding the research, a report results. For us in academia, the report is usually sent in form of an article to a publication outlet such as a refereed journal. The skill in writing good quality journal articles for publication consideration is an important hallmark of a researcher.



Activity 2.5



Use the self-report inventory below to assess your ability as a researcher.

VG= Very Good

G= Good

P= Poor

VP= Very Poor

S/No.	Characteristic	V.G.	G.	P	VP.
1.	Ability to identify problems				
2.	Ability to design efficient research plan				
3.	Resourcefulness				
4.	Objectivity				
5.	Honesty				
6.	Perseverance				
7.	Willingness to collaborate with others				

8.	Skills of writing winning grant proposals				
9.	Ability to supervise research				
10.	Skills in writing acceptable research reports				

Make note of the areas needing improvement. Make an effort to remedy deficient areas within a convenient time frame.

Community Service

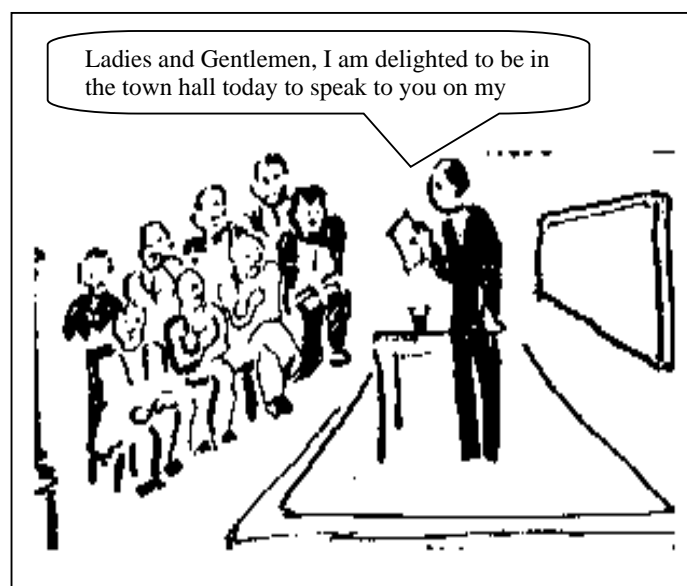
It is not enough for the teacher in a higher institution to be concerned only with his or her teaching and research. There is the need to serve the community in other ways. By community we mean both the community within the institution and the community outside it.

Service within the institutional community

This includes committee work and membership of task forces, patron to student and staff societies, and office holder of staff societies.

Service outside the institution

Examples of service offered by higher



education teachers to the community outside the university are:

- Participation in special local and national assignments and services
- Delivery of public lectures
- Offering of services in one's specialised area e.g. medical care
- Office holder of national societies e.g. President of Science Teachers Association.



Activity 2.5



1. State the characteristics needed for successful participation in community service.
2. Prepare a checklist like that developed for research.
3. Assess yourself and a colleague using this checklist.
4. How can you improve on your performance on these characteristics?

Summary

In this module, we reviewed the major characteristics of the higher education teacher in the areas of teaching, research and community service. We identified attributes that will ensure success in the three areas. For teaching, we identified the following:

- an understanding of how students learn;
- a concern for students' development;
- a commitment to scholarship;

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- a commitment to work with and learn from colleagues;
- continuing reflection on professional practice.

For research we noted the following as attributes:

- Ability to identify problems
- Ability to design efficient research plan
- Resourcefulness
- Objectivity
- Honesty
- Perseverance
- Willingness to collaborate with others
- Skills of writing winning grant proposals
- Ability to supervise research
- Skills in writing acceptable research reports

For community service, we noted that committee work and membership of task forces, patron to student and staff societies, and office holder of staff societies are services that can be offered within the institution. Examples of service offered by higher education teachers to the community outside the university are:

- Participation in special local and national assignments and services
- Delivery of public lectures
- Offering of services in one's specialised area e.g. medical care
- Office holder of national societies.

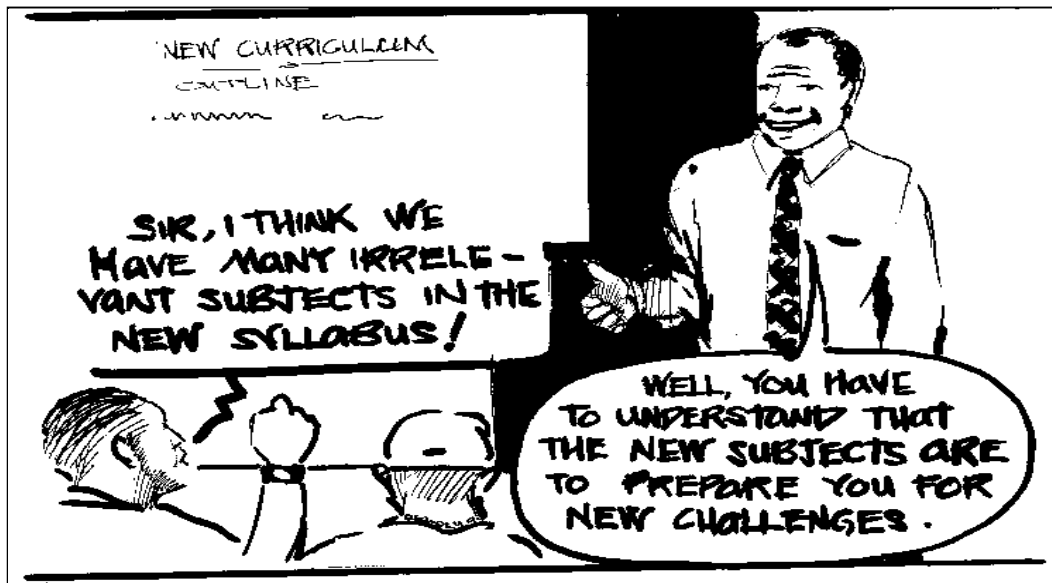
References

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Module

3

Curriculum Development in Higher Education





Reflect on the following as you work through this Module

25. The Dakar, Tokyo and Beirut Conferences define what is relevance, a definition which fits what has already appeared in UNESCO's Policy Paper for Change and Development in Higher Education: 'Relevance is considered particularly in terms of the role of higher education as a system and of each of its institutions towards society. It must thus include matters like democratisation of access and broader opportunities for participation in higher education during various stages of life, links to the world of work and the responsibilities of higher education towards the education system as a whole. No less important is participation by the higher education community in the search for solutions to pressing human problems such as population, environment, peace and international understanding, democracy and human rights'.
30. The idea that higher education should participate in the improvement of the whole education system appears in the definitions of relevance in the Tokyo and Dakar Declarations, and is mentioned in the Arab States Declaration. In the Latin America and Caribbean Declaration the contributions are expressed in a direct way. It says that 'most concrete contributions can be made a reality via: training teachers, transforming students into active agents of their training; promoting socio-educational research into such problems as early school drop-outs and students' repeating courses; and ensuring its contribution to the design of State policies in the field of education'. The Beirut Declaration adds that 'Arab States should devote determined efforts to improve general education as well as to ensure that graduates of this level of education master the essential competencies needed for life, including those necessary for the pursuit of higher education endeavour. Higher education institutions should actively participate in the efforts leading to the improvement of pre-university education'.
31. The document adopted in Palermo concentrates its conceptual analysis regarding relevance on the links with the world of work, in particular with industry. A principle is established at the outset: 'In a labour market which is dynamic and heterogeneous, higher education institutions should not base their long-term orientations on labour market or manpower planning, but on social demand', which requires that students gain new skills, (such as learning to be entrepreneurial). On this last point, the Havana Declaration states that 'higher education must implement pedagogical methods based on knowledge, in order to train graduates that learn how to learn and how to undertake; in this way, they will be better prepared to generate their own jobs'. The Arab states document recommends 'reciprocal harmonisation with world of work, and states that 'higher education must take a leading role in the evolution of the world of work to better meet sustainable development requirements'.

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36. The Dakar, the Tokyo and Beirut Declarations present definitions of quality, which also fit with the concepts presented in UNESCO's Policy Paper for Change and Development in Higher education. One basic assumption is that quality is linked to relevance (in other words, quality has no meaning without relevance as stated in the Arab States Declaration) and that 'quality is a multidimensional concept which depends to a large extent on the contextual setting of a given system, institutional mission, or conditions and standards within a given discipline.
71. The Palermo document proposes that the cultural values, in both European and global contexts, 'should permeate all higher education curricula, their transmission, especially as far as ethical considerations are concerned, should not be limited to special courses. Special emphasis should be placed on language training, multi-disciplinarity, independent and critical learning associated with team-work. With the help of higher education institutions, this process should start in primary and secondary education'. On values, the Havana Conference asks that the most significant ones be incorporated, including: freedom, human rights, social and ethical responsibility and solidarity.
72. The African Conference recommends that 'Member States develop educational programmes capable of meeting the challenges of sweeping societal changes and the principal challenges which Africa is bound to face in the immediate future'. It also recommends that Member States should 'be convinced that investment in higher education is worthwhile, as long as the institutions are oriented to meet the needs of society'.
73. The Tokyo Conference suggests that higher education institutions:
- 'give every student the philosophical, historical, psychological and anthropological foundations of knowledge with regard to humankind, its environment and its different societies'.
 - 'support research and pilot curriculum projects which provide expertise to facilitate access to modern technology and scientific discoveries, but which also lead to the understanding, appreciation, internationalisation and dissemination of human and societal values, with special attention to the goals of peace and democracy and protection of the environment'.
71. The Dakar Conference also presents a series of proposals oriented to specific actions by the higher education institutions. In brief:
- they should establish integrated programmes to seek appropriate strategies to create a culture of peace and to solve problems related to sustainable development (such as the reduction of hunger and the protection of the environment);
 - research should be more closely related to the needs of African societies;
 - institutions should define their mission statements in the form of overall general guidelines, linked with the national education programmes and based on the analysis of needs;
 - educational programmes should be defined in terms of expected outcomes and not simply in terms of facts to be transmitted and reproduced or in terms of mere course titles;
 - higher degree programmes should be organized around a quantitative and qualitative critical mass of committed academics working together, in a qualitatively conducive environment, on subjects relevant to Africa's development.

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84. The Tokyo conference considers that 'Governments must expand and diversify opportunities for every citizen to benefit from higher-level-skills, training, knowledge and information which are the qualifications for entry into the world of work'.
85. Higher education institutions should promote continuous and interactive partnerships with the productive sector using both reactive and proactive approaches. They must adjust the curriculum to meet the needs of the workplace and ensure that new disciplines and specialisations are incorporated into its content. Also, they must help shape the labour market, on the one hand by identifying (independently of conjunctural (short term) interests of enterprises), new local and regional needs, and on the other hand by designing mechanisms for retraining and career-switching. Curricula should be organised to stimulate the entrepreneurial skills of students. This requires flexible, innovative and interdisciplinary approaches'. Later, the Tokyo conference also proposes that 'pedagogical programmes should be established to encourage students to be more entrepreneurial and initiative-oriented'.
94. The Dakar Conference, like the Tokyo and the Beirut Conferences, suggests that Member states create 'observatories to monitor changes in the labour market in order to facilitate the elaboration of national educational plans and to improve the capacity of higher education institutions to align their policies with national priorities'. For Beirut, the observatories should monitor 'short and long term trends of the world of work and the harmonisation needed between these trends and higher education policies and programmes'.
97. The Dakar conference also proposes that institutions of higher education make special efforts to develop scientific and technological programmes to help meet the demands of the accelerated development of new information and communication technologies and notes that this can create virtual universities.
98. The Palermo document considers that the shift from teaching to learning implies, among other things, 'a new approach to curriculum development taking into account multi and interdisciplinary, flexibility of choice but in a coherent system which allows for modularisation, credit and transfer, the validation of work experience and the organisation of the academic year in semesters both at national and international level'. For Palermo, this shift implies also 'self-managed learning, a coaching role for the teacher, professional support services, investment in new delivery and quality assurance mechanisms especially in off-campus operations, which leads to a new definition of scholarship that balances discovery and transmission as well as the integration and application of knowledge'.

Article 11. Qualitative evaluation

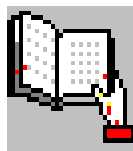
- a. Quality in higher education is a multidimensional concept, which should embrace all its functions, and activities: teaching and academic programmes, research and scholarship, staffing, students, building, facilities, equipment, services to the community and the academic environment. Internal self-evaluation and external review, conducted openly by independent specialists, if possible with international expertise, are vital for enhancing quality. Independent national bodies should be established and comparative standards of quality, recognised at international level, should be defined. Due attention should be paid to specific institutional,

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national and regional contexts in order to take into account diversity and to avoid uniformity. Stakeholders should be an integral part of the institutional evaluation process.

- b. Quality also requires that higher education should be characterised by its international dimension: exchange of knowledge, interactive networking, mobility of teachers and students, and international research projects, while taking into account the national cultural values and circumstances.
- c. To attain and sustain national, regional or international quality, certain components are particularly relevant, notably careful selection of staff and continuous staff development, in particular through the promotion of appropriate programmes for academic staff development, including teaching/learning methodology and mobility between countries, between higher education institutions, and between higher education institutions and the world of work, as well as student mobility within and between countries. The new information technologies are an important tool in this process, owing to their impact on the acquisition of knowledge and know-how.

Extracted from the:
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(1998)*



3.0

Introduction and General Objectives

Introduction

With the explosion of knowledge and increasing sophistication of technology, higher education programmes need to be frequently reviewed and developed to keep pace with the needs of society and the learners. This module provides a guide to undertaking curriculum development at the higher education level. The module, which consists of four units, clarifies the concepts of curriculum and curriculum development and describes the prevailing practices in curriculum development in higher education. The module also presents the determinants and perspectives of curriculum development in

higher education and ends with activities to illustrate what is involved in curriculum development in practice.

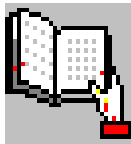
The module has several practice activities and exercises to give an idea of what the various elements of curriculum development are all about. You are encouraged to do these practical activities so as to enhance your understanding of the concept and practice of curriculum development.



After completing this module, you should

GENERAL OBJECTIVES

- ❑ develop better understanding of the concepts of curriculum and curriculum development;
- ❑ identify the determinants of curriculum development in higher education;
- ❑ review prevailing approaches to curriculum development in higher education; and
- ❑ carry out exercises in the development and review of curricula in your subject area.



3.1

Curriculum and Curriculum Development



At the end of this unit, you should be able to:

SPECIFIC OBJECTIVES

- clarify the concepts of curriculum and curriculum development;
- demonstrate the need for curriculum development in higher education;
- ❑ describe some models of curriculum development in higher education;
- ❑ identify the stages in the process of curriculum development;

- ❑ distinguish between different types of curriculum; and
- ❑ develop a curriculum in your subject area.

The Concepts of Curriculum and Curriculum Development

The quest for a definition of curriculum has taxed many educators. Obanya (1996) ascribed ambiguity and lack of precision to the term “curriculum”. Olaitan and Ali (1997) observed, “The curriculum field is by no means clear; as a discipline of study and as a field of practice, ‘curriculum’ lacks clean boundaries... Indeed, curriculum seems at times analogous to the blind men’s elephant. It is the pachyderm’s trunk to some; its thick legs to others; its pterodactyl-like flopping ears to some people; its massive, rough sides to other persons; and its rope-like tail to still others.

The amorphous nature of the word curriculum has given rise over the years to many interpretations. Depending on their philosophical beliefs, persons have conveyed these interpretations, among others:

- Curriculum is that which is taught in school.
- Curriculum is a set of subjects.
- Curriculum is content.
- Curriculum is a programme of studies.
- Curriculum is a set of materials.
- Curriculum is a sequence of courses.
- Curriculum is a set of performance objectives.
- Curriculum is a course of study.
- Curriculum is everything that goes on within the school, including extra-class activities, guidance, and interpersonal relationships.
- Curriculum is what is taught both inside and outside of school that is directed by the school.
- Curriculum is everything that is planned by school personnel.
- Curriculum is a series of experiences undergone by learners in school.
- Curriculum is that which an individual learner experiences as a result of schooling.

What can we deduce from this array of definitions? Perhaps we can see curriculum defined in a narrow sense (as subjects taught) or broadly as all the experiences of learners, both in school and out, that are directed by the educational institution. The implications to be drawn from the differing conceptions of curriculum can vary considerably. The institution that accepts the definition of curriculum as a set of subjects faces a much simpler task than one that takes upon itself responsibilities for experiences of the learner both inside and outside the institution.

...let us take the curriculum to be the set of activities that are geared towards the achievement of that institution's educational goals.

Where do we go from here? For the purpose of this guide, let us take the curriculum to be *the set of activities that are geared towards the achievement of that institution's educational goals*. All the inputs into an institution are intended to support the implementation of the curriculum and some of the outcomes of the implementation process include developed talents, acquired knowledge and skills and improved intellectual abilities.

The curriculum of an educational institution deals with all the scheduled activities undertaken in that institution. Where any of these aspects is deficient, the curriculum becomes inadequate and therefore a subject of improvement and/or revision. Advances in knowledge and technology also make curriculum revision necessary by including in college programmes the new and relevant developments to keep pace with the needs of society. In some cases, a new subject may need to be added to the existing programme and this new subject should be developed using existing materials in similar programmes elsewhere as resources.



Activity 3.1



The concepts “curriculum” and “curriculum development” have many related concepts which need further clarification by teachers in higher educational institutions. Which of these other concepts related to curriculum or curriculum development would you wish to have clarified? Write down as many of these concepts as possible and give your approximation of what they mean. Your list is likely to consist of the following (Box 3.1).

Box 3.1. Concepts in Curriculum and Curriculum Development

Concept	Approximate meaning
<i>Content</i>	Body of knowledge contained in a course
<i>Syllabus</i>	List of topics arranged in sequence
<i>Scope</i>	The level to which a topic can be taught
<i>Sequence</i>	The arrangement of topics in order
<i>Aims</i>	Broad statement of what is intended to be achieved
<i>Goals</i>	What is hoped to be attained
<i>Core Curricula</i>	Courses/subjects that are of absolute necessity in a programme of study
<i>Integrated curriculum</i>	A set of subject fused together in which the traditional boundaries between subject areas are broken
<i>Teaching Resources</i>	Materials and activities used by teachers in their classroom transaction
<i>Optional/electives</i>	Courses/subjects to be elected by students



Examine the following definitions of the term CURRICULUM:

Activity 3.2



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- (a) The plans for the teaching and learning of a specific subject in school;
- (b) Official regulations on what schools should teach, the books they should use, how much work they should cover in a given period, etc.
- (c) A mixture of all the activities that a school involves its students in;
- (d) Details of what examiners require students to learn;
- (e) The entire syllabus for student work in school;
- (f) The act of constantly adjusting school activities to the changing goals determined by changing times.

Arrange (a) - (f) in an ascending order (1-6), representing the order in which each statement best describes the term CURRICULUM.

How have you re-arranged the definitions? Encircle the correct ordering

- a..... 1 2 3 4 5 6
- b..... 1 2 3 4 5 6
- c..... 1 2 3 4 5 6
- d..... 1 2 3 4 5 6
- e..... 1 2 3 4 5 6
- f..... 1 2 3 4 5 6

Is Curriculum Development Needed in Higher Education?

In Africa, most institutions of higher learning that were established during the colonial period had their curricula patterned along models of the colonising countries. This state of affairs remained largely unchanged even after the countries gained independence. The curriculum of higher educational institutions in countries where this situation existed were designed to serve the needs of the system that was operating at the time. Since independence and the establishment of African administrative structures, the curriculum in these institutions have been found to be inappropriate and this necessitated the development or revision of higher education curriculum, as a way of improving the system of education. This is the major reason for curriculum revision, improvement and indeed development in many countries in Africa.



Activity 3.3 

There are many other reasons for which curriculum development is undertaken in higher educational institutions in Africa. State as many of these reasons as you can. Your list is likely to include the reasons contained in Box 3.2.

ent in.

Box 3.2. Major Reasons for undertaking Curriculum Development in Higher Education

1. Improvement of what is taught in higher education by revising and including current and relevant content matter.
2. Placing higher education in its local milieu from the western European context that was kept in view when transplanting educational practices in Africa.
3. Filling the gaps that currently exist in higher educational programmes.
4. Responding to the needs of society.
5. Responding to research evidence from internal and external efficiency studies of the higher education sub-sector.

Changes in society tend to immediately require corresponding changes in the curriculum of higher education institutions presumably because it is the end of formal education and the last opportunity for entry into the world of work. Besides, higher education has the capacity to constantly investigate itself in order to make adjustment to improve both its internal and external efficiency. Also, new developments in various fields and new thinking and visions may necessitate changes in the curriculum in higher education. For instance, the Declaration of the Jomtien World Conference on Education brought with it a number of curriculum changes in the education field including higher education. Firstly, the Declaration gave special prominence to the training of teachers in special education for the physically and mentally handicapped. This meant the development or revision of a teacher-training curriculum in special education. Also, higher educational institutions in some countries were assigned the task of training teachers in subject areas like technical and vocational education, and national languages. Curricula in teacher training in these subject areas were developed in order to have sufficiently diversified school curriculum that will engage all the children in various countries. In a similar way, major advances in biological, medical and physical sciences led to revision of courses in the field.



There may be other reasons for undertaking curriculum development in the higher education sub-sector. State four of

Activity 3.4



these reasons and describe whether they have influenced the onset of a curriculum development project in your country.

Curriculum Development and Domains of Learning

A commonly used model or design of curriculum development is based on the taxonomy of educational objectives by Benjamin Bloom and a group of colleagues from the University of Chicago. Bloom's taxonomy presents a system for classifying educational objectives into three broad categories called domains (cognitive, affective and psychomotor). These domains are in turn further classified into sub-categories. The cognitive domain is concerned with behaviours related to thinking or manipulating while the affective domain is concerned with attitudes and values and the psychomotor domain with learned muscular responses. The cognitive domain is most developed and it is divided into six sub-categories. The cognitive domain of this taxonomy is reproduced in Box 3.3.

“
*Bloom's
taxonomy,
though old,
still
lumbers on
in
educational
discourse*
”

Box 3.3. Educational Objectives : Cognitive domain

1. KNOWLEDGE
 - .1 **knowledge of specifics**
 - .11 knowledge of terminology
 - .12 knowledge of specific facts
 - .2 **knowledge of ways and means of dealing with specifics**
 - .21 knowledge of convention
 - .22 knowledge of trends and sequences
 - .23 knowledge of classification and categories
 - .24 knowledge of criteria
 - .25 knowledge of methodology
 - .3 **knowledge of the universals and abstractions in the field**
 - .31 knowledge of principles and generalisations
 - .32 knowledge of theories and structures
2. COMPREHENSION
 - .10 Translation
 - .20 Interpretation
 - .30 Extrapolation
3. APPLICATION
4. ANALYSIS
 - .10 Analysis of Elements
 - .20 analysis of Relationships
 - .30 Analysis of organisational principles

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5. SYNTHESIS

- .10 Production of a unique communication
- .20 Production of a plan or proposed set of operations
- .30 Derivation of a set of abstract relation

6. EVALUATION

- .10 Judgement in terms of internal evidence
- .20 Judgement in terms of external criteria

Most of curriculum development in higher education has to do with the knowledge that is transmitted and the manner of doing so. The above taxonomy of educational objectives is handy because it gives a framework for the statement of objectives. The affective and psychomotor domains have not been as clearly defined but are equally the concern of curriculum developers.

Like the cognitive domain of educational objectives, the affective domain can be divided into sub-categories. Identify five of such categories and attempt to break these further into simpler categories. Your list of categories might include the following as in Box 3.4.



Activity 3.5



Box 2.4. Sub Categories of the Affective domain of Educational Objectives

1. ATTENTION (RECEIVING)

- .1 Awareness
- .2 Willingness to receive
- .3 Controlled or selected attention

2. RESPONDING

- .1 Acquiescence in responding
- .2. Willingness to respond
- .3.Satisfaction in response

3. VALUING

- .1 Acceptance of a value
- .2.Preference for a value
- .3. Commitment

4. ORGANISATION

- .1 Conceptualisation of a value
- .2. Organisation of a value system

5. CHARACTERISATION BY VALUE COMPLEX

- .1 Generalised set
- .2 Characterisation

Models of Curriculum Development

There are several models of curriculum development. An attempt to describe the various models oftentimes leads to confusion. To avoid falling into the confusion trap, we have settled for three of the well-known models. These models are:

- ◆ objective model
- ◆ process model
- ◆ situation analysis model.

The Objective Model

This model is influenced by behavioural psychology and makes use of objectives expressed in behavioural terms. According to this model, there are five major stages in curriculum development:

1. Stating General Aims, Goals and Objectives: This stage is the entry point in the model and it is derived from the national philosophy of education. Aims are formulated in line with the wider social context in which learning is taking place, hence they should be influenced by society's accepted needs and values. The aims of higher educational institutions are embodied in their mission statements enacted by parliament at the time the institution was founded. Goals and objectives are also formulated in line with the general policy framework.

2. Selection of Content: After stating aims, goals and objectives, the next line of action using the objectives model is to select content. The content to be taught in a higher educational institution is usually decided upon by the higher education institution's authorities who set up the programme. Where the curriculum is to be improved or revised the existing content is reviewed by adding new topics that have become essential. If an entirely new course is to be developed a survey of what should be offered to fulfil the stated goals is undertaken.

3. Selection of learning experience: Experiences to be provided to learners in order to achieve the content identified are spelt out. These will range from lectures to field trips and laboratory or other practical exercises. Learning experiences are essential for each content area to be taught.

4. Organisation and matching of learning experience with context: Each learning experience must be matched with the appropriate content area. These are then organised in sequence indicating the scope of the content to be covered.

5. Evaluation stage: This enables the implementers of the curriculum to determine the effectiveness of the curriculum and then to make modifications. This stage thus prepares the ground for the commencement of further curriculum development activities. The evaluation stage examines the extent to which the objectives are realised in practice thereby indicating the effectiveness or otherwise of the curriculum.

This five staged objective model is cyclic and can be represented diagrammatically as follows:

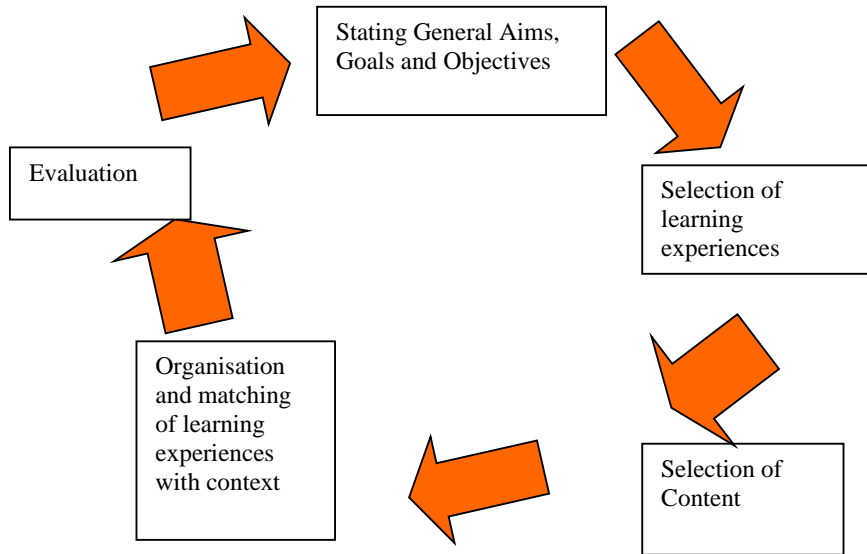


Fig. 3.2 Cyclical Stages of Curriculum Development

The Process Model

This is a model of curriculum development in which content as well as principles and procedures are specified rather than anticipated outcomes in terms of objectives. In this approach to curriculum development, the content selected represents a particular form of knowledge which is intrinsically worthwhile. The content shows important procedures, key concepts and criteria inherent in a field of knowledge. The choice of content is not dependent on students' behaviour to which it might give rise but on the degree to which it reflects the form of knowledge.

Developing a curriculum using the process model involves devising teaching methods and materials which are consistent with the principles, concepts and criteria inherent in such activities. In this design, the process is specified (i.e. the content being studied, the methods being employed and the criteria inherent in the activity). The end product is not specified before hand in terms of behaviour but can be evaluated using the criteria inherent in the field of knowledge. If, for instance, you define the content of a philosophy course, define what constitutes a philosophically acceptable teaching procedure and articulate standards by which a student's work is to be judged you will be planning rationally without using objectives. And this is what the process model is about. Behavioural objectives are absent, and the teacher does not promote any particular point of view of response from students. In place of objectives, the emphasis is on defining acceptable principles of procedure for dealing with such issues. The stages in this model are not successive as in the objective model.



Activity 3.6



Name the stages in the process model of curriculum development. Which are the stages in the objectives model that are not found in the process model? The stages in the process model that are likely to be included in your list are in Box 3.5.

Box 3.5. Stages in the Process Model of Curriculum Development

1. Selection of Content
2. Selection of Principles of procedures (learning strategies)
3. Devising teaching methods and materials
4. Evaluation by criteria inherent in the field of knowledge

Only the organisation and matching of content with learning experience is absent from the process model, all the other stages correspond to stages in the objectives model.

The Situation Analysis Model

This model puts curriculum development firmly within a contextual framework. It views curriculum development as a means where teachers modify and transform learners' experiences through providing knowledge of each specific situation. The model underlines the importance of the curriculum development process and its inevitable political character as different pressure groups and ideological interests seek to influence the process of education. In this model, recommendations about the curriculum are made separately for each institutional situation as these are assumed to be unique. It makes specific provisions for different planning contexts including a critical appraisal of the institutional situation as one of its most crucial features. The model is based on the assumption that focus for curriculum development should be on the context where learning is taking place including national, and societal and institutional. Of concern also is the institution and its teachers. Institution-based curriculum development is one of the most effective ways of promoting genuine change at institutional level. This is where curriculum experts go to the institution, work with its teachers to develop the curriculum or improve the teaching of the subject.

The stages in this model are:

Situation analysis which involves a review of the situation and an analysis of the interacting elements. External factors to be considered are broad social changes including ideological shifts, parental and community expectations, the changing nature of the subject and the potential contribution of teacher support systems such as senior colleagues and specialised

institutions. Internal factors include the learners and their attributes, teachers and their knowledge, skills, interests, materials, resources and perceived problems.

Goal Formulation: The goals are derived from the outcomes or results of the situational analysis.

Programme building: This comprises the selection of subject matter, the sequencing of teaching and learning episodes, the development of staff and the choice of appropriate supplementary materials and media.

Interpretation and Implementation: This is where practical problems involved in the introduction of a modified curriculum are anticipated and tackled as the implementation proceeds.

Monitoring, Assessment Feedback and Reconstruction: This involves a much wider concept of evaluation than determining to what extent a curriculum meets its objectives. Tasks here include providing on-going assessment of progress of a wide range of outcomes (including learners attitudes and the impact of the institutions organisation) and keeping adequate records based on responses from a variety of participants.



Select a section of your subject area of specialisation, and develop these into a rational curriculum package using the three models of curriculum development. Compare the three curriculum packages developed and select the one you would prefer to use in your classroom.

Activity 3.7



Stages in Curriculum Development - A Hybrid Model

As noted by Okebukola (1997), a hybrid model that features elements of the objective, process and situation analysis models is made up of the following steps:

Diagnosis of needs - The curriculum development group begins by determining the needs of the society, institution, the students and subject matter that the proposed curriculum hopes to address.

Formulation of objectives -After needs have been diagnosed and identified, the curriculum planning team specifies objectives to be accomplished.

Selection of content - The group of experts and users select content for the curriculum in line with the formulated objectives.

Organisation of content - With the selection of content goes the task of deciding at what levels and in what sequence the subject matter will be placed. Maturity of learners, their readiness to confront the subject matter, and their levels of academic achievement are factors to be considered in the appropriate placement of content. The methodologies or strategies by which the learners become involved with the content must be chosen by the curriculum planners.

Organisation of learning activities - The curriculum group decides how to package the learning activities and in what combinations and sequences they will be utilised.

Determination of what to evaluate and of the ways and means of doing it -The curriculum planning group selects from a variety of techniques, appropriate means for assessing achievement of students and for determining whether the objectives of the curriculum have been met.

Pilot Testing: Testing the draft curriculum using a sample of the target group of users.

Revising and consolidating: The units are modified on the basis of pilot test data to take cognisance of variations in student needs and abilities, available resources, and different styles of teaching so that the curriculum may suit all types of classrooms.

Approval by Faculty, Senate and Governing Council: Approval is sought at the appropriate level for the curriculum in line with the guidelines applicable in the higher institution.

Use of the approved curriculum: The approved curriculum is put to use in the higher institution.

Periodic review: The curriculum is subjected to periodic review and evaluation.

Two groups of educators A and B are on some tasks. Compare the activities of GROUP A educators with those of GROUP B as described below:

GROUP A

Students are found not to cope well with scientific disciplines. Science is thus immediately removed by law. It will be taught at a higher level.

GROUP B

Students, teachers, parents are questioned on the science programme (its link with life out of school and with other school subjects). The qualifications, attitudes, and teaching methods



Activity 3.8



are examined. School facilities are also studied. Examination scripts are studied to see what specific areas pose problems to teachers and learners. A committee of experts (teachers, parents etc) looks at all the reports. New objectives are then fixed for science education and other decisions are taken in relationship with the new objectives.

- (ii) Which of the two groups is carrying out a more acceptable curriculum work and why?
- (iii) What are the advantages and disadvantages of the approach of the group you have chosen?
- (iv) Would you say that the other approach is entirely useless?
- (v) To what extent would the approach you prefer work in your immediate environment?

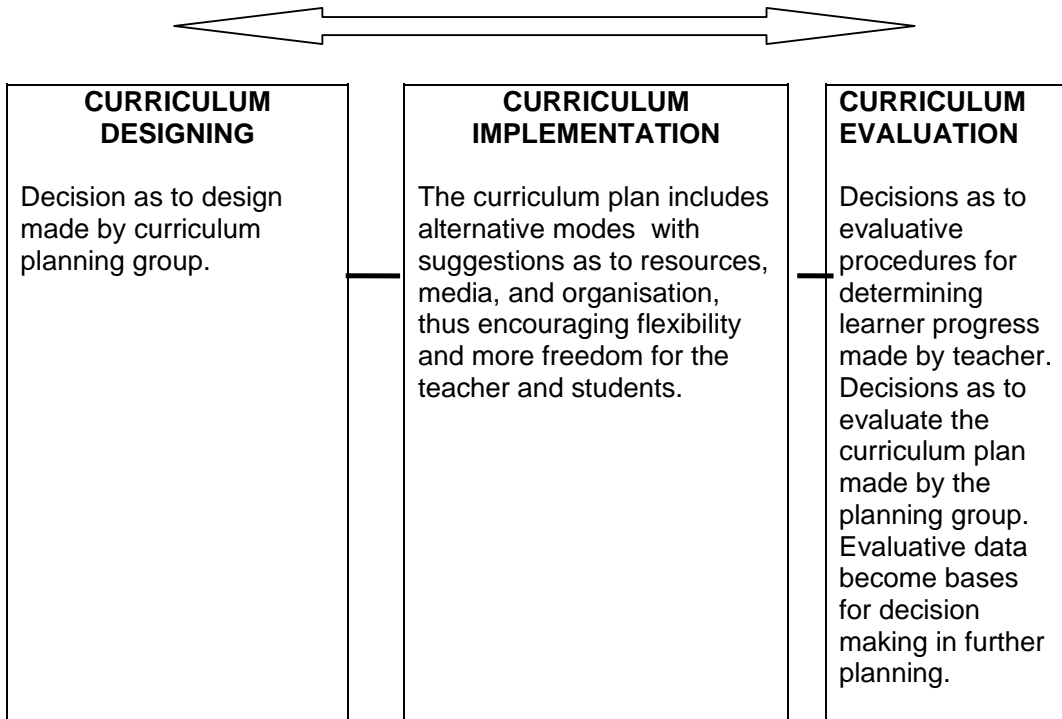


Fig. 3. 2: Process of Curriculum Development

Activity 3.9



Study the following SEVEN phases of systematic curriculum development. Compare with the five cyclical stages described on page ?

P = Planning phase, during which the new idea is discussed, all its implications are studied, and strategies for putting it into effect are worked out.

C = Conception phase, during which an idea is thought about.

T = Try-Out, during which the new curriculum package is studied to see if its principles make sense in practice.

D = Development, during which methods are selected, materials assembled to fit content and objectives.

R = Revision, during which field experience is used to enrich the original package.

M = Monitoring, an unending process that goes on even after the curriculum message is known to everybody.

Ds = Dissemination, during which the revised package is used by a larger number of institutions.

(a) Arrange the seven to represent a logical sequence.

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....

(b) Which of these phases really represents IMPLEMENTATION of a new curriculum?

Curriculum Implementation is an exercise which combines SENSITISATION, INTERNALISATION, and PARTICIPATION. This has been called the S-I-P theory.

(a) To what extent do you think that the S-I-P theory can improve the process of curriculum implementation in higher education in your country?

1. State the factors which affect curriculum development in higher institutions in Africa, with special attention to emerging societal needs and observed learner characteristics.
2. Describe the process of curriculum development in higher institutions in your country.
3. How does this process compare with the stages listed above?
4. Simulate the preparation of a curriculum for a group of higher education students which takes into consideration emerging societal needs and observed learner characteristics.



Activity 3.10



Reading 3.1

The Concept of Curriculum Needs Assessment: Learner Needs
Peter Okebukola

One of the early steps in the development of a curriculum is the assessment of the needs of the target group of users of the curriculum. **Need** is used in many ways in the education literature. At one extreme, terms such as **felt needs** or **expressed needs** are used to refer to those needs of which the learner is conscious or to requests for help in solving problems or meeting situations. At the other extreme, there are those who put the stress on **societal needs** - those attitudes, knowledge, and skills that society demands of its citizens whether or not learners are aware of these demands. Neither definition alone provides an adequate interpretation of the concept of needs for the purposes of curriculum development.

The curriculum worker must be aware of three kinds of needs. First, the learner has needs in the sense of **purposes** which he or she accepts as his or her own and pursues. This is similar to the concept of felt needs, but more inclusive. Learners can be helped to identify and to accept goals of the importance of which they have not been aware. Second, the learner has needs in the sense of **developmental tasks** which are set by his or her developmental stage in relation to the society in which he or she is growing up. Third, there are so-called **basic needs** or **psycho-social needs** within the individual that cause him or her to seek certain goals related to his or her biological nature.

What does this total concept of learners' needs mean for the curriculum worker? Certainly the implications are much broader than the terms felt needs or expressed needs would imply. While the preceding discussion has indicated that the learner is dynamic and active, seeking goals and responding to experience in terms of these goals, there is nothing to imply that the school should withhold guidance until the individual is conscious of or has expressed his or her need. On the contrary, there is the definite implication that teachers

have an obligation to study learners, to give help in meeting needs of which they are not conscious, and to help them become more sharply aware of other goals.

The objectives of needs assessment are twofold: (1) to identify needs of the learners within the context of the needs of the larger society that are not being met by the existing curriculum; and (2) to form a basis for revising the curriculum in such a way as to fulfil as many unmet needs as possible. The conduct of a needs assessment is not a single, onetime operation but a continuing and periodic activity.

The higher education student of today and the institutional environment have characteristics that are different from those of the 60s and 70s. Thus, the needs of students in higher institutions in present-day Africa are different from the needs students used to have in the past. Societal needs also keep changing. For a good person-environment fit, it is expedient to systematically assess the needs of present-day students as a prelude to developing curricula. If this is not done, we may end up using what has been described as “yesterday’s inappropriate tools to solve today’s problems.”

Excerpted from

Okebukola, P.A.O. (1997). Needs and Assessment and Curriculum Development in Higher Education. Presented at the UNESCO Workshop on Teaching and Learning in Higher Education, Nairobi, Kenya.



Activity 3.12



1. Describe any three ways of conducting needs assessment in higher education.
2. Develop an instrument for carrying out needs assessment for teaching and learning based on any two of the three ways described in (1).
3. State the merits and merits of the methodology described.

A Common Practice

In many higher institutions, the development of a new course or programme of studies is initiated by the subject department. Here, specialist academics put together topics as they know them to have been taught elsewhere. The department presents these to the Faculty or Academic Board where approval essentially gives authorisation for the course to start. The higher bodies of the institution, like the Senate and Governing Councils in the case of Universities, endorse the decision of the Faculty Board under normal circumstances. These activities are part of curriculum development in higher education.

There are three types of curriculum commonly used in educational institutions. The first is one in which all subjects or courses are treated as equal. The second is an integrated

curriculum in which several subjects are fused together in such a way that the identities of the individuals are lost. Integration of subjects is done so that teaching and learning become more meaningful and applicable in the real world. Some groups of subjects bear a lot of relationship to each other and are considered by many specialists to be more effective if they are fused together. The case in point is that of the natural sciences (physics, chemistry and biology). These subjects are often considered to have artificial boundaries between them and that since, in the real world we do not use them separately it is better if they are fused together as Integrated Science and taught accordingly. A second example of a group of subjects that have often been fused together at the school level is the social science group, (geography, history, civics etc). However, the extent to which these groups of subject are treated in integrated form in higher education is low.

The third is the core curriculum. This is the course or set of courses that are deemed to be the main components of a programme of studies. These courses or subjects are expected to constitute the programme of studies under normal circumstances. They are required for the provision of the general skills, attitudes and knowledge required by a programme of training. In a programme of studies or training where a core curriculum is provided there is usually another set of courses or subjects referred to as elective or optional subjects. The prescribed selection of optional subjects plus the core gives the student the full dosage of the programmes.

State two examples of integrated curricula in your institution and two examples of core curricula.

The examples of integrated curricula and core curricula in your institution are likely to include the list in Box 3.6



Activity 3.12



Box 3.6. Two types of Curricula

Core Curriculum

Mathematics
Language (English)
Philosophy

Integrated Curriculum

General Science
Communication skills
Research Methods

Develop an integrated course out of the various subject areas that make up your programme of study. What do you think should be the core subjects in the present programme of study you are teaching?



Activity 3.13



Glossary of concepts in curriculum and curriculum development

Curriculum: The entire set of activities scheduled to ensure achievement of the goals and aspirations of a system of education in a nation state or institution

Curriculum Development: The identification and organisation of a set of activities scheduled to ensure the achievement of the goals and aspiration of a system of education based on an existing design or model.

Core Curriculum: A set of courses or subject that is of absolute necessity in a programme of study. The core is usually the set of subject that must be done by everybody because it is required by all areas of specialisation.

Electives/Optionals: These are subjects or courses that the learner can add on to the core subject or courses. The learner has choice of selection.

Integrated Curriculum: A set of subjects fused together by breaking the traditional boundaries between them.

Teaching resources. Materials and facilities used by teachers in their classroom transaction

Goals. Global statements of intentions and aspirations

Aims. Broad statements of what is intended to be achieved

Objectives Specific behaviours to be produced as a result of exposure to some

Sequence. The arrangement of content in an order

Scope. The level to which a topic can be taught

Syllabus. List of topics arranged in a sequence

Content. Body of knowledge contained in a course

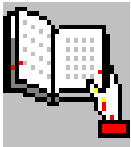
Taxonomy. A classification of teaching objectives into broad categories and sub-categories

Cognitive domain: A category of educational objectives concerned with behaviours related to thinking or manipulation of abstract symbols

Affective domain: A category of educational objectives that is concerned attitudes and values

Psychomotor domain: A category of educational objectives that is concerned with learned responses

Evaluation: The collection and analysis of objectively measured data and their use to reach a judgement on an educational practice or experience.



3.3

Prevailing Practices in Curriculum Development

At the end of this unit, you should be able to:

- ❑ describe prevailing practices in curriculum development and revision in higher education; and
- ❑ identify the strengths and weakness of these practices.

SPECIFIC OBJECTIVES

Prevailing Practices of Curriculum Development in Higher Education

A common practice of curriculum development in higher education is the construction or revision of syllabuses for new or existing courses. Many courses in higher education in Africa were transplanted from western Europe or the United States of America and the only

form of curriculum development undertaken in respect of these courses is the revision of what already exists so as to reflect the African context. Another form of curriculum is the inclusion of new developments in the field of study resulting from research and public declarations into existing programmes.

Emphasis on the development and use of African languages in Declarations such as the Lagos Plan of Action has made several African universities start research projects in African languages and develop these languages through research and experimentation. For example, the use of Yoruba as a medium of Instruction in primary schools was experimented and developed by the Faculty of Education, Obafemi Awolowo University, Ile-Ife, Nigeria. The Declarations also expand the subject areas of higher education because the emphasis on the use of African languages led to studies of certain large language groups in Africa for use as medium of instruction. Today, many African higher educational institutions teach national languages and used some of these languages are used as subjects of research for higher degrees. In 1996, a Declaration was made in Accra, Ghana on the promotion and use of African national languages in education. In some cases, central governments specific request to a higher educational institution to mount specific programme of studies.

Some of the successful models of curriculum development in higher education are found when the development is originated from within the institution. Also, education policy documents by the Ministry of Education have been found to be effective in promoting curriculum revision and development in higher education.

The development of courses in higher education in many instances involves the listing of topics for the several years for which the course is made to run. Rigorous curriculum development procedures are hardly adopted in these course development exercises. Prevailing practices in curriculum development in higher education is therefore limited largely to syllabus construction or revision.



Activity 3.14



Have you participated in curriculum development or revision exercise organised by your department or faculty? If yes, reconstruct the way you performed this task. If no, discuss with a colleague within or outside your institution who has had such experience.

The stages you went through in performing this task were most likely as described in Box 3.8.

Box 3.8. Prevailing stages in curriculum development in higher education in Sierra Leone

1. Initiative for curriculum revision or development coming from your department.
2. Draft of proposed curriculum sent to the Faculty/Academic Board for discussion and approval.
3. Approved document from the Faculty Board is sent to Senate.
4. Approved document from Senate with the financial implications is sent to the Ministry of Education for ratification for cabinet.
5. The approved document from cabinet is returned to the Ministry of Education for information of the University.

Where a course in existence is to be revised, authority for the revision comes from the Faculty Board and does not go through the same stages as those of the mounting of a new course or programme of studies. In only a few instances are the systematic approaches to curriculum development using established design used.



Reading 3.2

Curriculum Development in Higher Education

Uduogie M.O. Ivowi

Current Practice

Curriculum content in higher education is mainly course outlines with content selection based on the topical approach. Because the lecturer is familiar with the course or is the originator of the course, known topics are included to define the features of the course. General objectives of the course, equipment to be used and other strategic factors are however provided to guide operators of the system. The scope of the course outline depends on the originator or lecturer; and reference is usually made to the outline used previously or an existing one elsewhere. Acceptance of content details depends on individual lecturer's impression, interpretation and interest. A course taught by two different lecturers in the same institution to different students could contain radically different topics and contents. It may be worse if different institutions are compared. While some basic concepts may be common, their application and interactions may vary according to the emphasis of the lecturer. While it is true that only specialists teach the course and so should know the content of the topic, the fact remains that the extent to which any lecturer can go depends on him/her unless there is a detailed description of the content coverage.

Curriculum Content Format

A few reasons have been given for the need for a change from the course outline format for curriculum content in higher education to one that should contain more details of the content, objectives and the use of sound theoretical basis for the selection and organisation of content. Instead of the current elements of topic, and content, we advocate themes, objectives, topics, content and evaluation/assessment guide. The theoretical basis for content selection is the use of any of four approaches. Details are in Ivowi (1995).

1. *Topical approach* – leads to many topics (much content) based on knowledge and experience. No clear relationship among content elements.
2. *Conceptual approach* – leads to fewer content clustering around major and sub-concepts and their interactions. Relatedness of content elements is emphasised.
3. *Thematic approach* – being a combination of concepts (i.e subsuming of concepts) has most of the advantages of conceptual structure plus flexibility in terms of innovative ideas without necessarily being overloaded.
4. *Modular approach* – leads to complete units of instruction that provide employable skills. This is the common approach in technical and vocational courses e.g National Board for Technical Education (NBTE) of Nigeria's programmes.

The thematic approach is recommended for content selection. We are very familiar with the use of themes and sub-themes at conferences, seminars and workshops; so generating appropriate themes and sub-themes for our courses should be fairly easy. As regards content organisation, the spiral approach is recommended; and in fact, it is what is being used in higher institutions whereby courses are graded in order of difficulty or complexity (e.g. solid state physics I and II). In the proposed format, the following will feature: theme, topics, objectives, content and evaluation. The three additions here are themes, performance objectives and assessment guide. The performance objectives are particularly important. Given the intellectual level of the students and their access to literature, this will give them direction in their studies and so make them to prepare more adequately for the courses. The assessment guide gives very specific and clear indication of the level at which a test should be pitched in a domain.

Excerpted from:

Ivowi, U.M.O. (1998, September). Curriculum development in higher education. Presented at the UNESCO Workshop on Teaching and Learning in Higher Education, University of Ibadan, Nigeria.



Activity 3.15



Comment on the Course Outline below and relate to Reading 3.2.

DEPARTMENT OF CURRICULUM STUDIES
EDC 444: EDUCATIONAL TESTS AND MEASUREMENTS
Lecturer: Professor X

Introduction

The technique for determining what the learner knows or does not know is an important skill for teachers. More importantly is the skill for developing and validating various instruments for assessing learner behaviour and the interpretation of data so gathered. The primary goal of this course, therefore, is to provide practical experiences in the preparation and administration of tests, questionnaires, interview guides and observation instruments and the interpretation of data gathered from the use of these instruments.

Objectives

At the completion of the course, students should have acquired competence in the following:

- Recognising the importance of measurement and testing in education.
- Differentiating between tests, assessment, measurement and evaluation.
- Planning of classroom tests.
- Identifying strengths and weaknesses of and when it is appropriate to use essay, multiple-choice and performance tests.
- Construction of different varieties of objective tests and essay tests.
- Construction of questionnaires, interview guides and observation schedules.
- Determination of validity and reliability of assessment instruments.
- Interpreting test scores.

COURSE OUTLINE:

UNIT	CONTENT
------	---------

Basic Issues in Tests and Measurement in Education

Why do we measure in education? Clarifying/differentiating between the terms – measurement, assessment, tests and evaluation. Usefulness of tests. Types of tests.

Planning Classroom Tests

Stages in planning classroom tests. Test blue-print development following familiarity with Bloom's taxonomy.

Strengths and weaknesses of tests

Merits and demerits of essay-type tests. When to use essay tests. Merit and demerits of completion, true/false, matching and multiple – choice tests and when to use them. Performance test- what they are and their strengths and weaknesses.

Construction of essay, objectives and performance tests

Guidelines for writing essay, objective and performance tests. Practicum in test construction – from test blue print to construction of test papers.

Construction of questionnaires, interview guides and observation schedules

Techniques for constructing questionnaires (Likert-type and Osgood Semantic Differential), interview guides and observation schedules. Questionnaire administration and scoring.

Item analysis, determination of validity and reliability

Computation and interpretation of item difficulty and discrimination indices. Procedures for validating instruments-face, content, construct, predictive and concurrent. Procedures for determining the reliability of instruments – test-retest, split half, Cronbach alpha and Kuder-Richardson.

Scoring/grading and reporting learner performance

Preparation of marking schemes/guides. Techniques of scoring/grading scripts. Guidelines for reporting learner performance.

Course Assessment: Attendance.....	5%
Project	25%
Examination	70%

Some Practical Hints on Course Development and Implementation

Provide basic information. Include the current year and semester, the course title and number, the number of units, the meeting time and location. Indicate any course meetings which are not scheduled for the assigned room. List your name, office address (include a map if your office is hard to locate), office phone number, email address, website URL, fax number, and office hours. For your office hours, indicate whether students need to make appointments in advance or may just stop in. If you list a home telephone number, indicate any restrictions on its use (for example, "Please do not call after 10 p.m.").

Describe the prerequisites to the course. Help students realistically assess their readiness for your course by listing the knowledge, skills, or experience you expect them to already have or the courses they should have completed. Give students suggestions on how they might refresh their skills if they feel uncertain about their readiness.

Give an overview of the course's purpose. Provide an introduction to the subject matter and show how the course fits in the college or department curriculum. Explain what the course is about and why students would want to learn the material.

State the general learning goals or objectives. List three to five major objectives that you expect all students to strive for: What will students know or be able to do better after completing this course? What skills or competencies do you want to develop in your students?

Clarify the conceptual structure used to organise the course. Students need to understand why you have arranged topics in a given order and the logic of the themes or concepts you have selected.

Describe the format or activities of the course. Let students know whether the course involves fieldwork, research projects, lectures, discussions with active participation, and the like. Which are required and which recommended?

Specify the textbook and readings by authors and editions. Include information on why these particular readings were selected. When possible, show the relationship between the readings and the course objectives, especially if you assign chapters in a textbook out of sequence. Let students know whether they are required to do the reading before each class meeting. If students will purchase books or course readers, include prices and the names of local bookstores that stock texts. If you will place readings on reserve in the library, you might include the call numbers. If you do not have access to the call numbers or if it makes to reading list look too cluttered, give students as their first assignment the task of identifying the call numbers for the readings. Let students know that this will make it easier for them to locate each week's readings, and more importantly, it will give them practice in using the library's electronic resources.

Identify additional materials or equipment needed for the course. For example, do students need laboratory or safety equipment, art supplies, calculators, computers, drafting materials?

List assignments, term papers, and exams. State the nature and format of the assignments, the expected length of essays, and their deadlines. Give the examination dates and briefly indicate the nature of the tests (multiple-choice, essay, short-answer, take-home tests). How do the assignments relate to the learning objectives for the course? What are your expectations for written work? In setting up the syllabus, try to keep the workload evenly balanced throughout the term.

State how students will be evaluated and how grades will be assigned. Describe the grading procedures, including the components of the final grade and the weights assigned to each component (for example, homework, term papers, midterms and exams). Students appreciate knowing the weighting because it helps them budget their time. Will you grade on a curve or use an absolute scale?

Discuss course policies. Clearly state your policies regarding class attendance; turning in late work; missing homework, tests or exams; make-ups; extra credit; requesting extensions; reporting illnesses; cheating and plagiarism. Include a description of students' responsibilities in the learning. You might also list acceptable and unacceptable classroom behaviour ("Please refrain from eating during class because it is disturbing to me and other students").

Invite students with special needs to contact you during office hours. Let students know that if they need an accommodation for any type of physical or learning disability, they should set up a time to meet with you to discuss what modifications are necessary.

Provide a course calendar or schedule. The schedule should include the sequence of course topics, the preparations or readings, and the assignments due. For the readings, give page numbers in addition to chapter numbers--this will help students budget their time. Examination dates should be firmly fixed, while dates for topics and activities may be listed as tentative. Provide an updated calendar as needed.

Schedule time for fast feedback from your students. Set a time midway through the term when you can solicit from students their reactions to the course so far. See "Fast Feedback" for ways to get feedback from students.

List important drop dates. Include on the course calendar the last day students can withdraw from the course without penalty.

Estimate student workload. Give students a sense of how much preparation and work the course will involve. How much time should they anticipate spending on reading assignments, problem sets, lab reports or research?

Strengths and weaknesses of the prevailing practices of curriculum development in higher education

Higher education in many African countries was from the onset conceived as something intended for the developed nations of the world. It did not fully address the important needs of the African countries at the time of establishment and so from the beginning it was not

keeping pace with the needs of the learners and the society. In the field of Agriculture, for example, crops and animals studied were mostly foreign, even though superior alternatives existed locally. In the field of medicine, practices in traditional medicine were despised. Also, developments in western Europe and the United States of America reached African societies well before higher educational institutions in those societies. The information super-highway (electronic mail, Internet, etc) is already in commerce and the private sector generally while many African institutions of higher education still operate with outmoded technology.



Activity 3.16



As a teacher in the higher education how and why would you want to keep the higher education curriculum in pace with the needs of the learners and the society? Your rationale and methods of keeping the higher education curriculum in line with the learners and society could include arguments in the box below:

Box 3.9. Rationale and methods of keeping pace in higher education

<u>Rationale</u>	<u>Methods</u>
1. African countries should not be left too far behind in any aspect of development. 2. Location of the education provided in the African context including recognition of indigenous African processes and products . 3. Returning African education to basics but keeping pace with recent development.	1. Development of higher education curricula that keeps abreast with recent advancement in subject areas. 2. Aspects of African culture and tradition that was ignored by the education process to be included in higher education curriculum 3. Two- pronged approach to curriculum development and revision in higher education.

There are several other weaknesses in current practices of curriculum development in higher education. In the first place higher education curriculum has remained largely teacher-centred. The teacher is conceived as a reservoir of knowledge while the students are a repository to receive knowledge from the teacher and return it on demand. It is advisable that the curriculum becomes more learner-centred so that the learner's initiatives are developed for use in the world of work. The learners would also have the confidence of practising what they have learnt.

The practice of constructing syllabuses and not undertaking systematic curriculum development appears to have discouraged curriculum reform projects in higher education. Curriculum reform projects are usually innovative in procedure and products and since higher educational institutions have continued to remain largely unchanged in their curricula offerings no reform projects could be undertaken.

The approach to curriculum development in higher education is largely ad hoc rather than systematic occurring as and when individuals or groups of individuals had been influenced by their own training. Most of the time, changes come through students who have had training in Western Europe or the United States and are recruited in our institutions to teach. Their experiences are brought to bear on the systems they meet and so even though the institutions strive for relevance they cannot because outside influences continue to supersede policy directives. Besides, policy directives on higher education in the area of curriculum are very few.

Consequently, traditional subjects and practices abound and remain unquestioned. The old school subject of English or French Grammar, Geography, History, Chemistry, Physics, Biology, etc. are common place. It appears the metropolitan institutions of higher education have continued to influence our institutions through these courses. Newer subject areas like remote sensing, aeronautic engineering, environmental resources management, are still outside the reach of some higher educational institutions in Africa. Even in the institution where some development are taking place in these directions these movements are very slow. The curriculum is kept very narrow and the process of expanding is very slow.

RELEVANCE OF HIGHER EDUCATION POLICIES AND PRACTICES

Florida A. KARANI



Reading 3.3

Adherence to the colonial model characterised by detachment and elitism ethos as observed above has been seen to inhibit ability to respond to the needs of African societies to which the institutions belong. The search for relevance has been led by national Governments and the institutions of higher learning themselves while at the same time proposals and formulation of long term policy goals and mission statements has been conducted at high level inter Africa Regional Conferences.

As early as 1966, Julius Nyerere, first President of the Republic of Tanzania, observed that: *“the University in a developing society must put emphasis of its work on subjects of immediate moment to the nation in which it exists and it must be committed to*

the people of that nation and their humanist goal". On the same issue, Aklilu Habte a former Vice Chancellor of the University of Addis Ababa stated that: *"the truly African university must be one that draws its inspiration from its environment, not a transplanted tree, but one growing from a seed that is planted and nurtured in the African soil"*.

It is evident that higher education in Africa must do more than just to propagate knowledge for its own sake, it must be instrumental to development – changing the conditions of the common man and woman. Universities can play a developmental role as inventors, experts, promoters, and interpreters of scientific and technology to help create scientific communities.

Curriculum reforms taking place in various Institutions of Higher learning are in pursuit of this objective. New degree programmes have been developed to replace irrelevant programmes, and there is increasingly more use of locally authored texts, however, it should be noted that not every aspect of the curricula can be Africanized given the universal nature of certain truths in the various disciplines. What is required is a new working definition which translates knowledge into development. Constraints pertaining to inadequate facilities, equipment and lack of instructional material, and crowding which hinder effective implementation of curricula thus affecting quality, need to be addressed.

Excerpted from:

Karani, F.A. (1998). Relevance of Higher Education: Policies and Practices. In J. Shabani (Ed.). *Higher Education in Africa: Achievements, Challenges and Prospects*. Dakar: UNESCO BREDIA.



Reading 3.4

Higher Education for an Emergent Nigeria

Pai Obanya

Radical Curriculum Reforms

I usually make a distinction between the curriculum as a process and the curriculum as a package. Here, I will stick to the package and it is to be understood that most of the point made so far about a new posture for higher education in an Emergent Nigeria already touch on the process.

Radical reforms in curriculum will have to question our received ideas on specialists and specialised disciplines, as accepted in higher education institutions, and will require our matching the content of instruction to the demands of society, especially of the productive sectors of an Emergent Nigeria.

An Emergent Nigeria will require an educated (i.e well-rounded) work force. That work force will require (a) a sound and broad general knowledge, and (b) the learning-to-learn (or adaptability) skills earlier discussed. A sound general education will demand that in the first years of higher education we concentrate more on general education, exposing the student to all areas of knowledge, as in the American liberal arts tradition. It will also require

that we do not admit students straight to specialised courses, that we give them time to discover their own interests, and to attain vocational maturity.

One implication of the “general education approach” is that our current course unit system will give way to the development of self contained modular courses, each with a number of distinct units and each module requiring the participation of a number of lecturers. **Team work** will then have to become the norm. Teams of lecturers will work together in developing programmes and in teaching and evaluating such programmes.

The “general education approach” is applicable even to professional and vocational programmes. A 1978 UNESCO report recommended that vocational programmes be based on the 2-tier foundation of (a) a sound general education, (b) a sound basis of general technical education, before initiation to specialised vocational training. This is because the job market place is becoming increasingly unpredictable, as new vocations will always evolve to meet new developments and so vocational skills should be made easily adaptable to changing times.

Continuing with today's narrow, specialisation approach means that we will be graduating students who will run the risk of marginalisation in the world of work. Tomorrow's world will see new developments in many facets of life and these will create new opportunities for jobs and self-employment. Hands-on experiential training will still have a place, but this will be infinitesimal, compared with the type of curriculum which seeks to develop all the faculties of the individual.

The question will be... “what does one do in a situation in which students have been made “narrow specialists” right from secondary school? That question is a big challenge to higher education. It means that, in the early years of higher education, teachers should do more of remedial teaching, especially in the tool subjects of language, mathematics, and computer literacy. It also means that higher institutions will have to work harder on foundation courses that broaden the base and deepen the foundation of what students bring as knowledge and skills from secondary schools.

Excerpted from:

Obanya, Pai (1998, September). Higher Education for an emergent Nigeria. 50th Anniversary Lecture, Faculty of Education, University of Ibadan, Ibadan, Nigeria



Reading 3.5

Curriculum Development in Higher Education

Extract of Proceedings of UNESCO Regional Workshop on Teaching and Learning in Higher Education, 13-18 September, 1999

Ms. Irene Broekmann, Education Development Office, Faculty of Education, University of the Witwatersrand, provided a view of the complexity of curriculum development initiatives. She stressed the need to continually redefine the curriculum taking account of local and regional issues. The characteristics of an African institution and the way in which curriculum needs to become responsive to developmental needs are central to curriculum renewal initiatives.

Questions regarding who engages in curriculum transformation and for what purpose are necessary for meaningful transformation.

An excerpt of the story about the sabre tooth tiger was used to introduce workshop participants to the notion of curriculum renewal and the complexity of curriculum transformation. Parts of story is reproduced below:

The story of *The Sabre-tooth Curriculum* by Harold Benjamin (1939)

This is a satire about the introduction of systematic education to meet survival needs in a prehistoric tribe in the Chellean times. A man by the name of New-Fist-Hammer-Maker knew how to do things his community needed to have done, and he had the energy and will to go ahead and do them. By virtue of these characteristics, he was an educated man. New-Fist was also a thinker. Then, as now, there were few lengths to which men would not go to avoid the labour and pain of thought...[New-Fist] got to the point where he became strongly dissatisfied with the accustomed ways of his tribe. He began to catch glimpses of ways in which life might be made better for himself, his family and his group. By virtue of this development, he became a dangerous man...."

The story goes on about how New-Fist thought about how he could harness the children's play to better the life of the community. He considered what adults do for survival and introduced these activities to children in a deliberate and formal way. These included catching-fish-with-bare-hands, clubbing-little-wooly-horses, and chasing-away-sabre-toothed-tigers-with-fire. These then became the curriculum and the community began to prosper - with plenty of food, hides for attire and protection from threat. "It is supposed that all would have gone well forever with this good educational system if conditions of life in that community had remained forever the same". But conditions changed.

A glacier began to melt and as time went on the community could no longer see the fish to catch with their bare hands, and only the most agile and clever fish remained who hid from the people. The woolly horses were ambitious and decided to leave the region. The tigers got pneumonia and most of them died. The few remaining tigers left the area. In their place, fierce bears arrived who would not be chased by fire. The community was in trouble. Food was scarce, raw materials for clothing were not available and they were threatened by the bears that wandered into the village.

One day, in desperation, someone made a net from willow twigs and found a new way to catch fish - and the supply was even more plentiful than before. The community also devised a system of traps on the paths to their village to snare the bears. Attempts to change the education system to include these new techniques however encountered "stern opposition".

These are also activities we need to know. Why can't the schools teach them?" "But most of the tribe and particularly the wise old men who controlled the school, smiled indulgently at this suggestion. "That wouldn't be education", they said gently "... it would be mere training". "We don't teach fish-grabbing to catch fish; we teach it to develop a generalised agility which can never be duplicated by mere training" ... and so on.

“If you had any education yourself”, they said severely, “you would know that the essence of true education is timelessness. It is something that endures through changing conditions like a solid rock standing squarely and firmly in the middle of a raging torrent. You must know that there are some eternal verities, and the sabre-tooth curriculum is one of them”.

In the excerpt, curriculum is seen as a tradition of organised knowledge, but curriculum can also be modes of thought or experiences. What then is this thing called curriculum? It is often associated with confusion. The term is variously referred to as "amorphous" or "elusive" and it is said that the subject-matter of curriculum varies from text to text. Researchers paint a gloomy picture about theory-building in curriculum and no generalisations seem to emerge. However, there are some widely accepted conceptions of curriculum, such as that of "broad" and "narrow" curricula. The broad conception includes all the experiences of the learners where the narrow refers more to subjects and explicit content. There are conceptions like "planned" or "enacted" curricula, and "explicit" or "implicit/hidden" curricula, the enacted and hidden being far broader conceptualisations.

The UNESCO 'Draft Guide' defines curriculum as the set of activities that are geared towards the achievement of an institution's educational goals. Within this perspective, there seem to be four levels of curriculum development: societal, institutional, instructional and experiential. The first is the broadest, the second pertains broadly to the institution concerned, the third considers what happens in the class or lecture room, and the fourth relates to the learner's experience.

Broekmann argues that we need to challenge the "fixed, natural and ready-made" character of structures, subjects and their importance. Times of change give us the perfect opportunity to do this. Listening to and questioning each other can help one see what has become "reified" practice. Maybe we are can not challenge all our assumptions, but each time we say that something "should be", let us also try to say "why". For example, the length of degree programs. Why is a general undergraduate degree three or four years long?

Curriculum change can be transmissional or transformationist. Transmissional refers to the passing on of new knowledge especially as disciplines develop or change, while a transformationist curriculum aims at changing the consciousness of learners (Walking, 1994). Some change will be on a macro-level (culture, marketplace, and social) and some on a more micro-level (e.g., language, courses). In curriculum development, it is critical to establish what to add, what to keep and what to improve. But what guides these choices? The current 'cultural' call which is presently strong in Africa needs to be critically evaluated. The question of who decides what is a cultural-societal-curriculum-fit and is also important. It is necessary to review curriculum practices in the light of the sabre-tooth-curriculum. This will require challenging things that we have taken for granted or that we see as "natural".

There are various perceptions of the African University. For example, South Africa President Thabo Mbeki's speech, "*I am an African*", gives some clues as to how he sees African identity. Appiah in his book "*In My Father's House*", speaks of the heterogeneous nature of identity and tells of how his father challenged prevailing custom by his request for the type of funeral he wanted

Broekmann proposed an exercise to participants that was designed to establish some consensus for the group as to what constitutes an African university. A second exercise followed which was intended to give some general indications of how a curriculum in such an institution could look from both broad and narrow conceptual frameworks. Questions included: What should learners 'experience' in an African University and what content could be offered, with what methodology? How should knowledge and activities be selected and organised?

The 'Draft Guide' makes the following claims about education:

- African countries should not be left too far behind in any aspect of development.
- Location of the education provided in the African context include recognition of indigenous African processes and products.

Returning African education to basics but keeping pace with recent development."

But how do we do this? Is the process of education more important than the products? Here should we deal with notions of outcomes in education, so topical in some countries in the region. Or should we consider also the notion of the 'expressive curriculum', where the educational encounter is what counts, and outcomes are not pre-specified? And how do we ensure that our methodology is appropriate. If a central purpose of education is the development of democracy, then the procedures have to model democratic practices. There would, for example, have to be an exploration of controversial issues in the curriculum, alternative explanations and so on.

How do we address the issue of relevance? To whom must the curriculum be relevant? 'Relevance' includes a consideration of learner needs and interests as well as their present educational levels and abilities. For the curriculum to be relevant to society, must it centrally address pressing societal needs? What are the expectations of learners, stakeholders such as lecturers, parents of younger students, stakeholders in the workplace and members of the broader community? Are there tensions between these?

UNESCO puts it thus: "Relevance is considered particularly in terms of the role of higher education. ... It must thus include matters like democratisation of access and broader opportunities of participation in higher education during various stages of life, links to the world of work and the responsibilities of higher education towards the education system as a whole. No less important is participation by the higher education community in the search for solutions to pressing human problems such as population, environment, peace and international understanding, democracy and human rights ...".

Some areas of study that are deemed central to address in Africa and have emerged in the literature include: entrepreneurship and the creation of own jobs (Palermo Conference), food technology/agriculture, health, peace, language, training, critical learning, environment and sustainable development, technology, team work, internationalisation, science, information communication technologies, insufficiently prepared learners, HIV/AIDS, gender, learner self- management, interdependence and the global village, poverty, violence etc..

Some see it as more important to become skilled in the 'ways of knowing' than to learn about any particular product of investigation. Knowledge of methods of inquiry can make it possible for a person to continue learning and to undertake inquiries of his or her own (Phenix, 1964). Some have suggested that a broad general education with an emphasis on 'learning to learn needs' to be considered (Obanya, 1998), others such as Paulo Freire consider a problem-solving approach to be the best approach for developing countries.

Drawing from Covey's (1992) *The Seven Habits of Highly Effective People*, we may have many concerns, but what can we actually influence? What can we do in our own institutions? Which way will curriculum development take place? From changes made by lecturers and tutors or by policy initiatives from the top (Cornbleth refers to contextualised and technocratic curricula respectively), we can certainly take the first steps which include identifying needs, identifying our own roles in our own institutions and identifying who to include in a curriculum reform process. The process is negotiated, but we must keep in mind outside influences that might enable or constrain the process. Finally, we need to consider the role of evaluation in the cycle of reflective curriculum change. Evaluation can be empirical where we judge in as many ways possible whether we have achieved our aims. But it must also be non-empirical where we evaluate the aims themselves. The cycle goes on.



3.3

Determinants of Curriculum Development

At the end of this Unit, you will be able to:

- *identify the needs and goals of society that are determinants of curriculum development in higher education;*
- *demonstrate gender sensitivity and environmental awareness in curriculum development in higher education; and*
- *relate the stages in cognitive development and other psychological attributes of learners to curriculum development.*



**SPECIFIC
OBJECTIVES**

The Needs and Goals of Society as Determinants of Curriculum Development

The national philosophy of education in a country affects the content and structure of education. This national philosophy is an expression of the needs, goals and aspirations of society in the field of education. The aims and objectives of all activities in the field of education should derive from the needs goals and aspirations of society Curriculum development, which is the planning of these activities, is thus influenced by the needs, goals and aspiration of society.

The aims of education in many African countries do not always express the needs, goals and aspirations of society. Curriculum development in higher education is therefore faced with the dilemma of planning and developing curriculum based on aims which are not of the society.



Activity 3.17



Using the national philosophy of education in your country state the aims of education. Where there is no national philosophy document consult a major policy document on education that carries the national aims of education.

Juxtapose the aims of education stated in the policy document against the perceived needs, goals and aspirations of your country. In one page, state some of the differences between the two.

The economy of many African countries is based on agriculture as food self-sufficiency is a major area of need of the society in these countries. However, the curriculum of higher educational institutions in these countries are not sufficiently reflective of this need. Curriculum development efforts in higher education in these countries should strive to address this need. This is not to suggest that other disciplines must be ignored or that agriculture must be treated at the expense of other essential fields of study like health, education and peace.

Activity 3.18




A civil strife has just ended in a country and some of the activities of the perpetrators had a lot in come with your subject area. Suggest practical ways in which your students returning from refugee camps can use the subject you teach to ensure a culture of peace in the country.

Apart from the needs and goals of society there are other influences on curriculum development in higher education that are largely of the society and the system of education itself. It was emphasised in Unit 2 that curriculum designs provide guidelines for systematic curriculum development. It was also stated that the objectives model is the most popularly used curriculum development design at the school level and that only ad hoc approaches are used in higher education. The objectives model, which is applicable to curriculum development in higher education, recommend the study of the society, the nature of the learners and the subject matter content.

The study of the society involves identification of the needs and goals of society that can be used as influences on curriculum development in higher education. The need for relevant and functional human resource by society to provide the expertise required depends on the curriculum materials planned and developed. And it is in this sense that curriculum development, especially in higher education, is considered to be very important in the development of education and human resource in any nation.

Curriculum development for higher education should take place at various levels and must involve a cross section of society especially those from industry and commerce (the private sector) to ensure more relevance. Involvement of national governments is ensured by representation on various committees of senior officers of government. Statutory provisions are made in the composition of committees of higher education, like university senates, boards of governors and councils of polytechnics and colleges of education. The presentations made to these committees by the institutions are usually critiqued by representatives from central government from a funding point of view and not relevance to the society. It is advisable for higher education institutions to obtain comments on their submissions from government offices from the point of view of relevance so that the institution is not blamed for the irrelevance of its curriculum offering. New programmes of study in higher education institutions that are the result of public declarations by government must be developed together with officers of government. The capacity to effectively participate in such activities must always be present within government ministries.

1. You are appointed dean of your faculty in a field of study that has a  strong professional association at the national level. What steps would you take to involve the executive and indeed members of that association in curriculum development efforts in the faculty?
2. The sectoral ministry that manages the affairs of the industry for which you train students complains that your graduates are not up to the task they are assigned on graduation. Describe the steps you will take to improve the situation.

Activity 3.19



Global Consideration: Gender sensitivity and Environmental Awareness

Gender sensitivity and environmental awareness are two global considerations that must be given in curriculum development efforts for all educational institutions. Curriculum development in higher education should avoid sexist content and language and very serious consideration should be given to environmental conservation.

The need for increased female enrolment in higher education is desperate in African countries. Every effort is being made to increase the enrolment of females in higher education. The curriculum in higher education must contribute to the phenomenon of gender balance in the institutions and one way is by avoiding sexist biases in the curriculum in these institutions. The content matter of subject areas and learning experiences must not favour any particular sex. In programmes on Home Economics, Food Technology and Teacher Training which have been traditionally offered by women or Agriculture, Engineering and Physics, which have been traditionally offered by men, caution must be exercised in the development of curricula to avoid gender bias.



In Activity 3.10 you identified certain features of the syllabus you are currently using. Look at these features again and select objectives that:

Activity 3.20



- 1) might cause environmental degradation or conservation
- 2) are gender sensitive or not
- 3) promote gender balance.

The objectives you discovered on environmental degradation or conservation and gender sensitivity are most likely to include aspects in Box 3.10.

Box 3.10

1. Objectives that degrade or conserve the environment (Depletion of marine resources, destruction of flora and fauna as a result of experimentation. Development of improved varieties of crops and animals)
2. Objectives that are gender sensitive or not (use of language that precludes a particular sex).

Psychological Determinants of Curriculum Development in Higher Education

Planning and development of curriculum for higher education involve the identification and study of the attitudes and values of the target group in that sub-sector of the education system. A study of learner's needs and interests are also advised to be undertaken including their social and cultural background (patterns of learning, authority and authority figures within the home and family, norms, values and customs). The language of the learners would also be studied, the languages used, spoken and understood and the relationship of the mother tongue to the language of instruction. The cognitive development of the learners should particularly be studied to understand their ability to comprehend idea and processes and the stages in which the learners are in relationship to the current demands of syllabuses. All of these psychological features of the learners are important to the curriculum because they determine the learning experiences to be proposed.

What alternative learning strategies would you use for a named topic in your subject area of specialisation? Describe these learning strategies.

1. Imagine a class of 25 students offering a core course that you teach who are unable to cope with the computational skills required. What would you advise the students and organiser of the programme to do to overcome this problem?

Activity 3.20



3.4

Practice of Curriculum Development

At the end of this unit, you should be able to :

- *develop a curriculum package from contents in your area of specialisation using the stages in the models of curriculum development you have studied in this Guide; and*
- *reflect on the influence of Outcomes -Based Education (OBE) on curriculum development in Higher Education.*



SPECIFIC OBJECTIVES

You have already done a number of exercises and activities on various aspects of curriculum development in higher education. The present unit is to use all the aspects to develop your own teaching activities as it would normally be done in a curriculum development effort by an institution.

Curriculum development is done through the number of stages defined in the various models present in section 3 of unit 1. In systematic curriculum development each of the stages in the models is dealt with separately.

The first of the stages dealt with is selection or survey of content matter. The content is sometimes taken from existing documents (e.g. existing syllabuses, college prospectus spelling out the courses in each programme, books and research journal, articles in related subject areas for a new course that is to be originated). The selection of content is in three parts:

- ◆ identification of topics
- ◆ sequencing of the topics according to one of the known methods of arrangement of content matter (e.g. spiral, simple to complex, concrete to abstract or known to the unknown). A spiral arrangement is one in which the same topics are presented at the different levels of the system with increasing complexity and difficulty).

- ◆ definition of the scope to be reached in the treatment of each of the topics.

Using the course you are presently teaching arrange the topics to be covered beginning with the simplest content matter to the more complex. Indicate the levels to which each of the topics arranged in 1 above should be taught.

You can pursue relevance in education in curriculum development by identifying topics that provide the needs of society and the learners. In the process model of curriculum development the content selected should show important procedures, key concepts and criteria inherent in the field of knowledge.

Outcomes Based Education (OBE) and Curriculum Development In Higher Education

Outcomes Based Education (OBE) is a direction to which attention is now turning in a number of African countries, notably South Africa. OBE is poised to make an impact on curriculum development in Higher Education in the coming years. As you go through this section, reflect on how OBE is influencing or can influence curriculum development work in your institution.

Outcomes based education is an approach to education in which clear statements are made about what knowledge, skills and values and attitudes learners should acquire as a result of their learning.

Outcomes based education is an approach to education in which clear statements are made about what knowledge, skills and values and attitudes learners should acquire as a result of their learning. These statements are called the outcomes, because they say what the result (or outcome) of learning should be. There are different sorts of outcomes. The broadest outcomes, and those which are considered to be the most important for all learning, are called critical outcomes.

There are seven critical outcomes. All learning, whether at university, school or in the work place should be organised to help learners achieve these outcomes. The critical outcomes state that learners should be able to:

1. Identify and solve problems and make decisions using critical and creative thinking.
2. Work effectively with others as members of a team, group, organisation or community.

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3. Organise and manage themselves and their activities responsibly and effectively.
4. Collect, analyse, organise and critically evaluate information.
5. Communicate effectively, using visual, mathematical and/or language skills in the modes of oral and/or written presentation.
6. Use science and technology effectively and critically, showing responsibility towards the environment and health of others.
7. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

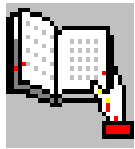
These outcomes have been adopted by SAQA and agreed by the Departments of Education and Labour after a great deal of debate and consultation with a wide range of stakeholders. They reflect essential qualities that all South Africans will need if we are to build a new democratic society and to create a thriving economy.

In addition, SAQA requires that learners should learn to:

1. Reflect on and explore a variety of strategies to learn more effectively.
2. Participate as responsible citizens in the life of local, national and global communities.
3. Be culturally and aesthetically sensitive across a range of social contexts.
4. Explore education and career opportunities.
5. Develop entrepreneurial opportunities.

These twelve broad outcomes must guide all work done in schools - in all grades, in all learning areas and even in informal interactions and extra-mural activities. In this sense, they are cross-curricular outcomes. The critical outcomes have a major influence on the kind of learning environment that learners need, and the kinds of activities that they must engage in if they are to progress toward achieving the outcomes. All the critical outcomes require learners to be actively engaged with their learning, to work both individually and as a member of a team or group, and to interact with learners different from themselves and with real world situations. It is not possible for learners to develop critical problem solving skills, skills of working effectively as a group, of organising and managing themselves, of showing cultural and aesthetic sensitivity if they are passive recipients of abstract theory. They need opportunities to try things out, to test ideas, to reflect on their processes of learning. They

need a learning environment in which they are valued, and in which they are required to respect and value others' points of view, to engage in constructive debate and to develop effective communication skills. And, as far as possible, their learning must link to their world experiences, and help them access those parts of the real world that they have yet to encounter for themselves.



3.5

How Workable is the Curriculum ?

After working through this unit you will be able to:

- ❑ examine the specific questions to be asked in the process of evaluating a curriculum; and
- ❑ frame appropriate questions necessary to evaluate a curriculum at various phases of its development;

**SPECIFIC
OBJECTIVES**

Try to answer the following multiple-choice questions by writing A, B, C, or D in the box of each of the questions, as appropriate. Where no option is correct, write E.

- i. EVALUATION really involves
- A. assigning scores to student assignments
 - B. seeing how far a programme has been successful
 - C. examining the extent to which objectives are being met
 - D. looking at a curriculum after it has been implemented.
- ii. The most appropriate phase for the business of evaluation in the process of curriculum development is
- A. at the very end
 - B. at all phases
 - C. at the very beginning
 - D. at the start of a new project.

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- iii. Evaluating a curriculum involves paying particular attention to
 - A. The learner
 - B. The curriculum materials developed
 - C. The methods of teaching and learning
 - D. Every possible input into the curriculum process.

- iv. Who of the following should NOT be involved in evaluating a curriculum?
 - A. The ordinary people
 - B. The learners
 - C. The teachers
 - D. Educational authorities

- v. Which of the following is NOT an appropriate evaluation question?
 - A. To what extent would learners be interested in working with their hands?
 - B. To what extent are the available textbooks useful?
 - C. What specific activities are carried out by pupils in the mathematics class?
 - D. What proportion of the students have come to like technical subjects?

Curriculum Evaluation involves (a) asking appropriate questions at all phases of curriculum development (b) deciding on the target group to be addressed by each type of question, (c) selecting the most appropriate strategies/instruments for seeking answers to the questions, and (d) taking appropriate action based on the information collected.



Activity 3.21



Using the format below, briefly state (a) the appropriate evaluation questions you will be asking at each stage, (b) your sources of data (or groups from which you can collect data), and (c) the appropriate data collection strategy during each phase.

	Major Evaluation Questions	Source(s) of data	Appropriate Evaluation Strategies
I. Conception			
II. Plan			
III. Development			
IV. Try-Out			
V. Revision			
VI. Dissemination			
VII. Monitoring			

It is often wrongly believed that evaluation should come only at the end of a process of curriculum development. Experience shows however that curriculum work is a continuous, cyclic process; so also is evaluation. Evaluation therefore involves asking such questions as:

- (a) is the new curriculum likely to work?
- (b) to what extent are the various choices (of objectives, content, methods, materials), appropriate?
- (c) to what extent are the intended objectives being achieved?
- (d) to what extent have the various processes worked?
- (e) what lessons can be learnt from all activities already carried out for further curriculum development?

Seeking appropriate answers to such questions involves (a) identifying sources of data (i.e. Where are we most likely to get the type of information needed? (b) developing a strategy for collecting information in a systematic manner, and (c) summarising the data and using the results to guide further action.

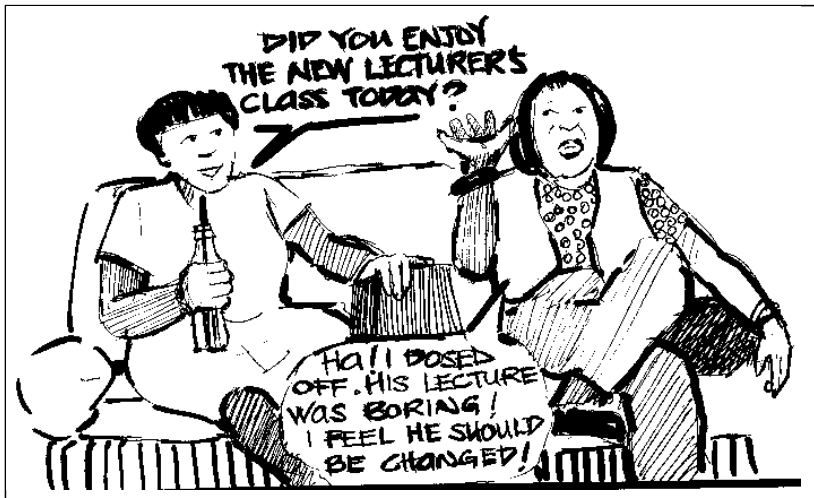
Summary

References

Module

4

Teaching and Learning Methods in Higher Education





Reflect on the following as you work through this Module

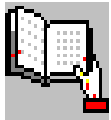


Article 9. Innovative educational approaches: critical thinking and creativity

- b. Higher education institutions should educate students to become well informed and deeply motivated citizens, who can think critically, analyse problems of society, look for solutions to the problems of society, apply them and accept social responsibilities.
- c. To achieve these goals, it may be necessary to recast curricula, using new and appropriate methods, so as to go beyond cognitive mastery of disciplines. New pedagogical and didactical approaches should be accessible and promoted in order to facilitate the acquisition of skills, competencies and abilities for communication, creative and critical analysis, independent thinking and team work in multicultural contexts, where creativity also involves combining traditional or local knowledge and know-how with advanced science and technology. These recast curricula should take into account the gender dimension and the specific cultural, historic and economic context of each country. The teaching of human rights standards and education on the needs of communities in all parts of the world should be reflected in the curricula of all disciplines, particularly those preparing for entrepreneurship. Academic personnel should play a significant role in determining the curriculum.
- d. New methods of education will also imply new types of teaching-learning materials. These have to be coupled with new methods of testing that will promote not only powers of memory but also powers of comprehension, skills for practical work and creativity.

Extracted from the:

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OF THE UNESCO
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CONFERENCE
ON HIGHER
EDUCATION
(1998)*



4.0

Introduction and General Objectives

Introduction

It is common to hear higher education students say:

- "I am going for lectures"
- "I am going for practicals"
- "I am going for field work"
- "I am going for tutorials"

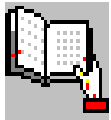
No doubt, this gives a feel of the modes of instruction they receive. Lectures, practicals, fieldwork and tutorials are common methods of instruction in higher education. What are the strengths and weaknesses of these methods? Are there some other ways by which the development of knowledge, skills and attitudes can be better facilitated by the higher education teacher? Are there better methods and study skills that higher education students can apply for more effective learning? These are the major questions on focus in this module.

In this module, we shall

- *describe traditional and modern teaching/learning methods that are used in higher educational institutions; and*
- *learn when to use, advantages and disadvantages of these methods.*



**GENERAL
OBJECTIVES**



4.1

Concepts of Teaching and Learning

At the end of the unit, you should be able to define the following concepts:



- teaching and learning;
- teaching environment;
- teacher-centered teaching; and
- learner-centered teaching.

SPECIFIC OBJECTIVES

One thousand two hundred learners in auditorium A. There is a row; there is so much noise that people cannot hear each other speak. An elderly person comes in. We wonder who he is. Then the person goes towards the board. Everybody is silent. It is hot and the room is dark because the windows let little sunlight in. The dictation begins, one would think that this is high school; worse, primary school. This must certainly be the teacher. He speaks a lot without stopping. The learners who are at the back cannot hear well. One of them bursts out laughing. The contagious laughter spreads everywhere, from back to front of the auditorium. The teacher demands silence. The dictation resumes. The laughter spreads from another corner. Driven to distraction, the teacher picks up his things. He threatens; he then leaves the classroom, the way he came in.

How is the rest of the academic year going to be if it starts this way?

Auditorium B is smaller and better ventilated than auditorium A. There are two groups of eight hundred learners at each end of the room. It is very lively, very pleasant. They look very serious but they are comfortable. There is a gentleman of a certain age. The teacher perhaps. He speaks little, observes and sometimes asks questions.

These are some of the scenarios that are played out in higher education. We shall keep these scenarios in mind as we begin with defining some of the key concepts in this module.

Teaching and Learning

Any teaching/educational system relies on three poles: **knowledge**, the **learner** and **learning situation**.

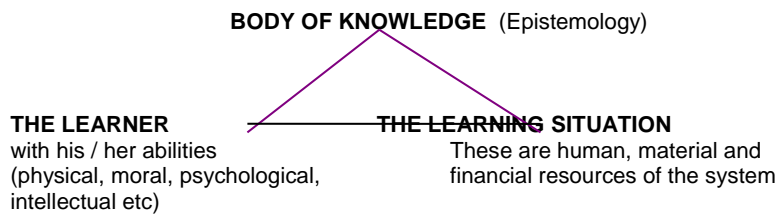


Figure 3.1: The three poles of the educational system

TEACHING

Teaching can be defined as a set of processes and procedures *used by the teacher* for the purpose of making learning happen. Obanya (1998) sees it as the process of bringing about positive changes in a learner.

THE LEARNING SITUATION

The learning situation or the teaching environment is the set of resources available for implementing the teaching/learning process. These include human resources (lecturers, learners, administrators and support personnel); physical resources (e.g. classrooms, library, laboratory, and workshops); material resources (teaching material, audiovisual materials and others) financial materials (operational allowances, scholarships, training grants and others); and the political and social context (democracy versus dictatorship, peace versus war).

LEARNING

Learning can be defined as an internal process which occurs in the learner. It is a relatively permanent change in the behaviour of a person (the learner). Research by cognitive psychologists (e.g. Brainard, 1997) shows that learning takes place in three stages: the **motivation** stage, the **acquisition** stage and the **performance** stage.

Commented [PAO1]: Look for better definition

The Motivation Phase

The learner receives a stimulus to learn. This provides the drive (kick start) for the learning process. He/she selects information from the environment, which is obtained by the sensory receptors.

The Acquisition Phase

The information acquired is processed in the following manner:

It enters the short-term memory from which it can be retrieved and exploited within a very short time. But the capacity of the short-term memory is very limited. The acquired information, following rehearsal, is stored in the long-term memory.

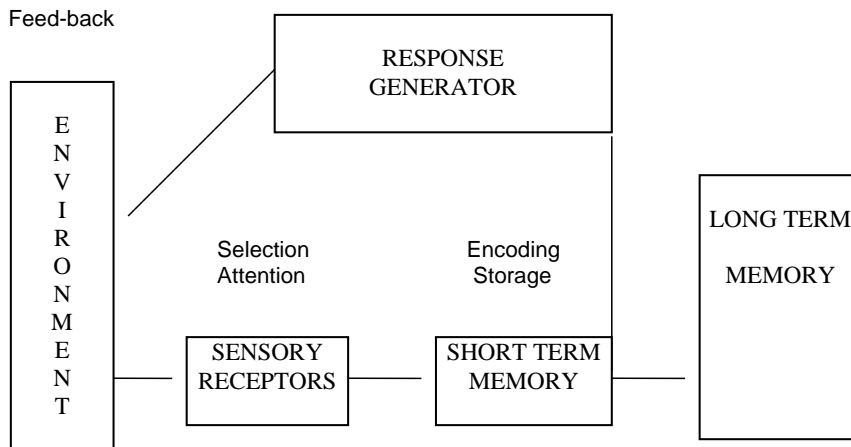


Figure 3.2 : Diagram of information processing

ROLES OF THE TEACHER AND THE LEARNER

Learning is influenced by the teacher - learner relationship. The roles of the teacher and the learner vary in this relationship. On the one hand, the teacher can be a mere transmitter of knowledge; the learner is entirely dependent on what the instructor says or does. He or she is then more of a "recipient" than a "learner". On the other hand, the teacher can play the role of a guide, or a facilitator. The learner is assisted in becoming autonomous, that is to say, in being able to plan his/her learning.

TEACHING METHOD

Prégent (1990) defines a method of teaching as particular way of organising pedagogical activities knowingly implemented according to certain rules in order to make learners reach specified objectives.

4.2

Teaching and Learning Methods : Uses, Advantages and Drawbacks

At the end of this unit, you will be able to:

- ♦ identify among a range of teaching and learning methods, those which facilitate learning; and
- ♦ state the uses, advantages and drawbacks of these teaching and learning methods

SPECIFIC OBJECTIVES



Activity 4.1



Have you ever had the opportunity to question your teaching performance?

If the answer to this question is yes, indicate two or three attitudes you wish to improve on.

If your answer is no, briefly explain why.

Promoting Teaching and Learning in Higher Education in the Natural Sciences Sam 'Tunde Bajah



Reading 4.1

Out of an exciting higher education intervention – Medium –Term Programme on Staff Development in Eastern and Southern African Universities in which I was lucky to participate, a handbook for University Lecturers with the title *Teach Your Best* was produced. In writing the Foreword to that book, Professor Gichanga, Vice-Chancellor, University of Nairobi underscored the need to revisit universities in terms of staff development and in terms of teaching and learning. He drew attention to the following issues:

Throughout Africa, institutions of higher learning are in a state of crisis. Universities are bursting at the seams due to ever increasing *student numbers*. Currently, only a handful of lecturers have been

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professionally trained in the art of teaching. All over the world, it is now recognised that excellence in teaching must be nurtured. In the face of such serious problems, it is becoming more and more evident that the quality of staff is a crucial element in ensuring that universities retain their traditional mission of discovering, transmitting and preserving knowledge (Gichaga, 1993).

While we are still battling with teaching and learning problems in higher education, we must not forget that in the natural sciences, discoveries are coming up at an unprecedented rate. The 21st century will see the world of the natural sciences take a giant leap – teaching and learning in an age that will become high-tech in terms of information must be conceived differently from what they are now.

Input Variables/Quality of Teaching

Teaching has oftentimes been described as a profession although some, for plausible reasons refer to it as an occupation. At all the levels below the university, teachers are not only trained (prepared) but also certified to teach. A professional teaching qualification is a passport to advancement in the profession. At least so it was if you aspire to becoming a Headmaster or a Principal of a Secondary School. The situation however in the Universities is different. There is an assumption that has become the norm also in the natural sciences- the possession of a Ph.D degree in that field of specialisation is all that an aspiring lecturer needs in order to take up a teaching position in any of the Department in the Natural Sciences in a university. If teachers teach (not cheat, *a la* Obanya), what do lecturers do? Teach or lecture? This raises the first question for our discussion.

Question 1

Should university lecturers be expected to possess a teaching qualification after a Ph.D? If yes, what sort of post-Ph.D training should be given?

For effective teaching, not only should the teacher be properly prepared; there is also need to provide that teacher with adequate facilities. Evidence which come out of most of the African Universities is that teaching facilities are far less adequate both in terms of quantity and variability. In the natural sciences, the arena for teaching is the laboratory. There is enough empirical evidence to show that as the student population increases, both the number and quality of teaching laboratories are static. This raises a second question which addresses the state of the laboratories.

Question 2

What is the optimum number and quality of teaching laboratories needed for teaching the natural sciences? Should the same parameter be used for Physics/Chemistry/Biology?

To determine the quality of teaching in a university, there is need not only to find out [assess] what is going on now but also to suggest how things can be improved. Whether university teachers like it or not, every time they stand before a group of students, they are being assessed by their students.

Question 3

What tips can we give to university teachers to make their teaching effective? What are the variables that need to be considered for good teaching?

Input Variables/Quality of Learning

One important ingredient of teaching is that it leads to effective learning. As observed in many universities, teachers provide through lectures, the guide plan for learners. University teachers provide a framework for learning. Indeed, that is why many university teachers still claim that they are expected to 'lecture' not 'teach'. The onus for learning rests with the students. For students who in the secondary schools have been used to teachers teaching, coming into a university presents a different scenario. Some of the students are not ready for that dramatic change [Teaching ----- Lecturing]. Statistics in most of the universities show that the age profile of the learners is dropping. Most are finding it extremely difficult to handle their learning all by themselves. Is this problem age-related?

In a secondary school environment, class size is relatively small compared with what obtains in a university. Moreover, in the university, the learner is the manager of time unlike in situations [in secondary schools] where the time for learning is planned by someone other than the learner. At the university, there are far more variability in terms of the type of people one interacts with. Indeed, the psycho-social environment in for instance a natural science laboratory or on campus can be traumatic for learners who not we well prepared. The result of all the above is that the traumatised young learner in a university faced with a much higher level of cognitive learning content performs poorly. Statistics in the university in Nigeria show a rather high failure rate at the end of the first year in natural science courses.

Suggestions/Recommendations

The discussion so far has raised more questions than providing answers. This is intentional as this presentation is meant to stimulate discussion so that at the end, we will come up with pragmatic suggestions/recommendations. Here are five suggestions to help our discussion.

Building confidence in the university teacher

A confident teacher is one who is well prepared for the job and invariably confident teachers are good teachers. The system should provide opportunities for those teachers who want to improve their professional competence. In the natural sciences, a good teacher must learn various techniques.

Wait-time for learners

The University System [especially in Nigeria] is moving out of phase with the old well laid down learning period. The semesters are now truncated; students are rushed and confused. Many students cannot confidently tell you when the next semester will effectively begin. The learners also need adequate time to plan their learning.

Provision of adequate resources to promote teaching/learning

Facilities in the natural sciences need to be adequate for individual use. The nature of the disciplines which make up natural sciences call for learner-material interaction strategy. Laboratories should be well equipped if we want to promote teaching and learning in the natural sciences.

Need for learners to assess their teachers

The University system is used to teachers assessing learners through cognitive tests. There are few instances where learners have been given the opportunity to assess the teaching of their lecturers.

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Information shared from the latter is known to promote teaching and learning, and this will be more so in the natural sciences.

Teaching students how to learn

Textbooks and lecture notes alone will not be adequate in sourcing information in the vast area of the natural sciences. As we prepare our learners for the 21st century, we must also teach them how to access information available mainly in the information super highway.

CONCLUSION

In this brief discussion on promoting teaching and learning in the natural sciences in the context of higher education, we conclude with the following:

- For the teachers --- **Teach your Best**
- For the learners --- **In the natural sciences, YOU DO SCIENCE**

Let me here share aspects of my contribution in the book *Teach Your Best*. These clips I presume will be relevant to our discussion on promoting teaching and learning in the natural sciences.

The teacher as an Authority

There are a number of areas you should consider when preparing your lecture.

Area to Consider

1. Identification of topic/objectives
2. Audience
3. Location and Duration
4. Subject Matter
of

Questions to ask Yourself

- What do you want to teach?
- For what group of students is the lecture meant?
- Where will the lecture be given and for how long?
- What is the scope of the lecture? How far, in terms

5. References

depth and breadth, do you think you can go with the subject matter in the prescribed time?

Is there any fact you think you have to look up in a book, journal or in your notebook? Are you confident with the facts you want to put across.

6. Trouble Shooting

Are there any areas in the subject matter that you anticipate students might find difficult to grasp? If so, do you want to double check these areas to be prepared for the questions.

7. Instructional Media

Do you want to use any aids during the lecture? Have you checked if they are available and in good working condition?

Areas to consider when preparing your lecture

If you have carefully considered all these seven areas, you will probably enjoy giving the lecture as much as your students will enjoy listening to you

ADEQUATE PREPARATION

- Have a clear voice and articulation.
- Speak at a moderate rate
- Use a strong loud voice.
- Vary the tone of voice.
- Use a conversational delivery
- Use language and terminology which is easily understood
- Use facial expressions and gestures
- Do not be afraid to smile
- Establish eye contact with individuals and the whole class
- Be neat and well groomed.
- Be dynamic and enthusiastic

The technique adopted in the delivery can make all the difference between a good and a bad lecture. Whatever the size of the lecture room, your voice must be clearly heard. You are the best judge of how to pitch your voice. If the room is too large for you to be heard, then you must use a microphone. You should adopt a conversational style of delivery and not keep your eyes glued to your lecture notes. Make eye contact with individual students, and scan the class as a whole. In a situation where students have few textbooks, lecture notes mean a lot to them. Therefore when you have to write on the chalkboard, you must make sure that your writing is legible. Sometimes you may use an overhead transparency, In that case, you should make sure that the lettering on the transparencies is focussed sharply. Allow sufficient time for the students to take their notes before removing the transparency. As a lecturer, you must strive to take your students forward by advancing their knowledge from a known starting point. In pedagogical terms, that starting point is referred to as the academic entry point. Therefore, before you start lecturing, you should establish the academic entry point of your students.

Excerpted from:

Bajah, S.T. (1998, September). Promoting teaching and learning in higher education in the natural sciences. Presented at the UNESCO Workshop on Teaching and Learning in Higher Education. University of Ibadan, Nigeria.



Activity 4.2



Prepare a checklist using suggestions in Reading 4.1 on “The Teacher as Authority”. Assess your last lecture using the checklist.

Selection Criteria of Teaching and Learning Methods

Methods of teaching and learning can be classified as follows according to the ability or inability to foster autonomous learning:

- **The teaching/ learning methods which do not foster autonomous learning**

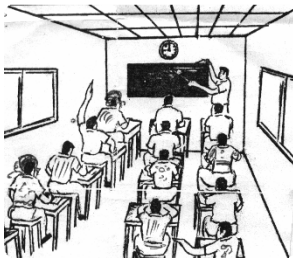
These are large group methods e.g. lecture, and symposium.

- **Teaching and learning methods favouring autonomous learning**

These are methods implemented in small groups or call for individual work by students.

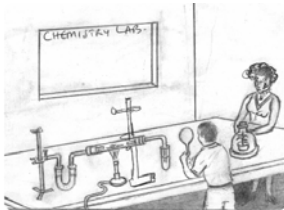
Let us now undertake a description of some of these methods.

LECTURE METHOD



In a lecture, the teacher addresses learners without interruption. This method is used for large classes. It allows the teacher to use the whole of the teaching time. This method has limitations because it does not foster learning. As a matter of fact, the learner's main task is to listen carefully. He or she is a listener, a little active; a little autonomous, since dependence is on what the teacher says and does. The opinions of the learner count very little.

SMALL GROUP METHODS



Small group methods include:

- The seminar
- Group discussion
- Case study
- Simulation
- Workshop
- Problem- solving method (PSM)

THE SEMINAR

The aim of the seminar is an in-depth exploration of a specialised topic. It consists of periodic (usually weekly) meetings of small groups of learners (sometimes between 10 and

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15) and a teacher who acts as an expert or a moderator. The learners are to read one text (or texts) on a specialised topic. They write what will be the subject of the meeting (in a report form), give it in advance to their peers (one week before, for example). The discussion will focus on the arguments and conclusions of the participants. These meetings allow an in-depth look at one topic at time. They develop in the learner, abilities for synthesis, critical analysis and communication skills.

GROUP DISCUSSION

Group discussion is a method that allows the learner to talk about his/her experiences, and to share ideas. It develops in the learner abilities for listening, comprehension, synthesis and critical analysis. During group discussion the fluent learner can dominate the discussion. The teacher should possess the qualities of a good moderator to maximise interest in the use of such a method in learning.

THE CASE STUDY

The case study is a written record of a hypothetical or real-life problem. The case study must 1) present the learner with situations that are very much related to the ones the learner knows or will know and 2) lead to decisions like those that will have to be made in real life. The case study can allow the learner to seek information necessary for the study of the case.

METHODS IN WHICH LEARNING IS INDIVIDUALISED

The practicals

The practicals make it possible to combine theory and practice. The practicals give the learner an opportunity to go beyond the words which remain as abstract symbols. Practical give the learner the opportunity to observe, to describe, to interpret, to solve problems, to manipulate, and to collate and report information.

Computer – Assisted Learning

Using this method, the computer presents the material to be learned in an interactive manner. It is a system that allows immediate feedback, and the establishment of a specific working pace.

Individually Prescribed Teaching

The originality of individual prescription teaching resides in the following main characteristics :

- The teacher writes and ranks all the specific learning objectives of each course.
- The teacher designs a set of placement tests aimed at measuring the achievement of the specific objectives in each learning unit.
- Every teacher regularly informs each learner about progress and suggests ways ("prescription") to reach the objectives partially achieved, or to proceed.
- Thus, each learner benefits from an in-depth analysis of his profile at the beginning of the course; a method and individual activities are proposed (prescribed) to him or her so that all the objectives of the course are met.

Distance Teaching

Distance teaching or tele-teaching is an advanced form of what was once called "correspondence course". In a course based on such a teaching method, the learner works alone, extramurals, most of the time at home. Once registered for the course of his or her choice, the learner receives the course documents by mail. In most cases, a written guide indicates what work has to be done with those documents. Details will be given in module 7.

Some Methods of Teaching Environmental Science Concepts

Peter Okebukola and Michael Arove



Reading 4.2

Lecture/Discussion

This strategy assumes a higher gradient of teacher knowledge on the topic relative to that of the students. In the pure lecture mode, the teacher transmits information to the students who are actively engaged in note copying and "soaking in" the supposedly rich content from the teacher. Only scant opportunity is available to the students for questions and discussions.

In the lecture/discussion mode, however, there is a preponderant two-way communication between the teacher and the students. A lower knowledge gradient is assumed as students, like the teacher, are expected to contribute to information building during the class session. For instance, in a lesson on water conservation, many students could be as aware as the teacher of industrial and domestic techniques for conserving water. Such knowledge could have been obtained through the media, especially television and radio and also from practice at home. Lecture/discussion on such a topic would, therefore, involve both teacher-talk and a lot of student-talk. There will be sharing and compiling of ideas and reconstructing and negotiation of meanings in a constructivist sense.

Merits

1. It saves time; the course syllabus is covered in relatively short time.
2. Students are able to have the benefit of "correct" information from the teacher.

Demerits

1. It favours the gifted student.
2. Could be monopolised by the teacher.
3. Too abstract and teacher centred.
4. It encourages rote learning.

Project Method

The project method classically involves breaking down a topic e.g. pollution, into integral components or sub-topics such as air pollution, water pollution, land pollution and noise pollution. Student groups are then assigned the sub-topics to carry out investigations and produce reports e.g. on causes, effects, and prevention of the assigned type of pollution for presentation to, and discussion by the entire class. The role of the teacher is to provide guidance when required and to monitor the progress made by each group. Each student group is free to adopt whatever methodology it deems appropriate for tackling the task.

Merits

1. It encourages independent study and brings about new discoveries.
2. Students acquire skills of investigation.
3. It keeps students busy.
4. The teacher has more time for other class routines.
5. Makes learning to be meaningful and encourages better understanding.

Demerits

1. It may be difficult in the absence of research materials e.g. books and other resources.
2. Time consuming.
3. A student can copy somebody's work or hire someone to do the project for him or her.
4. It does not take care of individual differences.
5. Students may veer off the topic.
6. Students may not be able to gather enough information if they are not guided.

Concept mapping

Concept mapping is a model of instructional strategy developed by Novak and his associates in 1972. It is a metalearning technique for assisting learners to organise information about science concepts in a meaningful manner in order to facilitate meaningful learning. It is based on the premise that concepts do not exist in isolation but interrelate with others to make meaning. Organising new concepts/information into a form that shows these interrelationships helps learners make mental connections.

The strategy was developed from Ausubel's (1968) assimilation theory of cognitive learning based on the idea that new concept meanings were acquired through assimilation into existing concept propositional frameworks. Ausubel and his associates had the task of how to present these frameworks. Thus given the additional ideas from Ausubel's theory that "the cognitive structure is organised hierarchically, and that most new learning occurs through derivative or correlative subsumption of new concept meanings under existing concept/propositional ideas" (Novak, 1977), they developed the idea of hierarchical representation of concept propositional framework which was later described as "cognitive maps" or "concept maps" (Novak, 1979).

Concept maps are diagrams indicating interrelationships among concepts as representation of meanings or ideational frameworks specific to a domain of knowledge (Novak, 1990b). The maps can be applied to any subject matter and to any level within the subject. Maps generated by a learner report his or her conceptual organisation of the topic. They are intended to represent meaningful relationships between concepts in the form of propositions. Propositions are two or more concept labels linked by words in a semantic unit. Concept map in its simplest form would be just two

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concepts connected by a "linking word" and forming a proposition. For example "leaves are green" would represent a simple concept map forming a valid proposition between the concepts "leaves and "green." Apart from a small number of concepts which children learn through the discovery learning process, most meanings are learned through a combination of propositions which is acquired and in which the concept is embedded. Although concrete empirical propositions may facilitate concept learning, the regularity represented by the concept label is given additional meaning through propositional statements including the concept. Thus "tomato is red," tomato is a fruit, "tomato is a berry", "tomato is edible and so on leads to increasing meaning and precision of meaning for the concept tomato.

Concept maps are therefore schematic devices to represent a set of concept meanings embedded in a framework of propositions. They work to make evident to both students and teachers the small number of key ideas they must focus upon for any specific learning task. They can also provide a kind of visual road map for a "journey" we are about to begin and some of the pathways we may take to connect meanings of concepts in propositions. After completing a learning task, concept maps provide a schematic summary of what has been learned. It has been recommended that concept maps should be hierarchical since meaningful learning proceeds most easily when new concepts or concept meanings are subsumed under broader more inclusive concepts, that is, more general, more inclusive concepts should be at the top of the map, with progressively more specific, less inclusive concepts arranged subordinately.

Concept maps can be constructed by students from texts or after class discussions/lecture. It involves listing the main ideas/concepts and words and arranging these in a hierarchy. The most general, abstract and most inclusive (superordinate) concepts are lower down in the hierarchy. This array of concepts is connected by lines or arrows carrying labels in a propositional or prepositional form. At the terminus of each branch may be found examples of the terminal concept. A finished concept map is analogous to a road map with every concept depending on others for meaning.

Thus, in a concept-mapping exercise (Okebukola,1990), students:

1. note the keywords/concepts, phrases or ideas that are used during the lesson or read in a text;
2. arrange the concepts and main ideas in a hierarchy from the most general most inclusive and abstract (superordinate) to the most specific and concrete (subordinate);
3. draw circles or ellipses around the concepts;
4. connect the concepts (in circle) by means of lines or arrows accompanied by linking words so that each branch of map can be read from the top down;
5. provide examples, if possible, at the terminus of each branch; and
6. cross-link hierarchies or branches of the map where appropriate.

Concepts are generally isolated by circles and connecting and labelled with linking words which describe how the connected concept are related to each other. Two connected concepts make a prepositional linkage or statement about how some piece of the world looks or works. Cross links are prepositional linkages that connect different segment of the concept hierarchy. Cross links are particularly powerful connections which form web of relevant conceptions, probably enhancing anchorage and stability in the cognitive structure.

Rather than just connecting general concepts to specific concepts, cross links tend to connect different sub-domains of conceptual structures. Linkages that are made only vertically would be more

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likely to be forgotten than those made both vertically and laterally. Vertical connections are somewhat more specific instances of concepts, whereas cross-links relate together concepts in different domains of hierarchy. Unlike rote learning in which series of propositions are memorised and not related to each other, with concept mapping new concepts and propositions are connected into a whole existing relevant framework.

Merits

1. It simplifies the topic and facilitates understanding.
2. It motivates students to learn.
3. It is student centred.
4. Students are able to organise their knowledge in a meaningful way.
5. Facilitates interconnectedness of topics.
6. It connects previous knowledge of the students with new knowledge.
7. It provides a window into students' misconceptions.

Demerits

1. May be a waste of time where the students need clear and detailed explanation.
2. No defined way of presenting maps.
3. Time consuming.
4. Students might be confused if maps are complex.

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Excerpted from:

Okebukola, P.A.O. & Aho, M.A.N. (1997). *Strategies for Environmental Education*. Ibadan: STAN

Critically review the methods described in Reading 3.2. What other methods do you put to good use in your class?

Activity 4.4



Promoting Teaching and Learning of Mathematics in Higher Education



Reading 4.3

C. B. OGUNTONADE

Let us now look at the task of the Mathematics Lecturer (teacher?) who is facing his/her first year students fresh from the secondary school. In doing this, we base our presentation on the need to strengthen students' entry behaviour on which teaching and learning will be built in the institution. We shall adopt the strategy of giving the teacher some tips for effective teaching of mathematics to the neophyte undergraduates or freshmen.

- (i) *Dispel a Myth:* These freshmen usually come with a myth that Mathematics is a meaningless, abstract collection of figures, symbols and letters for the purpose of gymnastic manipulations to obtain some predetermined right answers. This myth must be dispelled at once. One effective way of doing this is to express, as much as possible, mathematical symbols and expressions in words and relate them to practical life. For example, it is astonishing that many freshmen can easily write the expression for Pythagoras' theorem, but when asked to express it in words and relate it to practical life, they are found wanting. The same thing applies to the three fundamental equations of kinematics:

$$V = U + at$$

$$S = ut + (1/2)at^2$$

$$v^2 = u^2 + 2as$$

There is an abysmally low number of freshmen who can express these equations in words and relate them to practical situations although they can recite them using their secondary school rote memory experience. The higher education teacher must therefore teach the neophyte undergraduate how to state mathematical expressions in meaningful words and get them to see their relationship with life.

- (ii) *Explain Letters and Symbols:* Take the case of letters and symbols in Algebra, Trigonometry and Calculus. The students are used to the letters of the English alphabet – a, b, c, ... x, y, z – in Algebra, but do they know that these letters represent unknown quantities which may be found through logical operations? They also know some other “strange” letters such as \forall , \exists , \int , Δ , and Γ from their elementary trigonometry in the secondary school. But hardly do they know the source or names of these letters, mainly because their teachers at the lower level also did not know (what a vicious cycle!). The lecturer should dispel the myth by letting the learners know that these are letters of the Greek Alphabet which we use when there may be confusion in repeated uses of the letters of the English Alphabet. The first letter of the Greek Alphabet is α (alpha) and the last letter is ω (omega). (Remember “You are the Alpha and Omega, the beginning and the end...”). Some others are β (beta), γ (gamma), δ (delta), θ (theta), ϕ (phi)...

These case of Integration in Calculus is another situation which usually seems mythical to students when based on an abstract background. Let us take it that the freshmen have a knowledge of elementary Differential Calculus in which they have been taught how quantities and magnitudes can be studied in details by breaking them down into very small pieces represented by Δx . In the process of Integration we want to collect all these pieces back to make a whole (explain the meaning of “integrate”). Hence we talk of the “sum of all the small parts Δx ”, i.e., “sum of all Δx ”.

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Since Mathematics uses symbols to summarize sentences and phrases, we can use “s” to represent “sum of all” and hence write $s(x)$. But this will be confused with any other “s” later in our work, so we shall modify the “s” by elongating it to stand as a special symbol looking like this: \int . This is called the sign of integration, so we write $\int(x)$. But as $\int(x)$ becomes very small, we write the usual symbol dx to obtain the familiar expressions $\int dx$, $\int x dx$, $\int x^2 dx$, As the case may be.

Our intention here is to emphasize that for a strong foundation, it is always necessary for the teacher to present new topics in a simple and friendly manner by patiently explaining apparently strange and intimidating symbols and bringing up the frame of reference of the students to accommodate the new language to be used in the new topic. It is to be remembered that accommodation as a reorganization of the cognitive map is a more complex learning process than assimilation by which the “new” input finds a ready anchor.

- (iii) *Relate to Technology:* Furthermore, it is necessary, wherever possible, to point out the application of mathematics to practical situations, especially in the development of technology. The study of Electromagnetic Waves is now part of higher mathematics. How does this relate to the transmission of radiation in broadcasting and in communication in space travels? The quantum theory and Schrodinger's equations are now part of higher mathematics. How do they relate to transmission of electrical energy in microchips which are used in the construction of sophisticated computers? In a lighter mood, it has been conjectured that Maxwell's Electromagnetic Equations are what God wrote in the firmament, and “there was light”
- (iv) *Emphasise Process and De-emphasise Answers:* Most students of Mathematics are of the opinion that the purpose of learning Mathematics is to obtain “the” right answers to problems. Answers per se are important but certainly not the crucial point in learning Mathematics. Indeed, some questions in Higher Mathematics may not require a definite figure as an answer. Cases such as “prove that...”, “show that...” do not require numerical answers. Of greater importance is the teaching of the processes of handling Mathematics as a series of logical operations. Hence, the teaching method to be adopted predominantly is what Nagel (1966) calls the “Deductive-Nomological Pattern of Explanation.” As Oguntonade (1971) pointed out, “in an explanation of this type, the phenomenon to be explained, (called the explanandum phenomenon) is shown to be a necessary or logical consequence of a set of premises (the explanans) which consists of at least one universal law (L) and some instances of the universal law(s) drawn from the explanandum phenomenon. In its simplest form, this is the “if x, then y, provided z” pattern of explanation.
- (v) *Work copious examples:* Since Mathematics is not a leisure-reading subject, but a subject to be practised, the teacher must take the lead by systematically working copious and varied examples for the students.
- (vi) *Get the Students to Practice:* The teacher should also adopt the Practice and Drill Method of teaching by getting the students to work copious examples in class and as home assignments. The question of student population explosion arises here. However, it is the practice at Higher Education level to get teaching assistants to assist the lecturer in supervising and grading students' work.

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- (vii) **Take Advantage of Modern Technology:** The teacher should update and use his knowledge of modern technology in the teaching of small and large Mathematics classes. The closed circuit television (CCTV), the Programmed Instruction Technique and the use of the Computer, especially the Compact Disc (CD) are some of the cases in view.

The question which arises now is: Do these strategies and others like them guarantee learning by the students? Not necessary, but they are essential pre-requisites to facilitate learning.

LEARNING MATHEMATICS

It is presumed that every professionally qualified teacher knows that the processes of teaching are different from those of learning. However, apart from actually teaching the contents of Mathematics, it is becoming increasingly necessary for the teacher to teach students how to learn. But in the final analysis the student must take advantage of the teacher's efforts and learn on his own. For this purpose, we offer the following tips which are by no means exhaustive.

- (i) **Be familiar with the Scope of Work:** The scope of the work required to be done every semester must be known to the student so that he plans how to learn and cover the work done during the semester.
- (ii) **Speak Mathematics:** The student should try to state every mathematical expression in his own words as much as possible. In addition, he should practice describing events, objects and issues of everyday occurrence in mathematical language. In this way, Mathematics will become part of the daily life of the student.
- (iii) **Practice Mathematics:** The student should learn that Mathematics is not a reading subject. It must be practised. Hence, the student must make it a point of duty to practice many problems everyday. While answers are important; they are not the main goal of practising. The processes are much more important than the answers. In addition, group practice among students is very useful in fostering independent practice later on. Furthermore, the student should persevere when a single problem seems to consume a lot of his time. The beauty of finally overcoming a knotty problem is that many like it can then be solved in quick succession later on because the "trick" has been discovered.
- (iv) **Seek Lecturer's Assistance:** Whenever necessary the student should seek individual attention of the lecturer to assist him in solving a problem. But this should not be made the main strategy for private learning. The student should not say to the lecturer, "I don't understand the problem, please solve it for me". Rather he should say, "This is how far I have tried in my attempt to solve this problem and I do not know how to proceed from here despite my attempts. Please, assist o unravel the knotty point".
- (v) **Use different Textbooks:** For variety in practice of problems, the student should read the approaches offered by different authors and solve problems in their textbooks. This gives the student the confidence that he is a mathematician anywhere, judging by available standards, and not just a mathematician by virtue of sticking to a particular author's ideas.

- (vi) **Re-practice:** After some weeks, the student should return to the sections and problems which he had practised and re-practice. This is one very useful way of self-test to ensure that Mathematics is not just being piece-meal or in an ad hoc manner.

ASSESSMENT IN MATHEMATICS

The only way in which the teacher can find out if the student has actually learnt what he is supposed to learn is to set tests for the student. Teacher-made tests in mathematics are usually subject to the violation of known norms of good testing methods and lecturers at higher education level tend to adopt the strategy of copying textbook items and setting tests in a hurry. This should not be so. Mathematics in particular, demands strict fairness to the student in testing what has been taught. The teacher is strongly advised to

- (i) map out the area to be covered by the test
- (ii) identify the objectives of the test
- (iii) prepare a valid blue-print for the test
- (iv) respond to the test himself before administering it to the students
- (v) season the test for at least one week and modify it on the basis of revised strategy in planning, and weighting of the items
- (vi) prepare a full-scale marking scheme showing the processes expected and the scores judiciously attached to each step in the processes
- (vii) produce and administer the test to the students under the conditions required by the regulations
- (viii) score the responses strictly in accordance with the marking scheme
- (ix) take and keep a proper record of the performances in each test
- (x) give feedback to the students, to himself, to the institution and to the curriculum developers for various purposes which need not be discussed here.

Excerpted from:

Oguntonade, C.O. (1998, September). Promoting Teaching and Learning of Mathematics in Higher Education. Presented at the UNESCO Workshop on Teaching and Learning in Higher Education, University of Ibadan, Nigeria.

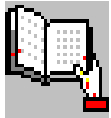


What lessons have you learned from Reading 3.3 that you can apply to your discipline/subject area?

Activity 4.5



1. Do teachers need to understand the nature and syntactical structure of Mathematics to be able to teach it effectively?
2. What are the practical strategies to be adopted by teachers of Mathematics at the tertiary level, particularly in view of the poor background or the students at the point of entry and their concept of Mathematics as a myth?



4.3

Some Strategies for Promoting Teaching and Learning

At the end of this unit, you will be able to:

- ❑ describe strategies for promoting learning;
- ❑ propose criteria and indicators necessary to assess the quality of teaching/ learning methods;
- ❑ use the workshop as an example of small-group teaching.



Strategies for Promoting Teaching and Learning

In order to promote learning, the teacher will need to comply with the following prerequisites:

- Specify what is expected of the learner by providing him or her with the objectives of teaching.
- Clarify with the learner what his or her specific expectations are in order to readjust the content of the teaching.
- Win the learner's cooperation all through the teaching/learning process.
- Start from where the learners are, that is to say, rely on what the learner already knows and use representations he or she is familiar with.
- Put the learner in a situation in which he/she can realise something by him/herself, do research, and create.
- Provide the learner with direct access to knowledge by ensuring that he or she has the necessary pedagogical tools at his or her disposal.
- Listen to the learner in order to change his or her ways and behaviour.

One of the best ways to improve one's performance constantly is to use a performance chart. In our case, this performance chart will be about the pedagogical methods used. It will be like the car dashboard, which gives critical information on the condition of the car, represented in our case by the state of teaching methods used.

In order to control the quality of the methods used, the teacher will have to identify:

- The criteria that will be considered.

- The indicators of the criteria selected.
- The measuring scales.

Finally, *no method is absolutely efficient*. The efficiency of a method depends on the nature of the learner, the number of learners, the subject being taught, the teacher's personality, the material and physical conditions etc.

The Workshop – An Example Of A Small Groups Teaching Method

Workshop Planning

A workshop requires advance planning and organisation. Let us consider some of the planning and organisational issues.

Several months before

- Write the schedule of tasks
- Analyse the needs of the target population
- Establish aims and objectives
- Contact resource –people
- Contact potential sponsors
- Reserve suitable rooms visit them before choosing, make reservation for meals
- Clarify aims and objectives in a meeting of resource people and representatives of the target population.
- Make a plan and a schedule (to the minute) clarify everybody's role. Gather resource-people to discuss it.
- Write the final version
- Establish the budget, determine registration fees, contact again potential sponsors
- Announce the workshop on descriptive leaflet the registration deadline (at least 1 month before)
- Think of necessary materials and get them (pencils, paper, felt pens, large-size paper ("Flip charts") brief-case and name-tag for each participants)
- Re-confirm reservation of rooms and meals
- Call resource – people again, for general rehearsal

On the eve of the workshop

- By means of a checklist, check that all planning activities have been successfully executed.

The day of the workshop

- Arrive at least one hour before the start of the workshop
- Check rooms, the arrangement of chairs and tables
- Put up posters to indicate clearly where specific events will take place
- Start on time
- Introduce resource persons
- Explain well everybody's role
- Have the schedule followed as much as possible

After the workshop

- Thank resource persons and sponsors in writing
- Compile assessment: send it to participants and resource-people (and sponsors, if necessary)

Summary

In this Module, we examined some methods of teaching and learning in higher education. We looked at the "traditional method" of lecturing, and also small-group methods. The merits and demerits of the methods were discussed. An example of the use of the workshop was used as a way of demonstrating how to plan for and use any of the methods for teaching. It was emphasised that there is no best method for all occasions. It behoves the higher education teacher to identify the method that best facilitates learning for his or her particular groups of learners.

For further Reading

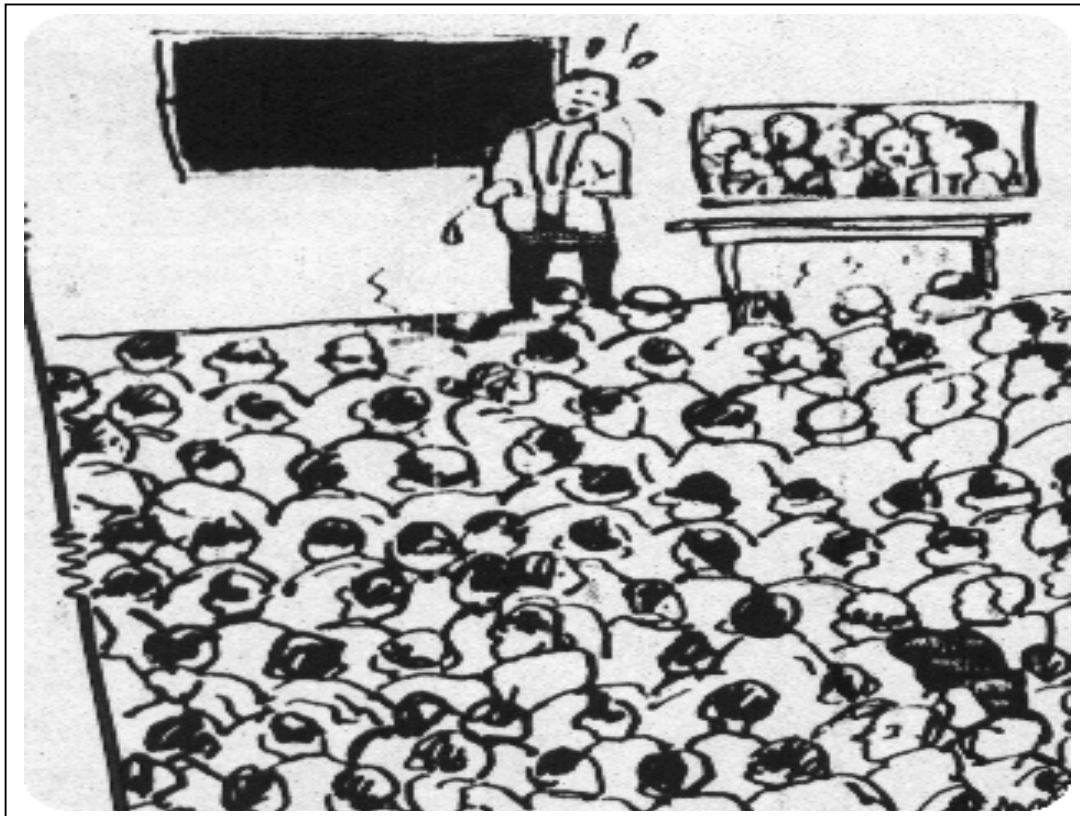
Obanya, PAI (1988) *Teaching methods across the curriculum*. London: Collins

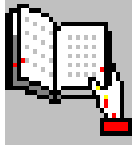
GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

Module

5

**EFFECTIVE TEACHING AND
LEARNING IN LARGE CLASSES**





5.1

Introduction and General Objectives

Introduction

The expansion in enrolment in higher institutions in Africa in the midst of limited resources translated in the 1980s and 1990s into more numbers in classes. The phenomenon of large classes is fast becoming one to be contended with in most higher institutions in the region. The outlook for the future? Many more large classes. But of course, large classes are found in institutions the world over. Since we cannot wish large classes away, we have to devise techniques for delivering good quality education in such settings. This module is to assist those teachers who have responsibility for teaching large classes to do so with a smile!

We often think that learning occurs in proportion to class size: the smaller the class, the more students learn. However, while research shows that small classes provide more opportunities for feedback and discussion than large classes, as well as greater student satisfaction, it does not suggest that class size is necessarily a correlate of student learning. What counts is not the size of the class, but the quality of the teaching. Research suggests that the key to effective instruction and student learning, regardless of class size, is engaging students in active learning.

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At the end of this module, you should have:

- developed a working definition of a large class; and
- acquired basic techniques of teaching large classes for optimal learning.

**GENERAL
OBJECTIVES**

What is a Large Class?

Putting first things first, the question to be addressed as we start our study of this module is “what is a large class?” This question was put to some senior academics attending a UNESCO Regional Workshop on Teaching and Learning in Higher Education at Moi University, Eldoret, Kenya. Here are excerpts of views expressed.

- *“There is nothing like a large class. The large class is only in the mind of the orthodox teacher”*
- *“A large class is one with more students than available facilities can support”*
- *“Large classes have more than 100 students enrolled”*
- *“There is no fixed number. The large class depends on the discipline- smaller number for engineering, science and medicine and larger number for the arts, humanities, and social sciences”*

What are other views on large classes? There is no agreed definition of a large class in the literature, nor should there be. One person’s large class is what some others consider as ‘regular’, ‘small’ or ‘normal’. Some teachers simply define “large” as “too many students to learn names by the end of the term or semester.” Whether something feels like a large class is partly a matter of the resources put into teaching

it and of the skill employed by the teacher. For example, a social science lecturer who works alone with a class of 40-50 and who grades students on coursework essays and essay-type examinations finds this to be a large class. However, a language lecturer may not think 50 students makes for a large class. So, let's say that a large class is one that feels large and that a sign of this will often be that you feel that the size of the class stops you from working in your preferred way. This module is about making large classes feel smaller; about weakening feelings that the number of students is disempowering the professor; and about helping students to feel better about the large classes that are likely to greet them in their first year at the higher institution.

For our purpose, we suggest that *a large class is one that feels large*. Signs that the class is 'large' can be:

- The class is significantly larger than you are used to.
- The resources can no longer cope with the number of students if you desire individual attention for the students.

One thing is sure. Whether we have a working definition or not, the phenomenon exists. Since we have identified some of the characteristics, we should now proceed with how to cope with it.



Activity 5.1



Reflect on the concept of a large class. Organise a discussion in your department on the meaning of a large class. What are the main similarities and differences in the definitions provided during the discussion?

How Does Class Size Make a Difference?

Studies on the effects of class size have been conducted since the 1920's. Results have often been mixed, with some methods of instruction favouring small classes and other methods being as or more effective in large classes. Large classes are as effective as small classes when the goals involve learning factual information and comprehending that information. When traditional achievement tests are used to measure learning, large classes compare well with smaller classes.

Smaller classes have been found more effective when instructional goals involve higher level cognitive skills including application, analysis, and synthesis. Smaller classes provide for greater contact between students and lecturer, which appears to be most needed for students with low motivation, those with little knowledge of the subject matter, or those who have difficulty grasping conceptual material. Smaller classes are also more effective than large ones in affecting student attitudes. In sum, the optimal size of a class depends on the instructional goals being pursued. The main advantage smaller classes have over larger ones is that they provide students with greater opportunities for interaction with subject matter, with the professor and with one another.

Now to the down side of large classes. Teaching large classes has been found to adversely affect morale, motivation and self-esteem of teachers. Although many teachers could manage a class of almost any size successfully, this could often be at the expense of the teacher's own well being and the range of learning experiences offered to students. Many teachers of large classes feel they spend too much time on organising and managing class activities and not enough on meeting the needs of individual children. Large classes and overcrowded classrooms have negative effects on students' behaviour and learning.

Some other problems with large classes are:

- Students become faces instead of people
- It is harder to give individual advice and guidance to students
- Organisational problems are compounded, making it difficult to schedule tutorials, laboratory sessions, and fieldwork
- There can be technical problems working with large classes e.g. difficulties in projecting slides that are clearly visible to all students.
- Monitoring of attendance can be difficult, thus encouraging students to cut classes
- Coping with large numbers of assignments and examination scripts is a source of difficulty
- The quality of feedback to students can be much reduced in large classes.

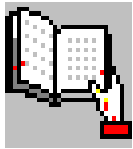
Table 5.1 gives some comparison between small and large classes.

Table 5.1 Comparing Large and Small Classes

Teachers' views on teaching larger and smaller classes	
Larger classes	Smaller classes
Students receive less individual attention	Students receive more individual attention
A more restricted range of teaching and learning activities	Flexibility to vary teaching and learning activities
Whole-class teaching sometimes employed for control and keeping students on task	Whole-class teaching employed when appropriate to the activity
Group work hard to manage because of too many or too large groups	Group work can be employed effectively and flexibly
Restricted opportunities for student assessment and individual feedback	Better quality assessment and feedback to students
Limitations to practical activities	More opportunities for active learning
Teachers work extremely hard to offset the effects of larger class size	More reasonable workloads enabling teachers to put their energies into meeting the needs of students

No doubt these obstacles are numerous. Since we cannot wish large classes away, we have to devise techniques for coping and ensure that our students benefit from

participation in a large class. Let us now examine how we go about this.



5.2

Developing and Implementing Curriculum for Large Classes

Introduction

Should we organise learning experiences for small classes and large ones in the same way? Clearly not. Since the demands of large classes are different from those of small classes, we need to prepare our programme to take the differences in demands into consideration. What demands are we talking about here? We are referring to the demands of space, equipment, and the demands of evaluation. We are proceeding with the assumption that our objectives for the course or programme are the same irrespective of whether or not we are faced with a large class or a small class.

At the end of this Unit, you should be able to:

- plan a course of work for students in a large class considering the demands of space, equipment and evaluation;
- organise practical work for students in large classes; and
- recognise the need for equity in implementing a programme for large classes.



SPECIFIC OBJECTIVES

Taking Demand of Space into Consideration

The learning experiences we have planned for our students in a course for example in science or the languages need not be watered down on account of presentation to a large rather than to a small class when space comes in as a limitation. Space here could mean lecture room, laboratory or workshop space. Our institution probably has room to accommodate 50 students for the course. In the next several years, we have been compelled to enrol 300 students for the same course. Or we have been asked to prepare a new programme for a course which has an outlook of high enrolment, yet space in our institution is limiting. Taking another example, a rather common one, how do we plan for many of our introductory courses that have high enrolment but whose space allotment for lectures and practicals is tight and choked? In all of these, we should not take any activity out of the normal programme of work. What we need to tinker with is how we take full advantage of the space limitation. But how do we do this?



Activity 5.2



How should we plan for introductory courses that have high enrolment but whose space allotment for lectures and practicals is tight and choked? How do you take full advantage of space limitation in your institution to address the space requirements of large introductory classes?

Taking Demand of Equipment into Consideration

So we probably have ample space but equipment is short and unable to go round the large number of students. For example, we have 120 language students for equipment fitted for 35 students in a language laboratory. Also an engineering

workshop with equipment for 30 students; but here we are with 75 students. As we agreed, course content remains the same.



Activity 5.3



How do you organise and implement learning experiences when your class is large and equipment is in short supply?

Taking Demand of Evaluation into Consideration

We expect that the progress of students in a large class should be monitored and reported upon with a rigour that is similar to that of students in a relatively small class. We expect that every student in the large class should have opportunities of doing assignments, of doing tests and of asking questions in class and of having a feedback on his or her performance.



Activity 5.4



How do we plan our programme to take the large number of students into consideration while evaluating large classes?

Organising Practical Work for Large Classes

If there is one issue that keeps teachers in higher institutions nervous when confronted with large classes, it is how to run practical sessions with the same fervour as they do for small classes. It is sad to note that many give up and do either of two things. One, skip the practicals entirely. The second option is to run what is commonly called “theory of practicals” sessions. In these sessions, students go through ‘dry labs’ and learn only the theoretically underpinnings of the scheduled practical work. These two approaches kill the inquiry spirit of science and fail to guarantee Africa the development of a crop of high-quality, Nobel prize-winning

scientists. In one breath, we want to advance rapidly in science and technology, in another breath, we ask our higher institution teachers to teach science to large numbers of students in laboratories that cannot accommodate large numbers. How do we maintain a balance in this context? Experts at the Regional Workshop on Higher Education at Moi University in Kenya and at a similar workshop in Lagos State University, Nigeria reached agreement on these strategies:

Cooperative Group Work

In a large class, assigning a set of materials to individual students for practical work is hardly feasible. Grouping students in the laboratory or workshop becomes an attractive option. Setting up groups is not as easy as some think. It is not enough to randomly assign students to groups without some defined criteria. Studies e.g. Okebukola (1992); Johnson and Johnson (1996) have shown that cooperative-learning groups perform better in science practical skills than individualistic and competitive groups. In setting up cooperative-learning groups, researchers have suggested mixing on the basis of ability level, gender and other discriminating variables. How do you achieve this? The following steps could serve as a guide.

- From the class list, group the students into high, average and low ability in terms of performance in your subject. The ability levels can be determined using previous test scores and labelling those students who are in the upper third as high ability, those in the bottom third as low ability and the middle two-thirds as average ability. Indicate H, A, and L to representing high, average and low, in front of the names of the students on the class list.
- Indicate M and F in front of every name on the class list.

- Compose the groups to include (as much as possible) at least one high ability, two average ability and one low ability student. Also have at least one female student in the group.
- Give students the guidelines for group work. These should include asking every member of the group to contribute his or her idea to experimental work and to decision making in the group. Inform them that it is a 'sink or swim together' situation and that group reward is for all and not for individual members. A score of 5 for the group will be the score for each and every member.

Use of the stations approach

This technique assumes that materials and equipment are available only for a small fraction of the students and that all experiments for the semester should be carried out by every student. After checking out the functioning equipment for each experiment, the teacher proceeds to set these up as "work stations". Thus, every station is dedicated to a specific experiment. If there are seven experiments listed for the semester in say, a physics course, there will be seven stations, clearly labelled in the physics laboratory. What next? The next thing is to prepare a practical time-table for the use of the laboratory. If each station is to be used by three students, only 21 students are then scheduled for practical work at a time. Two of such sessions can be held in a day. Thus, 42 students will have practical experience in a day. Yet, we have 75 students. This means we have to run the sessions on two days. The third thing to do is to assign students to stations and to sessions and to paste the roster. The station's approach is ready to run! Will the sessions run automatically? Definitely not. The teacher and the technicians need to set up every station before the start of every practical session. They also need to monitor progress of the students during the practical sessions. And of course, grade lab notes of the students after each

practical session.

The Rotary Approach

This is similar to the station's approach except that the same set of experiment is carried out every practical session. The rotating aspect is the student group. In the engineering workshop with equipment for 10 student groups, but with 30 student groups to contend with, students will do the same experiment in three groups. Timetable schedule will need to be developed by the teacher indicating student allotment to groups and when which group will undertake their practicals in the workshop. It is often useful to keep a set of equipment as backup in an event of breakage or damage. The number of students in each group should be small (between 2 and 4) to enhance greater student contact with experimental materials. The advantage of the rotary approach over the stations' approach is the greater ease of set-up and monitoring. In the rotary approach, the lecturer and technical assistants deal with a uniform set of equipment at a time and are able to follow progress of students in the groups using the same set of criteria. Independent work is fostered in the stations approach. This gives it an edge over the rotary approach.

Use of Projects

Practical work for a large number of students can be turned into a good avenue for enquiry and for developing scientific skills. Rather than run all the practicals designed for a course in a straight-jacket, cookbook-like way, we can denote some of the experiments as projects. In this case, students have to proceed in an open-ended way using problem-solving approaches. They design and implement their own plans for addressing the research questions and take ownership of their procedures

and results. Students have to look for their materials and may acquire improvisation skills in the process. Thus, while some of the experiments for the course can be designed by the teacher and implemented using the co-operative-learning group, station and rotary approaches, some others can be in the form of projects assigned to students.

Sharing Resources with Nearby Institutions

If there is a neighbouring institution with facilities that can be used for your practicals, then collaboration will be the answer to running practicals for your large class. Collaboration requires agreement on time-tabling and the terms of use of space and equipment. If the collaborating institution is also battling with large classes in the course, then mutual benefit results. They share what you have and you share what they have. What will need to be worked out include when to use, what to use, how to use, how to transport students to the laboratory or workshop in the nearby institution, and inventory taking. If cost is involved (usually the case) for the use of the facility, then this needs to be sorted out during the planning process.

Demonstration

With acute shortage of equipment and materials in the face of large numbers of students, demonstration is an option for practical work, maybe not the best. There could be four types of demonstration- teacher demonstration, student demonstration, teacher-student demonstration, student-student demonstration and guest demonstration. In teacher demonstration, it is the teacher that presents the experiment to the class while a student who had practised the experiment conducts the student demonstration. You may wish to consider asking a woman in the class to

lead the demonstration. Or a disabled student who has agreed to lead. In the teacher-student model, two people are on stage - the teacher and a student; while two students (male and female preferably) conduct the student-student demonstration. A guest teacher can also be requested to present the demonstration of the experiment to the class.



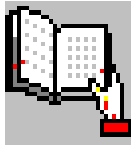
Activity 5.5



Try out the approaches to practical work suggested above. From your record of the effectiveness of the approaches, rank them in the order of suitability for your needs, objectives of the course and preference of your students.

Promoting Equity in Large Classes

When conducting large classes, we should give consideration to promoting equity along the lines of gender and physical and learning disabilities. More often than not, inequity is accentuated in large classes and disadvantaged groups tend to suffer inattention leading to learning problems. In a large class with few women, the sheer number of men tends to reduce to the barest minimum, the chances of class participation of the women if not deliberately induced by the lecturer. Disabled students are often sidelined and given scant attention in a large class of 'normal' students. Low ability students can also be buried in the crowd. The message here is that the lecturer needs to recognise that his or her class is mixed in terms of student characteristics and efforts need to be made to engender participation of all categories of students. This will mean identifying such groups and making deliberate efforts to involve them in class work- in asking and answering questions, in group work and in leading discussions. (Please refer to Modules 9 and 10 for techniques for empowering women and students with special learning needs).



5.3

Teaching Large Classes

Introduction

Large classes are not necessarily less effective than smaller ones, but they do require more conscious effort and planning. Like other classes, large classes work best when students take an active interest in the subject, and when teachers personalise their presentation. However, while these basic principles of good teaching apply in large as well as small classes, the sheer number of students in a large class can magnify some problems that might be much more manageable in a smaller class. For example, an occasional late student or two in a class of forty is not a big problem--and if one student comes late to class repeatedly, it is easy for the teacher to initiate a conversation after class to find a way to resolve the problem. In a class of four hundred, however, late students can be more plentiful and disruptive. They could also be more elusive after class.

At the end of this unit, you should be able to:

- provide a variety of experiences for students in a large-class setting;
- acquire skills of making a large class more interactive;
- present a lecture in a productive way to a large class; and
- evaluate a large class with little stress.



**SPECIFIC
OBJECTIVES**

Teaching Large Classes

A teacher with responsibility for teaching a large class, will find the following tips useful.

Be organised

Large classes require more advance preparation and structure than small classes. Lapses in the flow of the class, while collecting thoughts or locating instructional materials, can result in loss of student attention. Before the course begins, prepare or identify a variety of instructional aids, demonstrations, and activities to support each meeting of the class. Prepare a syllabus that includes outlines for each class meeting, all project and activity descriptions, and handouts for the entire course. Provide structure to the content, and use the structure to organise each lesson. Inform the students of that structure. Taking roll or distributing materials during class is not recommended for large class situations. Student materials or instructions needed for a specific class should be made available prior to class or located so that students may obtain them with as little disruption as possible.

Connect with your students

It is important to appear approachable in large classes. Build rapport with your students, and recognise the individuality of each student. Move among them when talking. Increase student access to you by getting to class early to listen to their questions, comments, or complaints. Begin by inviting students to call out something they know or recall about a topic. Display the responses as an introduction to the

day's activities. Address some of the anonymity students feel in large classes. Try to learn some names, and call on those you know by name. Learn something about as many students as possible. Ask for a few volunteers each day to help with demonstrations and activities and throughout this process learn some student names.

Provide a variety of experiences

It is appropriate to vary the type of instruction in large classes to encourage discussion, interaction, and involvement. Do not attempt to lecture the entire period. Actively involve students during at least a small part of every class meeting. Form groups of three or four to discuss a problem or work on a task for a few minutes. Have a question and answer period at the beginning or end of each class.

Encourage participation

Be aware that students are often reluctant to ask or respond to questions in large classes, and it is often very difficult to hear their comments in large lecture halls. Try to be accepting of all questions and responses from students, and paraphrase or repeat every question or response. Provide hand-held microphones if acoustics are poor. Invite students to write questions or comments on index cards and give them to you at the end of class. Increase the wait time after you ask a question. Encourage students to indicate in some way when the pace of the class is too fast or too slow.

Obtain and use feedback

Students in large classes are often reluctant to communicate difficulties they are

having with a course or the teaching strategies. Employ informal assessment techniques frequently to obtain student perceptions and suggestions. Use this information as a basis for making small changes in your teaching behaviour before the course is completed. Inform your students if you make a change as a result of their suggestions. Hold weekly meetings with teaching assistants, or small groups of students, to discuss student reactions to your teaching and the course. Ask individual students after each class meeting how the course is progressing. Provide a suggestion box, or have an envelope attached to your office door where students may leave comments about you or the course.

Create a Small-Class Atmosphere in a Large-Class Setting

One of the challenges of large classes is overcoming the anonymity and distance that can exist between teacher and students. If students are to be actively involved in and feel personal accountability for the learning process, they must be more than anonymous spectators and passive recipients of information. In order to facilitate discussion, feedback, and active learning, the teachers of large classes can work to create the kind of group identity and individual rapport that make smaller classes so effective and enjoyable. The following techniques can foster a more comfortable and productive learning environment in large classes.

- **Learn students' names.** You may not be able to learn all the names, but even learning some will help.
- **Use a microphone.** Not being able to hear clearly will exclude students from the lecture.
- **Move around the classroom or lecture hall.** Standing behind a podium emphasises the distance between you and the class. On the other hand, moving into the aisles and around the room makes the class seem smaller

and encourages student involvement.

- **Elicit student feedback about the course.** Have students meet in groups to provide feedback about the course. Other options include using a mid-semester student feedback activity or informal discussions with students to learn their reactions to and suggestions for the class.

Personalise: Learn and use the names of your students, even in a large class. As difficult as this is, it goes a long way toward personalising the class.

Include Active Learning Strategies: This can be done by using 2-minute dyad discussion groups, asking students to share personal experiences related to course content, formalising study groups, giving group assignments, using peer feedback groups, and asking students to write answers to discussion questions before class begins.

Give feedback early and often: Students need to know how they are doing, particularly in a large class. After every fifteen minutes of lecturing, ask students to discuss a thought question with the person next to them and have two or three students tell their response to the whole class. After lecturing for half the class, ask students to write the most important themes you have mentioned; write your answers on the overhead and let them compare their lists with yours.

In a large class, the teacher must change the method of teaching to accommodate the number of students. Here are some suggestions to make large classes more interactive:

- Present the subject in a way that it will be of lasting interest to students.

Use examples students will understand e.g. examples that involve current issues or situations they can relate to.

- Have students make group presentations on a topic covered in class or of particular interest to them, followed by questions and discussion. Encourage creativity and originality.

Lecturing Large Classes

Many teachers settle for the lecture method when faced with a large class. To them, it is the line of least resistance! While some present the lecture in a rather dull manner, some make their lectures exciting. Here are a few things teachers who succeed with lecturing large classes do.

- Plan the lecture so that you do not talk for the whole time: twenty-minute spells are quite long enough. Intersperse your presentation with active learning techniques; questions for the students to talk about with their neighbours; two-minute 'stand up, stretch and breathe' sessions; time for students to review their notes (or perhaps to review each other's notes); Use a variety of media: e.g. slides overhead projector, handouts, and video clips. All of these help to break up the monotony that accompanies even the best presenter who talks too long.
- Students like lecturers who explain things clearly. So:
 - Don't rush.
 - Do repeat yourself, preferably varying the words.
 - If possible use examples, similes and metaphors.

- Make connections with 'real life', if possible.
- Humour is appreciated. This is a hard one to get right, but is - thankfully - not compulsory. Some people begin presentations with a couple of prepared jokes or stories.
- Unless the projection of your overhead transparencies is so poor, assume students can read. You do not have to read out all the words on your transparency.

Keep the number of transparencies small rather than large, and try to limit the number of points on each transparency - a rule of six slides, each with no more than six points, has been suggested.

- It is possible, even with 800 students, to ask and to invite questions. Some lecturers plant questions in the audience so as to ease things along.

When asking, wait for answers, look around the audience, repeat the question, ask the questioner's name and thank him or her. When receiving questions, again repeat them for all to hear.

- Taking and asking questions means less information can be covered although better understanding should result. Have some sense of what you might do if questioning throws you seriously off-course.
- Handouts and support materials can list key points and connections; contain an outline of the lecture; draw attention to terms to be learned and to recommended reading.

Implementing good practices in teaching large classes

- Organise your lectures carefully, but try to deliver them without detailed notes so that you can maintain eye contact and get cues from students as to their understanding.
- Give students frequent short assignments and quizzes so that you and they will know whether they are understanding the material.
- Do not make assumptions. Write out and define not only technical terms but other words or expressions with which the students may not be familiar.
- Try to refrain from such comments as, "Now, I know you all know this" (many of them do not). Or "You do not know this?" (which makes them feel stupid).
- Intersperse your lectures with questions to students; this makes them active participants in learning.
- Leave the last five minutes for student questions; try taking several questions at once and responding to them with a mini-lecture.
- Return papers and marked examination scripts promptly and review them at the next class meeting.
- Keep a journal or log of what explanations, techniques, or assignments worked well and share these with colleagues teaching the same or similar courses.
- Get feedback from students once or twice during the semester by asking them to write on two or three questions, such as "What is the most significant thing you have learned in this course so far?" "What, if anything,

is still unclear?" or "What suggestions do you have for improving the course?"

- Acknowledge student feedback at the next class meeting and indicate which changes you can and which you cannot make and why.
- Sit in on courses taught by those of your colleagues you know to be especially effective teachers to see what other ideas or techniques you can pick up.

Making Exercises Count in Large Classes

A technique you can count on when teaching a large class is the in-class exercise. As you lecture or go through a problem solution, instead of just posing questions to the class as a whole and enduring the ensuing time-wasting silences, occasionally assign a task and give the students anywhere from 30 seconds to five minutes to come up with a response. Anything can serve as a basis for these exercises, including the same questions you normally ask in lectures and perhaps some others that might not be part of your current repertoire.

In the exercises you might sometimes ask the students to write responses individually, sometimes to work in pairs or groups of three, and sometimes to work alone and then to form pairs and combine and improve their individual responses. ("think-pair-share"). The more you vary your methods, the more interesting the class tends to be. *Whichever approach you use for the exercises* (individual, pairs, groups, or think-pair-share), *at least some of the time you should call on groups or individuals to present what they came up with*, perhaps landing disproportionately on students near the back of the room so they know they cannot hide from you there. If you never do this, students will have little incentive to work on the exercises when you assign them and many would not, but if they think they may be called on, they

would not want to be embarrassed and so you will get 90+ percent of them actively involved in what you are teaching.

The principal benefit of these exercises is that they get students acting and reflecting, two important ways by which we learn. The students who succeed in a task will own the knowledge in a way they never could if you simply handed it to them, and those who try and fail will be receptive to discovering what they did not know. Group exercises have the added benefit of giving students an opportunity to meet and work with one another, a good first step towards building a sense of community. (You can augment this benefit by periodically asking the students to sit in different locations and work with students they have not been with before.)

You can also use in-class exercises to wrap up a lecture period. Ask the students to write down and hand in a brief statement of the main point of the lecture, or come up with two good questions or test problems related to what you just presented, or tell you how they think you could improve the class. You can scan their responses and quickly see if they got the main idea you were trying to present, identify their main points of confusion, or discover things you could do that would make the class better for them, like giving more examples or leaving material on the board longer or speaking more slowly.

Other Techniques

- Prepare handouts far enough ahead of time to make sure that they will be ready for the class in which they will be used.
- After you have taught the course enough times to be comfortable with your lecture notes, consider having them duplicated and bound and given out to students. You need to ensure periodic updates of the notes. Leave gaps in

the notes to be filled in during class or by the students in or out of class, sprinkle the notes with questions about the contents, promise the students that some of the gaps and questions will show up on the tests, and keep your promise. The students will then actually read the notes.

- If you hand out notes or provide a coursepack, do not spend the lecture hours simply going over all the derivations, explanations, etc., for the students to follow along. You are guaranteed to put them to sleep like that. Instead, use the time to go over the conceptually difficult points, provide additional examples, fill in some of the gaps and answer some of the questions in the notes, and carry out some of the active learning exercises.
- To minimise the number of times you have to answer the same questions, encourage students to come to your office hours in groups. If you find yourself answering the same questions repeatedly, create FAQ (frequently asked questions) file with your responses and insert it in subsequent replies.
- Make sure that each part of an assignment or test is graded by only one grader so you do not have to deal with two students getting different grades for the identical response.

Out-of-class Group Assignments

When you are teaching a class of 160 students and you give individual

homework weekly, that's 160 papers to grade every week. If the students complete the assignments in teams of four and only one solution is handed in by each team, that is 40 papers to grade every week. The difference has a major impact on the feasibility of collecting homework at all. Unless you have a squadron of teaching assistants, there is no good way to deal with 160 papers every week, and most lecturers in this situation either give up on collecting homework (which is a pedagogical disaster), confine themselves to multiple-choice problems that require either memorisation or rote substitution, or grade superficially enough for the homework to lose most of its educational value. Even if there are enough teaching assistants to do the job, maintaining quality control on the grading of hundreds of assignments is next to impossible.

Getting students to work on assignments in fixed teams relieves the grading problem but introduces another set of problems, most of which have to do with the fact that the students in a group may have widely varying levels of ability, work ethics, and sense of responsibility. *If a lecturer simply tells students to get into groups and do the work, more harm than good may result.* In some groups, one or two students will actually do the work and the others will simply go along for the ride. In other groups, the students will parcel out the work and staple the individual products together, with each student understanding only one-fourth of the assignment.

To minimise the likelihood of these situations occurring, the lecturer must structure the assignments to assure that the defining conditions of **cooperative learning** are met: (1) *positive interdependence* (if one team member fails to meet his or her responsibilities, everyone loses in some way); (2) *individual accountability* (each student is held personally accountable for his or her part and for everyone else's part as well); (3) *face-to-face interaction*, at least part of the time; (4) *development and appropriate use of teamwork skills* (leadership, time management,

effective communication, and conflict resolution, to name a few), and (5) *periodic self-assessment of group functioning* (What are we doing well as a group? What do we need to do differently?)

Individual accountability is promoted by testing individuals on *all* of the material covered in group assignments and by factoring individual effort assessments into team project grading. Positive interdependence is fostered by assigning rotating roles to team members (coordinator, recorder, checker), and by offering small bonuses on tests to all members of teams with average test grades above (say) 80.

Using Multiple-Choice Assessment in Large Classes

Since multiple-choice questions are amenable to speedy marking or grading, they are well-suited for use in large classes. Efforts should however be made to minimise, indeed, eliminate cheating. After the examination is taken, students can exchange their scripts in a random manner and made to mark. This ensures early feedback to the students on how well or how badly they have done. Also to the teacher on the level of success or failure of the class on the topics covered by the test.

Other Assessment Techniques

Suggestions include:

- The use of Classroom Assessment Techniques to give both students and you an idea of their achievements
- Self-assessment, which is best done with reference to known criteria and which leads to the student identifying areas for attention.

- Peer-assessment. As with self-assessment. This can be a very good way of giving students feedback on drafts of essays, reports, case-study responses, law case analyses etc.

The three suggestions above have faster (and probably better) feedback built in to them. Other ways of giving rapid feedback include:

- Student self-assessment sheets. These are returned with comments written on them. That might amount to just one phrase - 'I agree'.
- Work is returned accompanied by a standardised, tick-list feedback sheet. Free form comments are kept to a minimum.
- In student presentations, all other students comment, preferably using a set of known criteria, and the comments are returned immediately and directly to the students making the presentation.
- Unless it is vital to correct errors, concentrate on giving feedback about points for improvement that can be applied to the next piece of work. It may feel very noble to write comments all over a piece of work, but it seems that students want perhaps two, good pointers towards getting a better grade next time, not lots of detailed comment.

Summary and Conclusion

We began a study of this module by arriving at an operational definition of a large class. We stated that for the purpose of study of this module, we suggest that *a large class is one that feels large*. Signs that the class is 'large' can be:

- The class is significantly larger than you are used to.
- The resources can no longer cope with the number of students if you desire individual attention for the students.

We identified some of the problems of large classes as:

- Students become faces instead of people
- It is harder to give individual advice and guidance to students
- Organisational problems are compounded, making it difficult to schedule tutorials, laboratory sessions, and fieldwork
- There can be technical problems working with large classes e.g. difficulties in projecting slides that are clearly visible to all students.
- Monitoring of attendance can be difficult, thus encouraging students to cut classes
- Coping with large numbers of assignments and examination scripts is a source of difficulty
- The quality of feedback to students can be much reduced in large classes.

In spite of these difficulties, we found practices that are disposing to meaningful learning in large classes. For practical work, these practices include:

- Cooperative Group Work
- Use of the stations approach
- The Rotary Approach
- Use of Projects
- Sharing Resources with Nearby Institutions
- Demonstration

We also described how the large class can be organised for greater student-material-teacher interaction and the issue of assessment in large classes.

Teaching a large class effectively is hard work, but it is possible to do it even if you are not a big-league entertainer. If you make the necessary logistical arrangements far enough in advance, provide plenty of active learning experiences in the classroom instead of relying on straight lecturing, and take full advantage of the power of teams in both in-class and out-of-class work, large classes can come close to being as educationally rewarding as small classes.

References

Module

6

New Technologies in Teaching and Learning in Higher Education



Reflect on the following as you work through this Module

113. The Tokyo and Dakar Conferences return to the question of utilisation of new technologies, suggesting that 'higher education institutions must adopt new approaches for the packaging of information, for course delivery and for rethinking traditional approaches to teaching and learning. Multimedia, CD-ROM, the Internet and interactive video must all be used to promote interaction between students and their lecturers'. It also says that 'teachers, professors and technical and administrative staff must be given training that enables them to integrate new information and communication technologies (NICTs) into their teaching programmes, and to examine the multiplier effect with regard to their use'.



***CONSOLIDATED
DECLARATIONS
AND PLANS OF
ACTION OF THE
REGIONAL
CONFERENCES ON
HIGHER
EDUCATION HELD
IN HAVANA,
DAKAR, TOKYO,
PALERMO AND
BEIRUT 1997-98***

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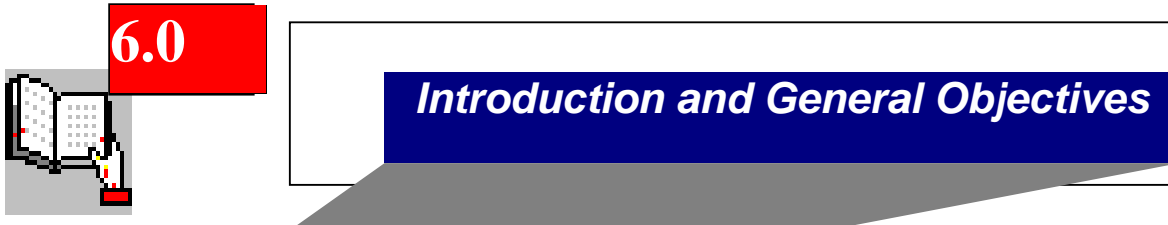
Article 12. The potential and the challenge of technology

The rapid breakthroughs in new information and communication technologies will further change the way knowledge is developed, acquired and delivered. It is also important to note that the new technologies offer opportunities to innovate on course content and teaching methods and to widen access to higher learning. However, it should be borne in mind that new information technology does not reduce the need for teachers but changes their role in relation to the learning process and that the continuous dialogue that converts information into knowledge and understanding becomes fundamental. Higher education institutions should lead in drawing on the advantages and potential of new information and communication technologies, ensuring quality and maintaining high standards for education practices and outcomes in a spirit of openness, equity and international co-operation by:

- a. engaging in networks, technology transfer, capacity-building, developing teaching materials and sharing experience of their application in teaching, training and research, making knowledge accessible to all;
- b. creating new learning environments, ranging from distance education facilities to complete virtual higher education institutions and systems, capable of bridging distances and developing high-quality systems of education, thus serving social and economic advancement and democratisation as well as other relevant priorities of society, while ensuring that these virtual education facilities, based on regional, continental or global networks, function in a way that respects cultural and social identities;
- c. noting that, in making full use of information and communication technology (ICT) for educational purposes, particular attention should be paid to removing the grave inequalities which exist among and also within the countries of the world with regard to access to new information and communication technologies and to the production of the corresponding resources;
- d. adapting ICT to national, regional and local needs and ensuring securing technical, educational, management and institutional systems to sustain it;
- e. facilitating, through international co-operation, the identification of the objectives and interests of all countries particularly the developing countries, equitable access and the strengthening of infrastructures in this field and the dissemination of such technology throughout society;
- f. closely following the evolution of the 'knowledge society' in order to ensure high quality and equitable regulations for access to prevail;
- g. taking the new possibilities created by the use of ICTs into account, while realising that it is, above all, institutions of higher education that are using ICTs in order to modernise their work, and not ICTs transforming institutions of higher education from real to virtual institutions.

Extracted from the:

*DECLARATION
OF THE UNESCO
WORLD
CONFERENCE
ON HIGHER
EDUCATION
(1998)*



Introduction

The use of technology in education dates far back in history. From a crude form in the early days of civilisation to the vast array of computer-technology driven devices of the 1990s, technology has significantly impacted on educational theory and practice (Okebukola, 1998). In his book, *“The Road Ahead”*, Bill Gates of Microsoft Corporation envisions a rather rapid transformation of the educational delivery process and assessment of learning by the fast developing information superhighway. The dynamics of change and the flux in computer technology development have made Gates (1995) to conclude that the information superhighway will transform education in the first quarter of the 21st Century “much beyond our wildest dreams”.

Instructional technology incorporates those tools and materials that present, support, and reinforce teaching. The devices used range from the pad and pencil to the computer. The use of technology in education started when the slate was introduced as a supplement to texts. The slate gave way to the blackboard and the chalkboard. From such beginnings came thousands of tools and devices to help teachers teach.

The communications revolution has had tremendous implications for education. This is because education involves the medium and message of the communicative

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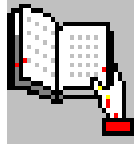
process. The chosen medium of communication influences the distribution of knowledge over time and space. The technology involved in communicating has been linked to learning throughout history. From clay tablets to paper and pen, chalkboard to books, pictures, radio and tape to television and films, the new educational technologies use the most sophisticated micro-electronics and communication media. The range of new information technologies include the chip, the microcomputer, the satellite and telematique (the merging of computer and telecommunications).

After working through this module, you should be able to:



- π distinguish between the methods and products of the new technologies;
- π determine the role of the new technologies in enhancing teaching and learning;
- π identify the new technologies and their use in teaching and learning with reference to the African context; and
- π get acquainted with the potential as well as the limits of the new technologies in the African context.

GENERAL OBJECTIVES



6.1

Technology in Higher Education

At the end of this unit, you should be able to:

- π describe educational technology as a process and as a product; and
- π differentiate between traditional and modern technologies.



SPECIFIC OBJECTIVES



Reading 6.1

NEW AND EMERGING TECHNOLOGIES IN HIGHER EDUCATION

A.M. Simiyu

The term technology as explained by Simiyu (1999) has its origin in Latin. It encompasses two concepts, that is, *technic* which means tools and materials, and *logic* which covers the different approaches in solving a problem. The term technology as applied to the process of education ***includes ways of organising events and activities to achieve educational objectives as well as the materials and equipment involved in the process.***

The history of educational technology dates back to the late eighteenth century and early nineteenth century when various industrial products such as the camera and later the

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motion picture were invented. The invention may not have had anything to do with the education process, but the benefits were soon realised by educators and the products were consequently put to use. The still camera made it possible to reproduce a life experience and share it elsewhere. The motion picture's contribution was more dramatic because features could be recorded and reproduced in actual motion. The invention of animation in the motion picture added further qualities of being able to demonstrate, for instance, the circulation of blood in the human body.

The greatest impact to education in the history of instructional technology came from the 2nd World War efforts to teach various skills to the military. Soldiers had to be recruited and trained to be ready for action within the shortest possible time. In this search for efficiency in the training process, the logic aspect of technology came into play. There was need to specify objectives, and organise the skills development process in a logical sequence of steps. This process was refined leading to the systems approach to instruction.

The invention of the computer and programmed instruction were applied to education with encouraging results. Correspondence education later developed into distance education that we have today. While correspondence education utilised print materials and programmed instruction, distance teaching has incorporated a variety of media to achieve educational results.

The concept "new technologies" recognises that technology improves all the time. New ideas are all the time being introduced by industry and these should be applied to the process of education in order to help in resolving problems that educators are challenged with. The new technologies applied to higher education should be considered within the socio-economic context of each country.

In Africa, higher education has many problems. We face problems of inadequate capacity for competent high school leavers to pursue further studies in the few tertiary institutions including universities. Evidence of this fact is the number of African students who raise large sums of money to study in Europe, America and elsewhere where they find such opportunities. In Kenya over 150,000 high school students sit the KCSE. Out of about 40,000 who meet minimum university entrance requirements, only 9,000 get places in public universities.

Higher Education is also plagued with lack of books and equipment for study in various disciplines. Personnel is also inadequately trained. In cases where there has been expansion of opportunities for higher education the lecturers have problems in handling large numbers. Even where numbers are small, the quality of teaching does not meet the expected standards because of lack of training in pedagogy. It is this scenario which attracts us to consider new technologies in higher education so that the objectives of our institutions of higher learning can be achieved with mutual satisfaction of the lecturers and students, and eventually society may benefit from the role played by the graduates in the society.

The new technologies can bring the following benefits to higher education:

- increase access to instructional resources through the Internet,
- share experiences through technologies such as the virtual university,
- increase access to higher education through distance teaching and learning,

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- increase flexibility in what to learn, how to learn, and when to learn, and
- motivate potential learners to engage in higher education.

To be able to realise the above benefits, we need to engage in various activities:

- train lecturers to improve their competence in using the new technologies in their instructional activities,
- train and assist lecturers in producing teaching and learning resources,
- train lecturers and students in computer literacy,
- acquire adequate facilities so that the identified new technologies can be used as part of the instructional resources in the institutions.
- run sensitisation workshops to promote new technologies in higher education.

Excerpted from Simiyu, A.M. (1999). New and Emerging Technologies in Teaching and Learning in Higher Education. Lead presentation at the Regional Workshop on Teaching and Learning in Higher Education, Moi University, Eldoret, Kenya, 18-22 May, 1999

New technologies as processes and products

The term “technology” as explained by Simiyu (1999) has its origin in Latin. It encompasses two concepts, that is, *technic* which means tools and materials, and *logic* which covers the different approaches in solving a problem. The term technology as applied to the process of education ***includes ways of organising events and activities to achieve educational objectives as well as the materials and equipment involved in the process.***

Yapi (1997) provides deeper insight into the meaning of the concept of ‘technology’. In his view, the variation in the use of the term “technology” suggests several different explanations, each of which can be more or less accurate. One of the plausible explanations is that: those who use this term in defining technology in the strict sense of a product certainly do so because of the large volume of commercial activities undertaken all over the world to display the material products of high technology. It is because the general public (especially that of the developing

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countries with a less advanced research culture base) knows nothing other than technology as a product, on account of the myriad advertising campaigns mounted to that effect. Another explanation is that technology as a process expresses something quite vague or at least represents technology itself, to the public, since it remains the restricted domain for specialists. Thus, when a non-specialist is asked to explain the term “technology”, he/she generally refers to it as the study of equipment (machines, materials, electronic components, electromechanics, etc). According to Thomas Kabayashi (1987), most people define technology as a set of electronic gadgets (film projectors, tape recorders, audiovisual equipment, microcomputers etc..).

Contrary to this point of view, technology is not solely a tangible asset that can be acquired like any piece of equipment. It consists not only of the product but also of the process (the whole domain taken together). However, the authors have more holistic and more qualified points of view about this issue.

Some authors consider technology as an intellectual and practical trend dealing with all aspects whereby systems are designed and controlled to produce a replicable effect.

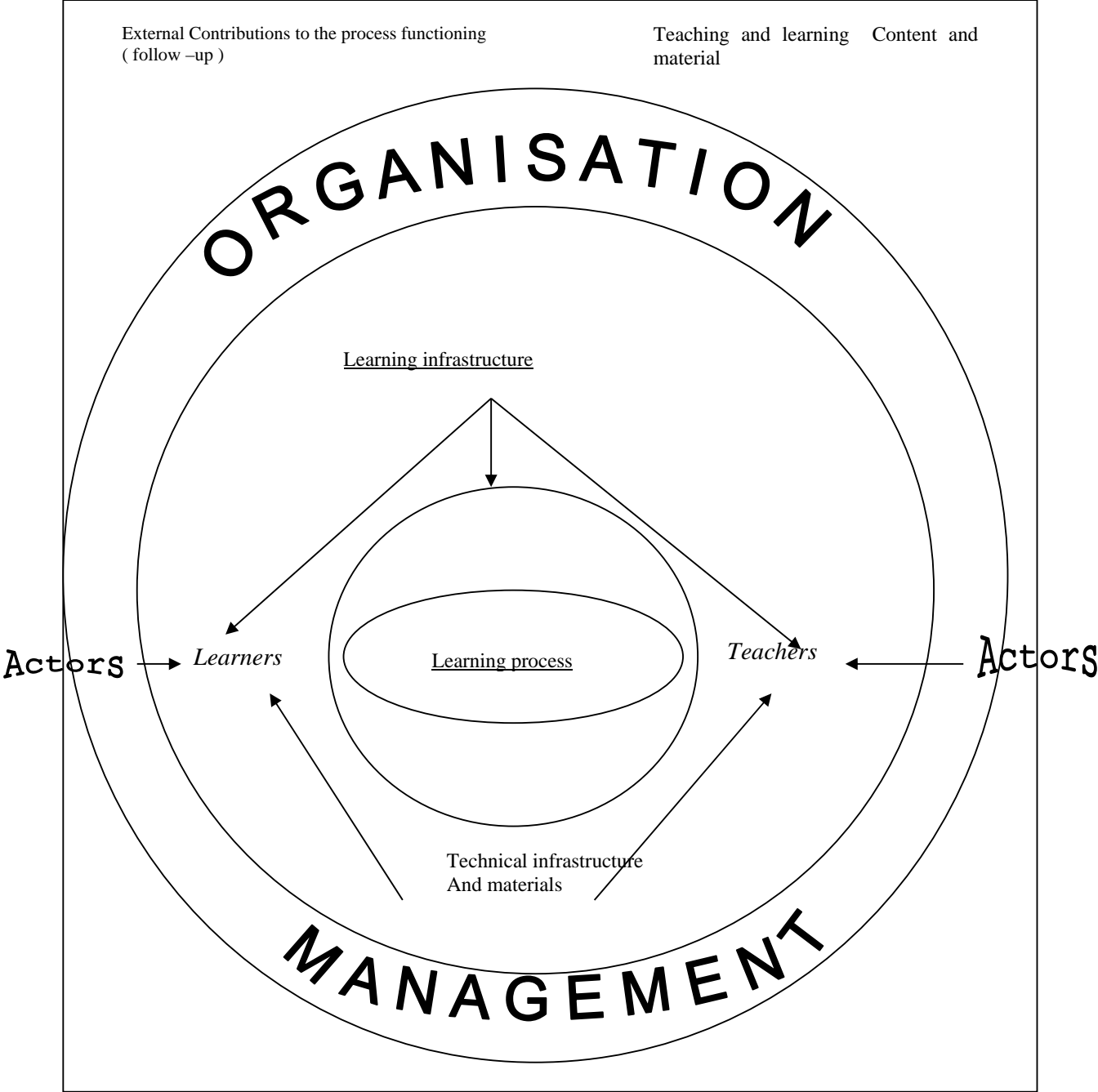
In other words, this is one way of defining and resolving a problem by taking into account the theoretic and practical aspects as well as the relationship between the two (Lapointe, 1991; Rheaume, 1993). Others say technology is a field of knowledge and activities that make it possible to design and produce objects and systems. It is also a process that allows for the automatic regulation of a system or an operation, thanks to a constant feedback effect that helps in readjusting the sub-systems or subsidiary operations, if necessary, in order to achieve the set objective. In other words, technology is the art of ensuring the effective functioning or management of very intricate systems (Gagne, 1987; Legendre, 1993).

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Some of these definitions refer to the technical object produced through knowledge and know-how i.e. visible equipment (machines and tools). Others go beyond this reference to the physical product to include methods, the set of ideas and knowledge, as seen from the angle of their use for practical purposes. With these definitions, we can theoretically distinguish technology as a product from Lapointe (1993), this distinction makes it possible not only to consider technology as an intellectual process but also to draw attention to the dynamics of the process rather than the physical product alone. To clarify the various interpretations, we will try to present and explain educational technology as seen from the general point of view before identifying from this global notion the aspects that makes it possible to distinguish between technology as a product and technology as a process geared towards education.

Figure 6.1 is provided to give a better understanding of the contribution of new technologies to the learning process. Four forces (horizontal and vertical dimensions) are involved in realising the teaching act, and the learning process represented by the intersection of the two dimensions.

Fig. 6.1: The learning process infrastructure and agents

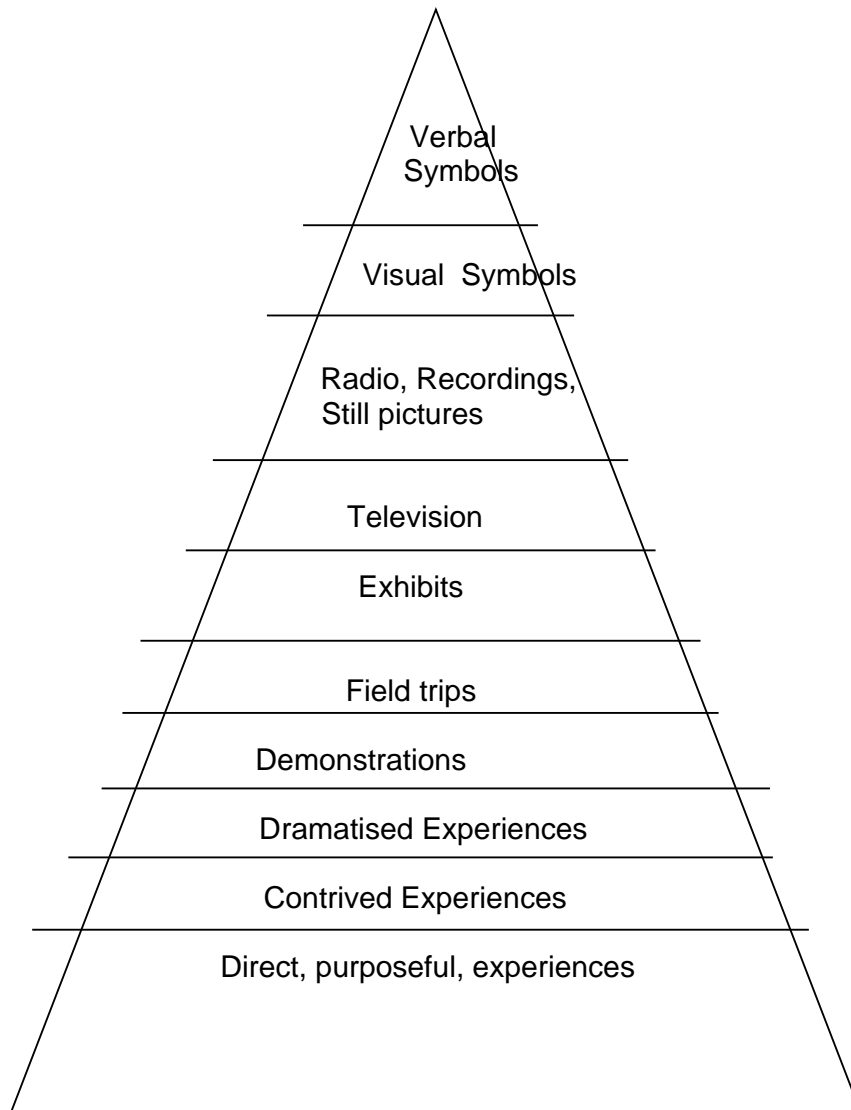


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The dichotomy between technologies as teacher-centered (traditional, non-verbal and non-dynamic) or learner-centered (new, verbal and dynamic) has been demonstrated by Edgar Dale. Dale illustrates with visual and verbal symbol representation on a continuum of experiences rising from a concrete base composed of directly transferable experiences pursuing immediate objectives up to abstraction, represented by verbal symbols, at the top of the cone. The divisions between the various experiences are not strict and inflexible. The cone only clarifies the sensory supports in terms of more or less concrete or abstract communication experiences.

In this illustration, the terminology used to refer to those concepts is covered by the phrase “ learning resources and technologies ”.

Edgar Dale's "Cone of Experience"



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Thus, once more we notice that the new technologies (at the cone base) exploit methods and tools that encourage interaction much more than traditional technologies (cone top) which use far more teacher- centered tools and methods.

Relevance of Educational Technology to Developing Countries

Achi Yapi



Reading 6.2

Like the technological innovations which enhance performance in all sectors of economic and social activities, educational technology has developed over the last thirty years and ultimately improved the quality and efficiency of education and learning, educational management and research. However, this technology is perceived in diverse ways by authors and users. According to Thomas and Kobayashi (1987), educational technology represents several things to different people. Thus, it is often mistaken for high technology products and their implication in the education sector. To the less informed ones, educational technology represents nothing other than the use of audiovisual equipment and/or micro computers for teaching purposes. Gagne and Reiser (1987) maintain that people usually understand educational technology as the use of communication media for educational purposes.

Whereas certain specialists have a very good understanding of the concept of educational technology, others are less informed about the concept, particularly in the developing countries where it is relegated to a mere notion of material products. With this confusion arising from interpretation, we wondered how educational technology could be basically explained to smooth away the situation and demonstrate the relevance of educational technology to a developing country.

This article seeks to clear up the inherent lack of understanding. In this regard, we have drawn on the points of view expressed by various authors in identifying the concepts of technology and educational technology. We have also tried to examine the possible distinction to be made between technology as a product and technology as a process. This brief conceptualization of technology enabled us to explain how educational technology can help in promoting education in developing countries. Finally, we have explained the extent to which it can help teachers to plan case studies to improve the learning process. However,

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before presenting the concept of educational technology, we digressed to focus on technology itself: we did so because, on the one hand, an analysis of all aspects of technology brings the problem of technology into focus straightaway; on the other hand, it constitutes the first origin of educational technology, as established by Gagne (1987) and Lapointe (1993). Consequently, a convincing conceptualization of educational technology should start with that of technology itself.

In other words, this article first attempts to explain educational technology by defining its concept and analyzing some aspects of the said technology that help in promoting education in the third-world countries. With this explanation, we wish to first iron out the lack of understanding of the concept of educational technology in developing countries and then demonstrate the theoretical and methodological contribution this technology makes towards the preparation of an instructional design aimed at improving learning and promoting its transfer.

THE CONCEPT OF EDUCATIONAL TECHNOLOGY

As in the case of technology itself, there is no universal definition for educational technology because the concept has been defined in numerous and diverse ways in the literature. Non specialist educationists generally consider educational technology as the use of microcomputers and audiovisual equipment in particular. Rheaume (1993) observes that, to certain teachers, the term “educational technology” refers to materials or equipment. Some of them define the field in terms of audiovisual products and the media. Others lay emphasis on programmed learning and observable behaviour (Stolovitch and La Rocque, 1988). The confusion becomes more obvious in the case of non-teaching staff outside the domain of specialists. This is because when you ask to know what educational technology represents, you can be taken as far as possible with a long lecture on what can be achieved through technology. Stolovitch and La Rocque observed that non educationists manifest an almost complete ignorance about technology issues.

For their part, specialists consider educational technology as an intellectual process and practice that addresses the needs of learners and those of teachers to enable them to determine precisely the objectives of learning as well as the means of achieving them (stolovitch and La Rocque, 1988; Lapointe, 1993). Finally, Thomas and Kobayashi (1987) maintain that educational technology is a complex integrated process whereby problems connected with all aspects of learning are conceptualized, analyzed, established and resolved through interaction between people, techniques, ideas and resources within an organizational framework.

With these definitions, it is noticed that, far from representing the mere use of the media and other tools for instructional purposes, as purported by certain people, educational technology is rather a scientific process whereby human and material resources are used to enhance efficiency in teaching, training and learning. Let us now consider what is meant by technology as a product and technology as a process.

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TECHNOLOGY AS A PRODUCT

Technology as a product is the end result of the systematic application of scientific knowledge in finding practical solutions to specific problems. As a product, educational technology can include teaching procedures, practices and materials. Consequently, the inputs from technological developments comprise, on the one hand, non-physical products (programmed learning, individualized learning, teaching skills, the use of computers in learning, computer-assisted education, comprehensive educational syllabi or curricula, multimedia, etc.); they also include, physical products such as microcomputers, mainframe computers, video cassette recorders, radio and television sets, video-tape recorders, tape recorders, overhead projectors, photographic slides, electronic acetates, etc..).

Some authors add to this list of products, language, writing case, pencil, paper, books, newspapers and films. Finally, these tools facilitate education and learning and also enhance the performances resulting from the cost of education.

TECHNOLOGY AS A PROCESS

Viewed from the angle of process dynamics, educational technology is an approach geared towards finding and improving solutions so it should not be associated with products of such technology. It therefore includes functions connected with the management of organizations and human resources, research (the setting of theories, rational methods and practices related to the techniques of education and learning), logistics, the use and establishment of systems (Gagne, 1987; Winn, 1991; Lapointe 1993).

Moreover, it is these different functions, together with the systematic analysis and design, that distinguish educational technology from the traditional approaches. In other words, educational technology is:

- (1) systematic, in the sense that it uses a rationalized and structured technique as opposed to the activities organised intuitively, haphazardly or without proper management (Stolovitch and La Rocque, 1988);
- (2) communicative, because any medium used is oriented towards the objectives of the educational design to guarantee the efficiency, economy and enhanced output of the selected model;
- (3) scientific, in so far as all the decisions on the design and choice of medium are also taken in terms of the objectives and instructional design and in accordance with the most proven results of the learning process;
- (4) systemic, because it allows for the constant analysis of the problem of learning in its entirety. Thus, in a systemic process, every solution to a problem comprises interrelated elements and is exclusively envisaged as part of the given problem.

The systemic approach is therefore one way of examining globally and not in isolation, a set of elements interacting in a given environment to promote learning (Stolovitch and Keeps,

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1993; Garavaglia, 1993). With respect to methodology, Stolovitch and La Rocque (1988) consider the systemic approach as a process connected with the planning and operation of a system are identified and analyzed. The main concepts of this approach are:

- the phenomenon of self-regulation or feedback;
- the control unit which takes account of information and
- the energy required to operate the system and facilitate its adaptation to the surrounding environment.

Consequently, any inappropriate interaction between the control unit and the feedback mechanism or any inconvenient readjustment deregulates and disintegrates the system (ibid). Moreover, educational technology requires three operational phases to establish a given system; analysis, design and evaluation (Gagne, 1987, Gagne and Glaser, 1988, Stolovitch and Keeps, 1993).

- The analytic phase precedes the model design phase and comprises seven stages of which five cover the analysis itself (preliminary analysis, target clientele analysis, contextual analysis) while two cover summary operations; (a) the preliminary analysis covers the phase during which the technologists determines the difference between the real needs of the target clientele in relation to the knowledge acquired and the knowledge to be acquired;
(b) in studying the target audience, the technologist tries to acquaint himself with the learner through his/her aptitudes and features that are most likely to interact with the other components of the model; (c) in the contextual analysis phase, the technologist identifies not only the contextual and environmental conditions underscoring the educational situation; however, it also presents a better enlightenment through the data collected to examine the manner in which the model to be designed is harmonized correctly and naturally;
(d) the job analysis enables the technologist to make an in-depth study of the instructional information to be imparted to the learner; (e) the concept analysis consists in examining the content so as to identify the underlying concepts; (f) Stolovitch and Keeps (1993) propose the preparation of a summary programme, plan of action and results of all the analyses conducted previously; (g) whether it is intended for a course or training session, before preparing the appraisal report, the technologist should systematically prepare in a graphic form, a list of all the principal activities to be accomplished, together with the duration, site and the agents involved.
- During the design phase, the technologist specifies the objectives of learning, prepares criteria tests, determines the teaching method, strategy and framework; he also selects the media and system of presentation, prepares a draft design, determines the set-up and production plan of the prototype. The technologist therefore considers this phase as the occasion to propose an operational model that normally includes solutions to the issue examined.
- This design phase precedes the design evaluation, set-up and monitoring phase during which the possible anomalies are detected and necessary corrections are made before the system is put into operation. It is because, to prevent potential failures, the

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technologist should check his prototype with the help of experts, learners and/or colleagues and make possible adjustments before the final product is adopted, distributed and set up – as stipulated by Stolovitch and La Rocque (1988) and by Stolovitch and Keeps (1993). To ensure the smooth execution of this phase, all the preceding phases have to be implemented.

To sum up, the myriad definitions given in the writings do not facilitate the understanding of the concept of educational technology. For one thing, while some authors base their definition on the application of scientific results and the empirical process whereby knowledge is acquired, others base their definitions on all the skills required in creating, designing, using and improving teaching methods. However, upon analysis, the writings show that educational technology is not only a physical object. It can be a product (physical or non-physical) as well as process. It also allows for the systematic application of theory to practical work in order to allow for the adoption and design of the most effective teaching methods possible according to the set objectives and the circumstances under which teaching should be conducted. Educational technology also entails the use of all available resources (human, non-human and the media) in attaining the set goals. Finally, it requires, as far as possible, that educational decisions be based on research results and first geared towards improving and facilitating learning.

This brief presentation of concepts concerning educational technology, which we have just made was intended to explain what this technology is (as summed up in the table below). It would now be interesting to consider what educational technology can represent for developing countries. However, the research into the relevance of such technology to developing countries inevitably poses the problem of its transfer.

Excerpted from:

Yapi, A. (1997). *The relevance of educational technology in developing countries*. UNESCO-AFRICA, 14/14, 43-53.



1. How has educational technology as a process and as a product impacted on your teaching?

Activity 6.1



2. List three ways in which you have used educational technology (a) as a process; and (b) as a product, in your teaching.



Reading 6.2

New Information Technologies in Education and New Role for Potential Teachers

N.C. NWABOKU

The whole purpose of an educational system is efficient communication through the instructional sub-systems that is, the transmission of information, knowledge, skills, values and attitudes from a source to a recipient; bridging the gap between generations of learners. A major purpose of communication is to influence the recipient of information. To influence learners, and consequently society, in a desirable way, the future of the society has to be kept in view.

Technology is a factor which has constantly changed the future of societies in usually unforeseen directions. It is the single factor whose advancement makes the difference in development for all the nations in the world. Technology has also made the difference between the various sectors of the society with the educational sector lagging behind the rest. In Africa, it can be said that technology, as it is known today, is virtually absent in the educational sector.

Recent developments in technology, especially in computer technology has set the pace of development at “fast forward” in all spheres. The educational sector is therefore in danger of losing contact with world realities in the very near future. The rate of advances in computer technology and the transformation it brings in its wake for communication and “work” cannot be ignored by the educational sector for two reasons; education involves and depends on communication systems, and secondly education prepares the future society for a world of work. This paper discusses the implication of technology in the classroom, at the delivery level, and the roles of the teacher in preparing learners for a technological world.

Why Use Technology In Teaching?

The introduction and use of information technologies in teaching in the schools would serve a dual purpose; for the purposes of acculturation and for more efficient instruction. For acculturation purposes, a learner who is being prepared for technologically oriented world needs to be immersed in technology early. Technology is a new world culture, and like all cultures is best acquired in early life. This would ensure that schools do not produce (technologically) maladjusted adults. By employing the information technologies (new or old) the schools would be facing up to new facts of life, that the learners would be functioning in a technologically dependent society. It is necessary to orientate the thoughts and attitudes of learners through technology. For a learner at any level to seek information through technology the awareness has to be created and a need established. Only then would the

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individual invest on and utilise technology. The use of the new information technologies have become inevitably for survival. While adults have to adopt with difficulties to the use of new technologies, young individuals can learn, and should be given the opportunity to learn easily and naturally by early contacts with these technologies.

Technology is about “machines”. Machines make work easier, achieve more work in less time. It can therefore be expected that employing technology in teaching would introduce better efficiency in the instructional system. This is achieved in many ways:

- (i) Expands the possible modalities of learning (redundancy)
- (ii) Adds some measure of reality to learning (concreteness)
- (iii) Increases the perceptual scope of the learner (immediacy)
- (iv) Motivates the learner by making learning easier more interesting, and challenging.
- (v) Provides the teacher with more reflective time for improving instruction.
- (vi) Makes record keeping and evaluation easier.

In general terms the introduction of new technologies in education would provide education with more productive learning systems, ensuring equal opportunities for learners. Technology itself has generated new information at an exponential rate and it is only through technology that the tremendous amount of available information can be harnessed and accessed in learning.

What Is In the New Information Technologies?

All through the ages new developments in technology have revolutionised society. The printing press produced the first book in 1456, and broke the monopoly of knowledge and information. This also led to establishment of libraries, and more efficient information storage and retrieval systems. Photography also caused a revolution in information systems. It provided a means of capturing visual information on paper leading to developments like motion pictures, still pictures, photocopiers etc. Photography has led to further developments in information accessing in education through mass media like the Television.

Developments in Mass Communication, mainly the radio and television, have had much impact on education, making distance learning possible, telecommunications also produced the telephone systems and satellite systems which have turned the world into an open learning classroom. A combination of all these technologies have resulted in limitless opportunities for the educational system.

The development of computers from earlier digital systems like the calculators has marked a turning point in the technology evolution. This is because the computer is capable of processing information from all other systems once the information is digitised. The computer combines all the advantages of the other information technologies, processes information at high speeds, generates new information and converts information from one encoding system to another. Used in combination with any of the other technologies. The

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computer provides limitless possibilities in information processing and information generation. The computer can also be used to develop the other information systems further.

The main implication of the computer for instruction is not in data processing but in its ability to aid the further development of all the other information systems used in education. For instance, photography can be improved by using computerised cameras which adjust automatically for light exposure and object distance. Viewed from this angle the new information technologies in education includes:

- The telecommunication process of teleconference, telephone teaching, telewriting.
- Developments in motion picture production culminating in the video-tape and videodisk (laser disk) which in combination with the computer provides interactive video systems.
- Interactive audio systems.
- Transmission systems, including satellite, through which instructional programmes, and information can be accessed at a distance by radio waves, microwaves tele-systems, etc.
- The white board (electronic board) and,
- Finally the computer and computer software.

When new information technologies are discussed much attention is however focussed on the computer because of its versatility. Its many advantages in combination with other technologies include:

- High speed processing of information.
- The ability to adapt to various input formats and encoding systems.
- High capacity for information processing and storage.
- Convenient information packaging formats (compact discs etc).
- Relatively easy manipulation techniques.
- Relatively low cost of the technology.
- Adaptability to user conditions and modes.

The computer has also gained the attention because it is regarded as the main changing agent for the future. It is envisaged that in the very near future most work will be done through computers so the computer as a technology has become an important subject for the educational system.

Introducing the New Information Techniques Into The School System In Africa

In the school system the computer can serve as subject, as media, and as a tool for creative work. As a subject the pupil learns about computers. This is computer literacy. The argument for computer literacy is that in the future the inability to use computers would be as limiting as the inability to read and write. It has therefore become important at this age to learn the basic uses of computers, to learn to operate the computer, to learn to use various computer software and to learn to develop computer software for various purposes.

As media, the computer is used for teaching and learning. This is Computer Assisted Instruction (CAI). The knowledge of computers and programmed instruction are used to produce computer programmes that teach. It becomes possible to tailor instruction to individual needs. Learners can advance at their own pace, or use the programmes at school

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or their homes. Teachers can utilise packaged lessons or produce their own courseware. CAI adds a lot of flexibility to learning systems.

As a tool for creative work, the learner uses the computer to advance her/his ideas, trying out new methods or projects, and experimenting with, and creating new concepts. In this format to use the computer also serves as a problem solving tool, calculating, manipulating and analysing data.

In the Sub-Saharan Africa formal school system, these three applications of computers are yet to gain much ground. Outside the formal school systems however most countries have seen the acknowledgement of the importance of computers in the proliferation of “computer schools”. In countries like Nigeria and Senegal these schools are popular and serve out of school learners who wish to improve their chances of securing a good job. In areas like secretarial studies computer literacy, and often competence, has become a requirement. In the private sector one finds that computers have made in roads and most companies especially the financial companies, are heavily dependent on computers and computer systems. These observations seem to indicate that the need for information technologies are evident in spite of the poor state of our economies. What is not clear is what the constraints are for introducing technology into the school systems.

A major constraint in the introduction of computer programmes into the school systems in the developing nations is financial limitations. It is already claimed that a high proportion of any nation’s budget goes to education. The older technologies of learning mentioned earlier in this paper have not been employed much in our public schools systems. It would therefore seem presumptions to expect that computers can be provided in schools. One might just consider closing all discussions on this subject but the problem is that, like all other problems facing our educational systems today there is no longer much choice in the matter. If the educational systems do not advance at the same pace as developments in all others socio-economic sectors, education in the region will become irrelevant to the society’s needs. Also character of the computer as an all purpose tool could spell disaster for any nation that fails to grasp its benefits.

The conclusion here is that financial constraints as an excuse for not improving our school systems has reached a dead end. It is time to put technology into the African school systems. Given the scope of informatics and other technologies of instruction the questions are, where to start?, how to start?, who to start with?. This paper proposes that action should start with intensive computer literacy programmes for teachers, now. There are many ways in which the urgency of this new requirement for teachers could be impressed on the minds of all concerned.

- short-term computer literacy programmes should be organised for teachers using the already established private computer schools and personnel. The cost could be negotiated and shared between the employers of teachers and the teachers.
- Computer literacy could be made a condition for promotion, for enhanced remuneration. In this wise teachers could be forced to take advantage of the opportunities offered by these private computer schools like anyone else in the public.

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- Selective in-service training could be organised for teachers in the use of computers. Such action could produce computer specialists in the schools systems who could teach other teachers to use computers on the job when available.

The training of teachers by whatever means should be a first step in the introduction of computers to schools. These teachers would then participate in the decision on the equipment and software to be provided in schools, and also what new curricula to introduce for the use of computers. Training of all students in computer literacy should be encouraged at the tertiary level also. Degree courses in computer science should include courses in computer literacy and computer Assisted Instruction for education students at both first degree and higher degree levels.

It would be possible to organise computer literacy programmes for teachers and students at the secondary school levels using youth camp or youth organisation outlets. It is important to use all available means to achieve mass computer literacy in a very short period. The use of public television should not be ruled out. Acquiring computers, hardware and software, for schools would require more financial commitment on the part of the government. Donor agencies, NGOs, parents and the communities may have to be appealed to in this regard.

To avoid a wastage of resources and efforts in the introduction of computer literacy it is necessary to make a distinction between specialised, vocational, and general computer education programmes. What should be intensified is a general computer education programme. The intention should be to create awareness in, and influence the attitudes of teachers and learners to the use of computers. Specialised and vocational computer education programmes should be left to vocational schools and for computer science and technology courses at the appropriate levels.

Emphasis on higher order use of computers in the school system, i.e. CAI and the use of computers for creativity, explanatory work, and research may be desirable but not advisable at a period in which computer literacy is very low and specialists in that aspect of educational technology are virtually lacking. The first step in that direction should be the training of personnel to a high level of specialization and competence in application of computers in schools.

The use of computers for school management, evaluation, record keeping should however be given the same treatment as for all other instructional media in matters relating to their use in instruction (CAI). This opinion is supported by the fact that there is no conclusive research evidence for the superiority of the computer as a medium of instruction over any other medium.

Our school system should look beyond the computer in the use of technologies of instruction. One important and very effective technology which Africa schools systems have failed to take advantage of is photography, and its products. The motion picture has evolved

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through the years and is versatile in its latest forms. The video tape and video disc are suitable for various modes of study. Recordings and retrieval of information require far less training for use. Video discs are compact and require very little storage space. This paper would recommend the setting up of collection of video tapes and discs in school libraries at all levels, or that where a media library exists, video materials should be an important part of it. Video materials are also an important software for distance learning.

Countries in the Africa region should consolidate on the technologies already introduced in their educational systems. Studies have shown that educational radio and educational television have been used in almost all the countries in the developing world as a means of reaching remote learners and cutting the cost of education. Any measures to reduce the cost of education should be supported and exploited fully. Unfortunately most of these technological innovations have not been sustained. Reasons for the breakdown of the systems are largely related to technical know how in both utilisation and maintenance. Most of these technologies were established through external aids which provided the initial technical support. It is necessary to precede the installation of technology with the provision of local experts. In other words what the African continent needs most as precondition for a technological take off in education and other social sectors are seasoned indigenous specialists. Unfortunately while other sectors of the economy make effort to provide these educational sector is contended with ad-hoc training programmes and half-baked specialist or no specialists at all.

Excerpted from:

Nwaboku, N.C. (1997). New information technologies in education and new roles for potential teachers. UNESCO-AFRICA 15/15, 30-37.



Activity 6.2



Comment on Nwaboku's claim that "what the African continent needs most are seasoned indigenous specialists (in educational technology)". How do you think this goal can be achieved?

Old and New Technologies

In the past twenty years, there has been a significant expansion in the availability of a wide range of technologies with the potential to improve the quality of teaching and learning (Taylor, 1995). Apart from the more traditional technologies such as print, broadcast television and radio, the following new technologies provide opportunities for enhancing the quality of teaching: audiotapes, videotapes, computer-based learning packages, interactive video (disk and tape), CDTV, audio-teleconferencing, audiographic communication systems (e.g. Smart 2000) and videoconferencing. In recent times, these technologies have been supplemented by the advent of the opportunities for interactivity and access to instructional resources provided by the computer communications networks popularly referred to as the “Internet”

Delivery technologies simply package information and instruction to give students access to educational experiences. What matters is the quality of the instructional message, rather than the inherent characteristics of the instructional medium used. Clark (1983) makes the point that educational technologies are “mere vehicles that deliver instruction but do not influence students’ achievement any more than the truck that delivers our groceries causes changes in our nutrition”(p.445). Taylor (1995) extends this view by taking the position that a teacher can be surrounded by a team of audiovisual technicians, graphic artists and computing specialists to vary the style of the delivery of the educational message without producing a significant increase in pedagogical efficacy. The key process for improving the quality of teaching and learning in Taylor’s (1995) view is instructional design which has received a significant boost from recent advances in instructional science, cognitive science and artificial intelligence, particularly expert systems. The process of instructional design entails a systematic fine-grained analysis of the knowledge base

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and associated cognitive skill that provide the foundation of professional expertise in a particular discipline. This approach entails the application of such techniques as cognitive task analysis, novex analysis, concept mapping, and knowledge engineering.

Table 6.1: Generations of Educational Technology

TECHNOLOGY	CHARACTERISTICS			
	Flexibility			Interactivity
	Time	Place	Pace	
FIRST GENERATION- The Pre-computer age model <ul style="list-style-type: none"> • Print • Board 	Yes Yes	Yes Yes	Yes Yes	No No
SECOND GENERATION – The Multimedia Model <ul style="list-style-type: none"> • Print • Board • Audiotape • Videotape • Computer-based learning (e.g. CML/CAL) • Interactive video (disk and tape) 	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	No No No No Yes Yes
THIRD GENERATION – The Telelearning Model <ul style="list-style-type: none"> • Audioteleconferencing • Videoconferencing • Audiographic communications (e.g. Smart 2000) • Broadcast TV/Radio + Audioteleconferencing 	No No No No	No No No No	No No No No	Yes Yes Yes Yes
FOURTH GENERATION - The Flexible Learning Model <ul style="list-style-type: none"> • Interactive multimedia (IMM, CD-ROM) • Computer-mediated communication (CMC) (e.g. Email, Cosy etc) 	Yes Yes	Yes Yes	Yes Yes	Yes Yes

Source: Okebukola (1997)

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As noted by Okebukola (1997), The flexible access technologies allow the student to turn the teacher on or off at will, as lifestyle and time permit. Also, access to the Internet facilitates interactivity without sacrificing the benefits of flexible access, since it can be used to support asynchronous communication. Such flexibility has the pedagogic benefit of allowing students to progress at their own pace. While this trend towards “technology-mediated” flexible learning is inexorable in a variety of education and training contexts, it is crucial that the use of a range of instructional media does not automatically enhance the quality of teaching and learning.

Traditional technologies are often the starting point of new technologies. They include the chalkboard, the magnetic board, the overhead projector, and the slide projector.

Suggestions for Using the Overhead Projector (OHP)

- Begin by placing the overhead projector in the best position for clarity of projection-not so close to the screen that transparencies are too small to see from the back of the room, but not so far away as to distort the image.
- Check to be sure the projector is not blocking students' view of the screen-ask students to move if some obstruction is unavoidable.
- Don't overcrowd transparencies. It is difficult to read small fonts and cramped lines, so a cluttered slide may be less effective than no slide at all. Instead, use large fonts and plenty of space between items to help students read and follow the information.
- Be careful not to scroll through prepared overheads too quickly. Slow the pace by stopping regularly to ask students for questions.

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- Use only blue or black inks when writing on transparencies-red and green can be difficult to see from the back of the room.
- If possible, avoid turning off all the lights in the classroom when using the overhead. Keeping some lights on helps students stay alert, as well as letting them see to take notes. Begin by placing the overhead projector in the best position for clarity of projection-not so close to the screen that transparencies are too small to see from the back of the room, but not so far away as to distort the image.

Some advantages and disadvantages of new technologies are summarised in Table 6.2.

Table 6.2 Advantages and Disadvantages of New Technologies in Education

<u>Advantages</u>	<u>Shortcomings</u>
<ul style="list-style-type: none"> • Relatively easy use as teaching material. • Easy for trials and simulations. • Easy data storage and processing • Easy documentation follow-up • Fast access to information • Easy access to external programs. • Facilitate distance education • Used and developed efficiently, the new technologies prove to be a strong and effective teaching and learning tools. • Help teacher teach more and better, and integrate his learning. • Bring together a larger number of professionals who were apart in time and space. 	<ul style="list-style-type: none"> • High cost • Difficulty for user and maintenance staff training • Difficulty with respect to power supply • Inadequate resources to have access to hardware (machines) and software needed for new technology development • Even where the equipment is available, there is often an obvious lack of adequate services (maintenance, repairs and follow - up) • Teachers do not have the adequate training needed to understand the concept of pedagogy, the new learning technologies and their uses. • Non availability of teaching and learning resource centres to support – teachers. • Lack of skills and creativity to develop supports to new technologies (software)



Activity 6.3



- What is the current situation in use of new technologies in your institution?
- What should be done to improve the situation?
- What are the constraints and opportunities?

Some applications of new technologies

Computer-assisted teaching/learning: This is the use of the computer to support the teaching / learning process. Each learner works at his or her own pace and on individual basis.

Simulation teaching: This involves using a computer to represent the operation of a system in a real-life situation. Computer simulation programs were first developed for training aircraft pilots. They represented exactly the operations executed by a pilot in real life flying situation (e.g. take off, and landing in different weather conditions). These techniques have been fully applied in teaching science and technology and in engineering, geography, biological, chemical and medical sciences to help the teacher explain concepts and the student to learn better.

Internet: Through digital telecommunication networks Internet explores information super highway which almost instantly offers users unlimited research and information opportunities in various specialised fields. Thanks to its accessible data, it becomes a veritable teaching, learning and research tool.

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Closed circuit television: The closed circuit television - assisted teaching system restricts the teaching and information only to identified learners linked with the circuit by means of a cable. .Such a teaching system permits a simultaneous presentation of a subject to a large number of clients. This technique may prove efficient when combined with verbal and non-verbal supports and if it makes room for learner's participation.

Satellite - assisted teaching: The use of communication satellites enables learners in far - flung and large areas to benefit from teaching offered in a remote location. Distance teaching becomes the most efficient means of teaching far - flung clients according to their specific needs in terms of time and place.



Activity 6.4



Identify in a comparative table the technologies and products used in the following cases:

<u>Teacher - centered technologies (verbal role)</u>	<u>Learner – centered technologies (non verbal role)</u>
Examples - chalk - blackboard	- TV sets - computers

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What other new technologies are there for use in Higher Education?

Televisions	WWW
Films	e-mail
Videos	fax
Tape recorders	Satellite
Photocopiers	Data bases/CD ROM
Microphones	LCD Projects
Teleconferencing/video conferencing	Overhead projectors

The level of readiness to use these technologies?

Readiness is on the level of:

- Affordability
- Attitudes
- Skills
- Management

How ready are we?

- User training needed
- Maintenance strategies required
- Adequate physical facilities (space, security, electricity, power, backup, accessibility) required.
- Need to sensitise the public to enhance acceptance, including university senates.

How do we proceed?

Needs:

- Training of staff in use of technology.
- Acquisition of technologies
- Change of attitudes

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- Have a maintenance culture
- Adapt technologies to our institutional needs
- Make our own programmes and software
- Lecturers should be helped to acquire computers.
- There should be common facilities for new technologies in each institution.

Recommendations

1. Train prospective users in use of new and emerging technologies
2. Provide facilities, security and maintenance of the new technology.
3. Provide guidelines for adoption and adaptation of new technologies.
4. Enable academics to purchase own computer hardware and software.

6.2

Using New Technologies in Higher Education

At the end of this unit you should be able to:

- π describe the role of new technologies in enhancing teaching and learning ;
- π examine problems associated with the use of new technologies in teaching, learning and testing; and

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**SPECIFIC
OBJECTIVES**

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π state how the library can be used effectively as a technological resource for teaching and learning in higher education.

Using New Technologies in Higher Education

The development of new technologies has permitted greater interactivity, the design of interactive self-teaching programs for users, as well as feedback. Indeed, through an integration of various types of information, the whole range of sounds can be exploited and the learner's emotional and cognitive processes better integrated. Above all, new technologies have permitted individualisation, self-teaching and distance education by creating open universities in a wider space.

Learner behaviours have undergone major changes as a result of easier communication and interaction with other learners and teachers through the use of computers. In short, thanks to new technologies, greater pedagogic efficiency has been attained. To sum up, the pedagogic support of computer technology in higher education have made possible:

- the visualisation of processes and procedures.
- diagnosis: self - testing as the exercise goes on.
- reflection: on acquisition and learning.
- the creation of situations: contextualisation.
- autonomy.
- rhythm of work
- motivation
- group work

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- integrated knowledge
- access to learners from various social backgrounds and traditional teaching systems.

In some fields, the new technologies are unquestionably better and give greater priority to individual work: one remembers, retains what one hears, one understands what one sees and one best assimilates self-taught knowledge.

If the new technologies were developed in Africa, they could help solve three major problems:

- remedy the lack of access to information and teaching resources, and
- the lack of communication opportunities among the actors involved in the pedagogic process: learners, teachers and parents
- and put an end to research workers isolation: providing them with information on recent developments, experiences.

Computers can be compared to books and libraries. As multimedia items, they facilitate learning since they include most of the educational proprieties of older technologies such as books, the radio, films, television, which they improve and transmit more efficiently. They encourage more learner - centered and interactive pedagogic approaches.

The new technologies have changed the bureaucratic and authoritarian approach of traditional methodologies by making the learner independent (convenience of ease, flexibility in terms of time). The teacher has to deal with a different type of learner who is better motivated, better educated, more critical, more autonomous. He no

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longer has the authority he used to enjoy in traditional education, and now the individual selects information according to his own interests and motivation.

The use of such a media - based teaching system (multimedia centers) is limited due to some drawbacks:

- ◆ expensive acquisition and exploitation, and therefore not affordable to everybody.
- ◆ requires user training: initial and further training for the use, pedagogical and didactic application of audio - visual material (teachers and learners: courses, seminars).
- ◆ requires technical training for repairs and maintenance.
- ◆ requires basic documentation and acquisitions for easier communication and interaction with other computers (networks).

The prospects for the use of these new information and communication technologies in higher education are limited by the African universities' unequal opportunities of access to these technologies for obvious reasons;

- ◆ Non-availability of the basic facilities of access to the technologies: budget, power, reliable telephone (networks).
- ◆ unequal distribution of resources to the various economic and social sectors in each country.

Due to poor experience with older technologies (films, radio, television), which were expected to be able to bring about drastic changes in the world, disappointed users are no longer enthusiastic about technologies. Most of the actors have faith in the nature of the educational activity that traditionally depends largely on the quality of human interactions for the realisation of its objectives; they can hardly perceive any

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possible improvement with technology. In education, the problems raised by traditional teaching with regard to teacher / learner relationship in a face - to - face situation has so far been scarcely touched upon. How then can the new technologies be tackled when the older ones have not yet even been entirely tapped? In Africa, in the few universities where computer science has been introduced in the faculties or other educational institutions,

- it is used much more as a support to administrative services than to teaching;
- instructors use it for their own research work more than for teaching purposes.

It is learned as subject rather than as a support to learning and training.

It must therefore be used beyond that level, as a support to improving education, the various subjects and learning. The risk is that the teacher may no longer be consulted whereas he must remain a facilitator.

With the new technologies the teacher may become lazy, relying only on the Internet content without making any effort to design, compare and simulate. On the other hand, the lack of control over the style and quality of the information provided by Internet may make teachers, parents and politicians sceptical and apprehensive, as they can no longer control these contents.



Reading 6.3

The Library as a Resource

Philomena Fayose

A guide to teaching and learning in Higher Education is incomplete without any reference to libraries and library resources. Not a librarian from the tertiary institution or a library educator from the 12 library schools in Nigeria had been given the opportunity to speak at this very important workshop. The library should be the hub of teaching and learning in higher education. It provides a wide variety of teaching and learning resources including the new terminologies which actually are refinement of some traditional learning and teaching resources. The book here used in its widest sense will continue to be the main instrument of teaching and learning.

There may be CD-ROMs and microforms but these were first in book forms before being transferred into electronic media. Books are cheaper to use and easier to come by. Books, computers, microforms and the like will complement each other and help to bring fresh insight into the traditional teaching and learning resources. Tertiary institutions' libraries will increasingly become multimedia based. This is why they are now called library resource centres, instructional resource centre, etc. The library will be the umbrella site for all learning and teaching resources in the tertiary institutions.

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Besides the provision of resources, the library will provide opportunities for teaching staff and students skills required for the effective use of books and other learning resources. Some of the ideas in my book titled “School library Resource Centres for Educational Excellence” can be adopted for use in tertiary institutions.

Beside the provision of support and enhancing facilities for teaching and learning, the library and its staff can provide opportunities for teaching skills in the use of books and libraries. Too often, University and other tertiary institutions assume that the two-hour tour of the library by fresh students is enough to make them users of the library. This is not true. Many students do not come across good libraries until they enter tertiary institutions. The library can be a bewildering place for the uninitiated. Besides the orientation tour, there are library skills that can actually be taught to teachers and students. The courses should be taught throughout the first year. They include:

LIBRARY RESOURCES

This course will introduce students to the wide variety of learning resources printed and unprinted. The division of printed materials into reference and non-reference. Reference books are those consulted for specific pieces of information. They are not meant to be read from cover to cover. Non-reference books are further sub-divided into text books and supportive books. Text books are used teachers and students in the pursuit of a course of study. Supportive or complementary books elaborate on text books and enable teachers and students to have a broader perspective of the topic.

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The references and reading lists given by lecturers provide the extra reading that leads to a mastering of the subject. Periodical and journal articles further complement books and provide up to date information especially in the fields of science and technology. Fiction and creative writing in general build up vocabularies, educates, the imagination, provide vicarious experiences which nature and develop our sensibilities and keep the student in tune with the rest of humanity.

NON-PRINTED RESOURCES

These are made up of audio-visual software and hardware – sound of all types, particularly useful for teaching languages, music and drama, visual resources which concretize learning, reducing the problems of over verbalization and a combination of the visual and aural video cassettes; film slides with their attendant gadgets for use. Students and teachers should be taught how to operate and use these gadgets in various teaching and learning situations. The availability of these materials will encourage self investigation and reduce dependence on the lecturers. All teachers should be encouraged to produce audio-video resources in their subject areas.

BIBLIOGRAPHIC SOURCES IN BROAD SUBJECT AREAS

Science and technology, mathematics, the humanities and the social sciences. The course will also include bibliographic citations and compilation.

THE LIBRARY CATALOGUE

The library catalogue is a tool for unlocking the treasures of the library. The components of the book and their various uses. Many students and their teachers

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for example, do not know the value of the back of the book index. Others do not realize that books have authors and publishers. All tertiary teachers should be encouraged to provide their students with extra reading lists. Students should be encouraged to read outside their various disciplines so that they can have a better perspective of life and knowledge. A proper use of library resources will produce robust students who are self-reliant and creative, who are able to weight one opinion against the other thus arriving at their own judicious conclusions. These will become the thought leaders and entrepreneurs of the 21st century. Finally, tertiary institutions with the support of the governments should provide all the infrastructure that would make the use of the new technologies possible.

Excerpted from:

Fayose, P. (1998, September). The library as a resource in higher education. Presented at the UNESCO Workshop on Teaching and Learning in Higher Education. Ibadan, Nigeria.



Activity 6.5



(a) Identify the new educational technologies used in your institution and in each case indicate the advantages and drawbacks of each technology.

List of Educational Technologies used in your own teaching	Strengths	Weaknesses
1---		
2--		
3---		

GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

4---		
5---		

(b) Identify the technologies used in your own teaching and examine them critically

List of Educational Technologies used in your own teaching	Strengths	Weaknesses
1---		
2--		
3---		
4---		
5---		

(c) Propose a new participatory approach to enhance teaching and learning for your students.

List of Educational Technologies used in your own teaching	Strengths	Weaknesses
1---		
2--		
3---		

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4---		
5---		

Summary and Conclusion

In this module, we defined technology as a process and as a product. We found that the new technologies can bring the following benefits to higher education:

- increase access to instructional resources through the Internet,
- share experiences through technologies such as the virtual university,
- increase access to higher education through distance teaching and learning,
- increase flexibility in what to learn, how to learn, and when to learn, and
- motivate potential learners to engage in higher education.

To be able to realise the above benefits, we need to engage in various activities:

- train lecturers to improve their competence in using the new technologies in their instructional activities,
- train and assist lecturers in producing teaching and learning resources,
- train lecturers and students in computer literacy,
- acquire adequate facilities so that the identified new technologies can be used as part of the instructional resources in the institutions.
- run sensitisation workshops to promote new technologies in higher education.

The module has presented to

We described the uses of the following new technologies:

Computer-assisted teaching/learning: which is the use of the computer to support the teaching/learning process. Each learner works at his or her own pace and on individual basis.

Simulation teaching: using a computer to represent the operation of a system in a real-life situation.

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Internet: Through digital telecommunication networks Internet explores information super highway which almost instantly offers users unlimited research and information opportunities in various specialised fields.

Closed circuit television: which provides teaching and information only to identified learners linked to the circuit by means of a cable. .Such a teaching system permits a simultaneous presentation of a subject to a large number of clients. This technique may prove efficient when combined with verbal and non-verbal supports and if it makes room for learner's participation.

Satellite - assisted teaching: The use of communication satellites enables learners in far - flung and large areas to benefit from teaching offered in a remote location. Distance teaching becomes the most efficient means of teaching far - flung clients according to their specific needs in terms of time and place.

The library as an important resource was also described. On how we can proceed, the following needs were identified:

- Training of staff in use of technology.
- Acquisition of technologies
- Change of attitudes
- Have a maintenance culture
- Adapt technologies to our institutional needs
- Make our own programmes and software
- Lecturers should be helped to acquire computers.
- There should be common facilities for new technologies in each

institution.

Recommendations made to ensure greater use of new technologies in higher education in Africa include:

1. Train prospective users in use of new and emerging technologies

MODULE 6: New Technologies in Teaching and Learning in Higher Education

GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

2. Provide facilities, security and maintenance of the new technology.
3. Provide guidelines for adoption and adaptation of new technologies.
4. Enable academics to purchase own computer hardware and software.

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Module

7

Delivery of Higher Education Using Distance Learning Methodologies





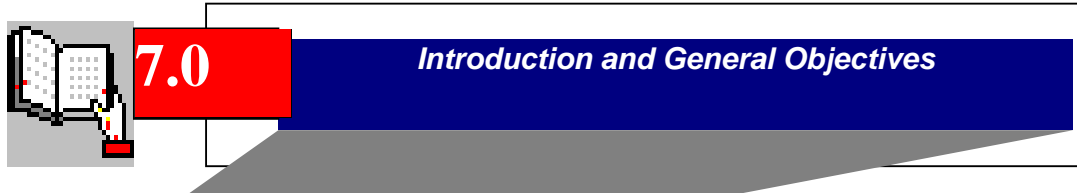
Distance Learning in Higher Education

Reflect on the following Declarations as you work through this Module

30. The importance of the concept of lifelong learning is highlighted by the Tokyo Conference as a means of increasing access for groups currently under-represented. Distance education and open learning can contribute to reaching this objectives. The same argument is offered by Latin America and the Caribbean: 'the nature itself of contemporary knowledge –in a process of constant renewal and most sudden and dramatic growth- fully agrees with the current notion of permanent education'. In this Declaration, in the part concerning 'quality', we can also read that the institutions of higher education will have to take up –without any further delays- the paradigm of permanent education and that 'they will have to turn into pertinent centres for facilitating professionals to be up to date, duly retrained and ready to change careers'.
31. The Arab States Conference declared that 'the concept of lifelong learning is of utmost important', that 'determined efforts are necessary to further increase access to higher education to all groups of society' and added that: 'in rapidly changing economies, the labour market will constantly require new and various skills. Hence, mechanisms must be developed at higher education level to allow workforce in all fields to upgrade their skills and develop new competencies at regular intervals throughout their lives'. The idea of lifelong education appears also in the Palermo document.



***CONSOLIDATED
DECLARATIONS
AND PLANS OF
ACTION OF THE
REGIONAL
CONFERENCES ON
HIGHER
EDUCATION HELD
IN HAVANA,
DAKAR, TOKYO,
PALERMO AND
BEIRUT 1997-98***



Introduction

The phenomenal development which open and distance education has undergone and is still undergoing around the world indicates its significance in contemporary educational development. Most developing countries now use it as a potent instrument for human resource development. With the world population increasing at a fast pace and the need to educate just about everyone, several issues have resulted in the need to focus on open and distance education. They include the following:

- the need to take education to over 70 percent of the world population who live in rural and remote areas,
- a huge unmet demand for education at all levels but especially for higher education,
- the incapacity of conventional educational systems to provide access for all, or to provide a quality education to those who have access, and
- the inadequate and inequitable representation of the poorer and marginalised groups in the mainstream of education.

Basically, there are three types of universities in the world. First, the conventional universities which deliver full-time education through on-campus face-to-face delivery. More than three-quarters of the world's universities fall in this category. Their students

are drawn mainly from age 16 to 24 years on the average and they are mostly high school graduates who are not in any employment. University of Ibadan, Nigeria and University in Ghana, Legon, are examples of this type of institutions.

The second type is the distance and open university which delivers higher education via the distance mode of instruction. Probably about ten percent of the universities in the world are in this category. Their students are often adults average age of about 35 years, usually employed or unable to undertake full-time study for a variety of reasons. Their education is not necessarily full time but part time or allowed to study the course till they graduate. These students are separated from the institutions and lecturers who provide the courses and instruction by distance. The students study at their own pace and at their own time often on their own either at home, workplace or in designated study centres. Examples of this type of university are The United Kingdom Open University, The Open University of Hong Kong, The University of South Africa, Simon Fraser University, Canada, and Payame Noor University, Iran. Originally it was known as correspondence because the only means to get the instructional materials to students was by post.

Today, technology is playing a tremendous role in the delivery of instruction and has now changed the term from correspondence education to distance education. Indeed others especially in North America use the 'distributed education' model based primarily on the use of technology (video conferencing) to deliver instruction to students in different locations. The third type of university is that which combines both distance education and face to face on campus education under one management. Such institutions are called dual-mode universities. They offer both the distance mode and the on-campus mode of delivering instruction.

There is a slight modification of this dual mode type of institution in many countries of the world, especially in Africa where resources are limited and cannot cope with both full-time and full-distance education. What therefore obtains is that the institutions run part-time degree and sub-degree programmes alongside on-campus full-time courses. Strictly speaking, these are not distance education courses but have now been accepted as a variant of distance delivery of education. They appear to combine in some formula both on campus and distance modes in one offering. It affords teachers who have only the holiday to study, to attend short-term instruction on campuses while they are not teaching. Universities such as the University of Lagos, Ahmadu Bello University, Zaria, Nigeria, University of Cape Coast, Ghana, and the University of Witwatersrand, South Africa fall within this category. Others include the University of Nairobi, Makerere University, University of Zambia, the University of Namibia, the National University of Lesotho, The University of Abuja, Nigeria and the University of Nigeria, Nsukka.

For many countries with large population of those wishing to be educated, open and distance education is a convenient avenue to enroll as many as are qualified. Since such institutions usually do not require as much classroom space as conventional on-campus education, space is not necessary a problem. In addition, such universities are 'open' regarding the entry qualification. In fact, no set qualification is necessary to enroll. A prospective student only needs to pass a qualifying entrance examination to indicate that he or she can cope with the foundation courses to be enrolled. Hence, such universities are called open universities. Examples of such universities in Africa are the Zimbabwe Open University, the Open University of Tanzania, and the Open University of Sudan.

Sir John Daniel, The Vice Chancellor of UK Open University has coined the term 'mega-universities' to represent open universities with enrolment of 100,000 students and above. . There are now at least 10 such universities world-wide . The only one in Africa is the University of South Africa (UNISA). Due to the increasing importance being attached to open and distance education, it is becoming imperative for everyone including teachers, administrators, and policy makers, to understand what this mode of education means and entails. This module has been written to fulfil this aim.

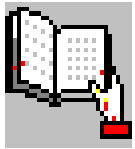
The main focus of this Module is to provide a brief overview on distance and open education to serve as a basic guide especially to those who are unfamiliar with this mode of education that has become fashionable the world over. The module does not pretend to cover every aspect or the depth of information and issues in distance and open learning. It is to serve as 'an eye opener' and hopefully will motivate you and other readers to seek more information elsewhere. Several references have been provided in the Module to which you may refer.

On completion of this module, you should be able to:

- π define the main characteristics of distance education;
- π appreciate recent developments in distance education; and
- π design strategies for distance education course development.



**GENERAL
OBJECTIVES**



7.1

Overview of Distance Education



After completing this unit, you should be able to :

- π define distance education;
- π identify the main characteristics of distance education; and
- π describe the support services needed in distance education

**SPECIFIC
OBJECTIVES**

What is Distance Education?

Very simply put, distance education is that form of study where students are not in direct physical contact with their teachers. In its historical perspective, distance education has gone through several phases beginning with exchange of letters (such as epistles by St Paul to the early Christians), correspondence courses (such as those conducted by Pitmans in shorthand), tuition for external examinations (such as for external degrees offered by the University of London), off-campus and part-time studies for existing universities (such as those conducted by the University of Nairobi and the Ahmadu Bello University) to universities devoted 100% to students who study while at a distance. Many of these students are located hundreds if not thousands of miles/kilometres from the university head office, such as is the case in the UK Open

7.7

MODULE 7: Delivery of Higher Education Through Distance Learning Methodologies

University, University of South Africa, Indira Gandhi National Open University and many others like them.

Known differently and variously as 'correspondence study', 'home study', 'off-campus study', 'independent study', 'distance study', 'telematic teaching', 'extra-mural system', what we now call distance and open learning has meant the same for everyone in the world. This is the provision of education by a mode other than the conventional face to face method but whose goals are similar to, and just as noble and practical, as those of on-campus full-time, face to face education.

The history and evolution of distance education has been marked by three main issues (Gough, 1980). The first is access: to allow students who would otherwise be denied educational opportunities to gain access to courses. The second is equivalence and integrity: students taught at a distance should receive an equivalent education and an equivalent qualification with the same integrity as those earned through the conventional mode. The third is excellence: quest for excellence in quality of learning materials, teaching, support services, academic and administrative systems or professional development of staff. As the resolution of these issues continue to dominate the theory and practice of distance and open learning, many countries in the world, especially those developing, became increasingly attracted to this form of education. Distance education relies on materials, the radio, television, tape recordings, learning units, the telephone, computer, and satellite communication. Several institutions conducting their programmes through distance education organise face-to-face practicals and field trips.

Why would anyone employ this form of study? There is no simple answer since there are diverse circumstances. First the political philosophy of a nation or political party

in power has a very strong influence. Secondly, availability of new methods of communication has solved problem of scattered populations such as those in Australia, the Island states and those with limited or no facilities for higher education. A previous Module describes in detail the use of technologies in higher education. The type of technology used depends on the ability to pay for it as well as supporting infrastructures. But, research has shown that even in quite developed countries, students have depended heavily on the printed materials for reasons we do not need to go into here. This should allay fears of those who are afraid of trying distance education because they are scared of the great expenses associated with the new technologies.

A third reason for resorting to distance education is its flexibility in relation to place, pace, age and time. Students do not have to be in physical contact with their teachers. They can continue earning their living while they pursue their studies i.e. they work as they learn their living while they pursue their studies i.e. they work as they learn and they learn as they work. They can take small doses over a long period or large chunks for a shorter period as circumstances dictate, unlike existing universities which expect students to move at a uniform pace.

In many countries especially where the state bears the financial burden of student bursaries, age is an important factor. Older students are not welcome since it is agreed that their working life before retirement would be too short. Distance education puts no upper limit to age. It is on record that the oldest student for the B. Ed at the National University of Lesotho was a retired lady who was then 63 years old. The UK Open University has had students in the 80s registered to do courses of their choices. At the end of the spectrum, there is the young preconscious boy in New Zealand whose age did not allow him admission to the University even though he already had

met the criteria set for admission. He was enrolled for university programmes by distance education instead as he waited to meet the age criterion for the traditional universities.

This flexibility of distance education has given many men and women a "second chance" to obtain higher education because they had not been able to avail themselves of such studies earlier in their lives.



Activity 7.1



If your university was asked to mount Distance Education programmes for students who cannot afford the cost or the time to register full-time at your campus, list the things required to subscribe to the programme?



Reading 7.1

Distance Learning in Higher Education

Neil Butcher

Pressures Stimulating Distance Education in Higher Institutions

Factors Creating Pressure for Change

- *Pressure from employers to produce skilled workers*
- *Competition from private education, colleges and Technikons*
- *Deteriorating boundaries of nationality leading to increased international competition*
- *Shift in knowledge production from higher education to diverse locations*
- *Inefficient organisational structures and hierarchies within higher education institutions*

- *Opportunities created by technological developments and the development of curricula to cope with technological advances*
- *Pressure to increase access to higher education to larger numbers of students*
- *Dwindling public sector budgets for higher education*
- *Western organisational models of universities which may not be appropriate for the African context*
- *Perceptions of declining standards of quality in higher education*
- *More efficient secondary school educational system*
- *Population growth*

There has been considerable and growing interest in distance education to provide access to students previously denied by personal or social circumstances. The costs are, however, to be carefully measured if one is to amortise all identified costs over time and over student numbers. The start-up costs are, therefore, minimal as compared to the long-term sustainability of the project.

Distance education and resource-based learning strive to break down traditional notions of having the teacher 'talk down' to the learners. Thus, distance education calls for the implementation of strategies that will shift the role of the educator. As a result, distance education demands that expenditure must be directed towards the design and development of high quality resources.

Some Problems and Possibilities

Common problems identified in distance education include the need for face-to-face tutorial support (which is expensive) and course material development (which is often unreliable and unsustainable). Professional development of educators is also often limited and sporadic. Administrative systems are often underdeveloped. Course fees are often beyond the reach of the learner. Unrealisable infrastructures make communication systems by way of roads, the postal service and telecommunication facilities and services difficult. There are funding constraints and no ready-made solutions that are applicable in every country.

Despite the rapid development and convergence in functionality of technologies, there is still a legacy of failed initiatives in attempting to implement educational technology. The four most common reasons for failure are: 1) inflexible technological choices were imposed on a system; 2) lack of investment in curricula and course design; 3) extremely high operating costs; and (4) underestimation of fully deployed systems for student support.

In light of the above failures, new approaches to planning have been adopted, and these include:

- Distance education methods of instruction should be developed as distinctly different as possible from face-to-face education.
- The new planning continuum sees any distinctions between distance education and educational technology as becoming increasingly meaningless.
- Quality strategic planning must take into account the use of terminology on distance education and educational technology in order to avoid sub-optimization of the planning process.
- The choice must be made from a wide variety only those methods that are feasible.
- It is time to turn away from debating on the relative virtues and merits of distance education and consider instead the nature of learning and the educational value of a course's structure and content.
- Each educational intervention must be planned, implemented, and reviewed on its own merits.

Excerpted from: Butcher, N. (1999). *Distance learning in higher education. Presentation at the Regional Workshop on Teaching and Learning in Higher Education, University of Witwatersrand, Johannesburg, South Africa, September.*



Activity 7.2



1. List institutions in your country offering courses by any form of distance education.
2. For each institution, what are the possible problems facing the delivery of distance education?
3. Using Butcher's (1999) list above suggest solutions to these problems.

Theoretical Influences Adopted in Distance Education

As stated earlier, Distance Education has been with us for several centuries even though in various forms. As is the case with all human endeavours, advances in research have had an impact on distance education. We will only mention a few which you can follow up in your own time. Since distance education provides the same type and quality of education as provided through full time on campus education, their theoretical frameworks are not different from each other. Heavy reliance is placed on the theories of instruction, theories of instructional science and technology and theories of applied cognitive science. Some of the theories you may have been familiar with are treated here.

There is the Skinner's stimulus-response theory which posits that we respond to certain stimuli depending on their relevance and intensity. Distance education makes use of this theory in the structure of its study materials for the distance learners so that they are encouraged to keep on learning. There is the Rothkopf's in-text questions theory which shows that constant and regular challenge to the learners to relate what they read to their understanding of the content is placed in context. Writers of study materials are expected to take this into consideration as they write their units, sections of units as well as in other manuals.

Ausubel's contribution is the advance organiser model which emphasises the need to produce materials that bridge the gap between the known and the unknown. Distance education students have a very rich background of experiences unlike the youngsters straight from school. Writers of study materials as well as tutors who meet the students during face-to-face sessions need to take Ausubel's model seriously.

We cannot review every theoretical contribution but we can at least consider Carl Rogers' facilitation model, which emphasises the need to create a facilitating and friendly environment to learn. There is need to engage the learner in a dialogue with the teacher both in face to face sessions as well as in the writing style of study materials. Gagne's general teaching model points out that there is a logical order of presenting materials. This is especially important with the distance education learner who does not interact with his teacher instantly in a physical sense.

Module 3 has covered the teaching-learning process more extensively and intensively and is it therefore sufficient to end with Holmberg's theory of didactic conversation which emphasises the important role of interactivity. Even in the marking of assignments, the tutor doing the marking needs to interact with the student so that this is not just the question of assigning a grade to the work done but teaching the learner through the replies given. However, for distance and open education several other philosophical and psychological frameworks are considered additionally because of the type of students who study through the distance mode. Adult education principles including lifelong education, co-operative learning, and socio-cultural aspects of learning which include constructivism have become incorporated within the guiding principles of instructional design and development.

Support Services

The principles of student support services are predicated on the belief that for students who are separated from their institutions, teachers and peers, there need to be a well-developed system of answering to the many needs they may have. Needs such as

reaching their institutions, lecturers and other students for counselling, course and subject selection, instructional guidance, and co-operation with other students for peer-group tutoring or for tutorial through technology such as tele-tutorial (using the telephone system) or computer conferencing, or video conferencing. Many distance education institutions have a small but highly organised centre or head office which looks after such needs of the students. They operate by bringing closer to the students services that will facilitate their learning. The first level of decentralisation is the Regional Centre and the second level is the study centre which is closest to the student. For example, the UK Open University has 13 Regional Centres and hundreds of Study Centres. The Open University of Tanzania has 21 Regional Centres and over 49 Study Centres throughout Tanzania Mainland and Zanzibar. The National Teachers Institute, Kaduna, Nigeria, which is probably the largest distance education system for training teachers at the primary and junior secondary levels in Africa has a network of regional centres in each of the 30 states of the federation. The basic setup of most student support network is as diagrammatically shown below. Please note that not all distance education organisations or institutions have such extensive network of student support services.

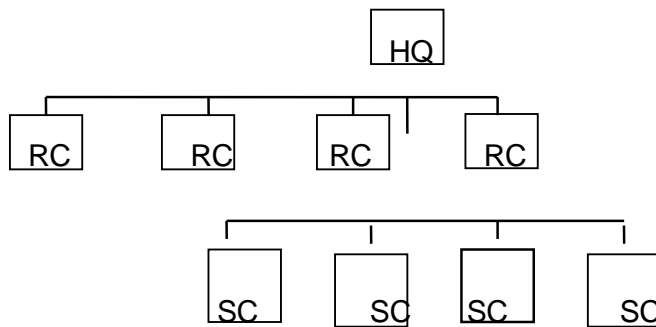


Fig. 7.1 Organogram of Distance Education Administration

At the Head Office/Head Quarters there is the general administrative structure that handles students records with as many details on each as is necessary, their grades, accounts including fees paid, outstanding debts, processing of scripts, stores of study materials, study units, audio and video cassettes.

Another service for students is tutoring at a distance. These tutors are engaged in marking, face to face sessions with the students, part-time staff to supervise science practicals in borrowed space in laboratories owned by other teaching and research institutions. Most of these tutors and part-time staff, are full-time employees of other institutions paid for their service to the distance education institutions

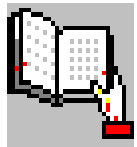
A third service to students is counselling which is at both the Head Office/head quarters as well as at Regional Centres. This way, students need not travel long distances nor spend too much money for boarding and lodging during orientation, face to face sessions, timed tests or examinations. The university accesses space at schools, private buildings, magistrate courts, police college premises, other institutions for higher learning for use by tutors, and the students

A developing country like Tanzania has found out that it cannot rely on large sums of money to invest on new projects such as the Open University. It has, instead, borrowed a leaf from other experiences elsewhere to enhance provision of student services. These include the library network run by the Tanzania Library Services Board throughout Tanzania. The Open University finds books and journals from well known international groups and then deposits them in the library network. When the public library system has no branches, arrangements have been made with private libraries

1. If you already operate a distance education programme at your university how do you reach students in remote parts of the country? State new ways of extending support services to them? What are the major constraints? Financial? Institutional support? State's goodwill? Others?
2. Have you ever visited another institution engaged in distance education either on the single mode or on the dual mode? What did you learn about their student support services?
3. If you have not you may wish to get in touch with organisations which could arrange such visits such as the Commonwealth of learning (COL), the Association of Commonwealth Universities (ACU), the International Council of Distance Education (ICDE)



Activity 7.3



7.2

Distance Education Systems

After completing this unit, you should be able to :

- list what constitute a distance education system and sub-system;
- describe how a distance education system operates; and
- identify the special needs of distance education systems in the Third World



**SPECIFIC
OBJECTIVES**

Characteristics of Distance Education Systems

There is no universally agreed and exhaustive list of characteristics of a system in distance education. Holmberg has a ten-process components list of his concept of a distance education system. These are :

1. Development of a rationale of distance education
2. Establishing goals and objectives of study
3. Selection of target groups
4. Choice of content and structure
5. Developing mechanisms for organisation and administration
6. Choice of methods and media used in the presentation of study matter
7. Selecting methods and media of two-way communication in distance study
8. Course development
9. Evaluation
10. Revision

It has been observed that whereas Holmberg's list would be sufficient for a developed country, Third World Countries would have to add two more. These are:

11. The politics of credits and credentials
12. Institutional networking to obtain instructional support from outside institutions

It is therefore urged that quality assurance should be accorded a very high premium. In the context of teaching in distance education system, there is need to make full use of all the relevant pre-existing educational and communications facilities



Activity 7.4



Review Holmberg's ten-process components list. Do you consider the list exhaustive? If yes, which of the components apply strictly to distance education in your institution? If no, what other components can be added to the list?

EXTERNAL AGENCIES IN SUPPORT OF DISTANCE EDUCATION SYSTEMS

Experience worldwide has shown that distance education systems are dependent quite heavily on the following external (to themselves) agencies.

Publishers

A publisher can make or unmake a carefully planned system if he does not guarantee availability of set books. Certain courses require students to read beyond the study materials written by the institution. If these set books come too late, say, after examinations, students will not be keen to read them while their understanding of the course will be limited to the extent that useful supplementary knowledge was lacking.

Universities which are not their own publishers depend on commercial publishers to produce their study materials after they have gone through the preliminary processes. When these publishers have not been paid or when their machines breakdown or when power is not available, then this causes pandemonium that puts off students. Their

plans are put off gear. Quality of published materials is also quite important to the distance education student since illegible text, or loose bound text lead to frustrations.

Booksellers

An open university is ill equipped to do book selling to its students and the general public. Stocking all the study materials published in its own stores would require investment in large storage facilities. Herein come book sellers who between them can handle an otherwise impossible volume of materials. Where the university policy is to include study materials in the fees structure, the way out is to decentralise store-keeping to Regional Centres. In a case such as Tanzania, this would imply distribution of the consignment to 21 Regional Centre stores, with quantities proportional to number of students registered in the Region.

Universities

For single mode universities, the most cost effective way of conducting science practicals, accessing learned journals, conducting face to face sessions is by making good use of existing facilities at the traditional universities. But this also applies to dual mode universities with students in far flung areas in and outside their countries. If they conduct distance education courses they cannot bring them all to the main campus of the university. It would be cost effective for them too to make use of facilities at other universities.

Current examples are the Open University of Tanzania whose BSc students do their practicals at the University of Dar es-Salaam and Sokone University of Agriculture. Another example would be the UK Open University which makes use of the Open

University of Tanzania to invigilate her students resident in Tanzania during their examinations. In the UK itself, it makes use of many British Universities.

Local Education Authorities

These authorities can allow access to school buildings by distance education students who use them as study centres. In Malaysia, it is Government policy that all schools shall make a classroom available for distance education students. Local education authorities can also provide financial support to students especially those with limited means. Mtwara, Lindi and Zanzibar are examples of regional and revolutionary governments which have committed themselves to pay fees or providing loans for some of the students.

Public Libraries

These libraries, especially if properly stocked are a great help to distance education students. With new technologies, it is possible to access library holdings in great libraries, a technique referred to as digital libraries. Even for poor and developing countries, the digital library is now at the door steps though projects such as the African Virtual University.

Reference to the Open University of Tanzania as regards access to the public library network has been made elsewhere in this Module. In a poor and developing country, it is not sufficient to leave it to the public library system alone to fetch for books and journals. The universities have and do assist in the acquisition of such valuable tools in the study programmes of their students.

Post office

Many modern and sophisticated ways of dispatching mail and materials may exist but the old Post office is a dependable provider of service to and from students. Working relationships can be worked out between the universities and the Post Office that will ensure safe, fast and affordable delivery system. The students on their part are advised to be very precise with their addresses since many a mail has been misplaced because inaccurate address was used.

Radio Broadcasting

The UK Open University found the BBC a very dependable ally in the production and transmission of its programs to her students. Circumstances have changed and its operations have been scaled down. The Open University of Tanzania has not been able to use the State Radio because its establishment coincided with the liberalisation policy that demanded that the State Radio operates commercially and operated without government subsidies. This development has made the venture too expensive for the University to afford. Investment in the radio project would have denied the University an amount that could have published 30 titles per annum. The University opted for the latter course.

Commercial Printers

These are very crucial in printing course units and handbooks. For limited quantities, Desktop Publishing would be adequate but for large numbers, commercial printers become necessary.

Full time staff of other institutions

As referred to elsewhere, an Open University on the single mode cannot afford to employ all the staff required. Staff student ratio of 1:30 has been proposed for distance education institutions. Relying on its own staff, the Open university of Tanzania has a staff student ratio of 1:106 while it changes to the ratio 1:37 when part time staff from other institutions are counted.

International links

The Open University of Tanzania has been able to achieve what it has to-date due to assistance in books from the USA and UK, desk top publishing facilities from UNESCO, staff development scholarships and fellowships from the Association of Commonwealth Universities, financial support for staff training on how to write study materials from Australia, financial assistance from the Commonwealth learning for writers workshops and for production of some titles, a private organisation in the UK which is supporting a project to produce audio tapes for distance education students who are handicapped both the blind and the multi-handicapped, the World Bank which has paid for facilities to enable the University to participate in the African Visual University project.

International links with Universities

The University of Nairobi/Open University of Tanzania is a good example of how such links can assist. The University of Nairobi established its B Ed programme in 1985 and produced study materials in 10 subjects namely Business Studies, Economics, Education, English Language, Geography, History, Kiswahili, Linguistics, Mathematics, *MODULE 7: Delivery of Higher Education Through Distance Learning Methodologies*

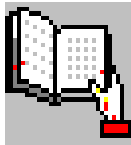
Philosophy and Religious Studies. The Open University bought materials and used them. Other examples can be cited involving UNED in Spain, IGNOU in India, Hong Kong Open University, Makerere University and the network grows. This way, many short units and leap-frogging can be achieved.



Activity 7.5



1. To what extent does the infrastructure in your country support university needs and requirements?
2. Would it be necessary to link up with other institutions to enhance the university's capability to handle a distance education system?
3. What useful concepts have you learnt in the previous modules which help you to tackle distance education programmes?



7.3

Course Design and Development

After completing this unit, you should be able to:

- π plan a distance education course;
- π list the main parts of a unit;
- π state the importance of pre-testing;
- π identify how to provide tutorial support; and
- π state when to print and dispatch the units.

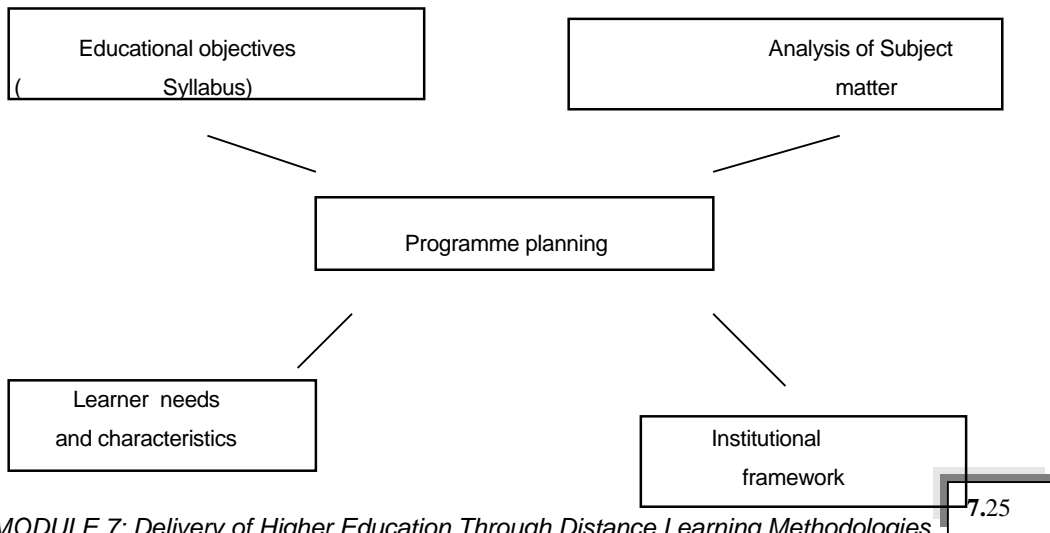


SPECIFIC OBJECTIVES

Programme Planning

Four factors need to be emphasised in distance education. First factor in the planning is the need to define the educational objectives of the programme. This will constitute the syllabus. Then there is need to carry out an analysis of the subject matter taking into account appropriateness and relevance. Third there is need to look at learner needs and characteristics. Some of these are Immigration officers or Custom officers or non-graduate Primary Court magistrates or Police officers or members of the Prisons service or general administrators. In planning a law course, needs of these men and women dictate environment specific inputs rather than universal principles with little applicability to their situation. Lastly, there is need to look at the institutional framework which will determine manner of delivery, support services, type of technology in communication and several other issues.

Diagrammatically, this process would appear as follows :



Course Planning

As you plan the course, the following specific details need to be decided upon :

- . the course title
- . the target group
- . the aims and objectives of the course
- . the content of the course
- . the teaching strategies
- . assessment methods
- . the study time needed
- . resource materials.



Activity 7.6



This list is by no means exhaustive. Refer to the Module on Curriculum Development for definition of terms and processes. Compare this list with the information on course planning in Module 3.

Unit Planning

Each course will have several units. Each unit should have the following :

- . a title
- . a table of contents
- . a list of objectives
- . study notes on the subject matter
- . activities

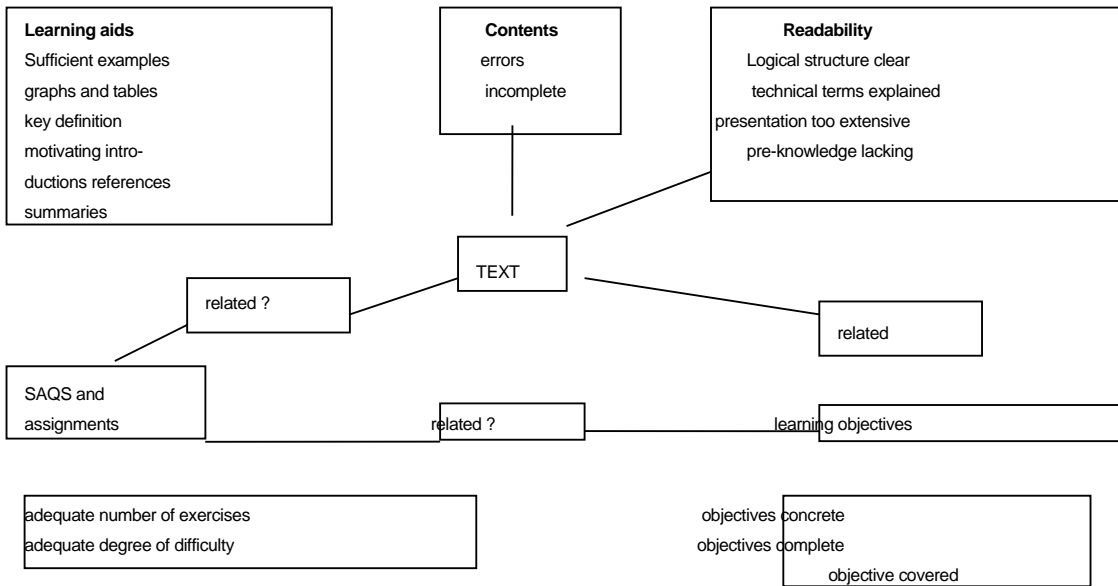
- . assignments
- . symbols and illustrations

When a unit has been completed and before it is released, there is need to pre-test it.

Pre-testing the Unit

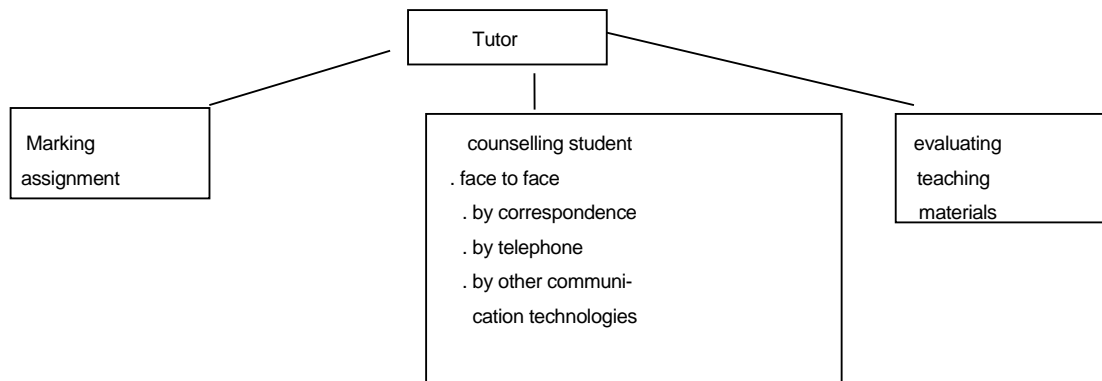
For each Unit, you need to involve key groups represented by experts in content as well as distance education, peers and the learners. Methods you could employ in the pre-testing exercise could include interviews, questionnaires, tests and group discussions.

Key questions which could be raised are summarised in the diagram below :



Tutorial Support

The need for tutors in student support services has been referred to already. Here, we will summarise in a diagrammatic form the functions of such a tutor.



Copy Editing, Printing and Dispatch

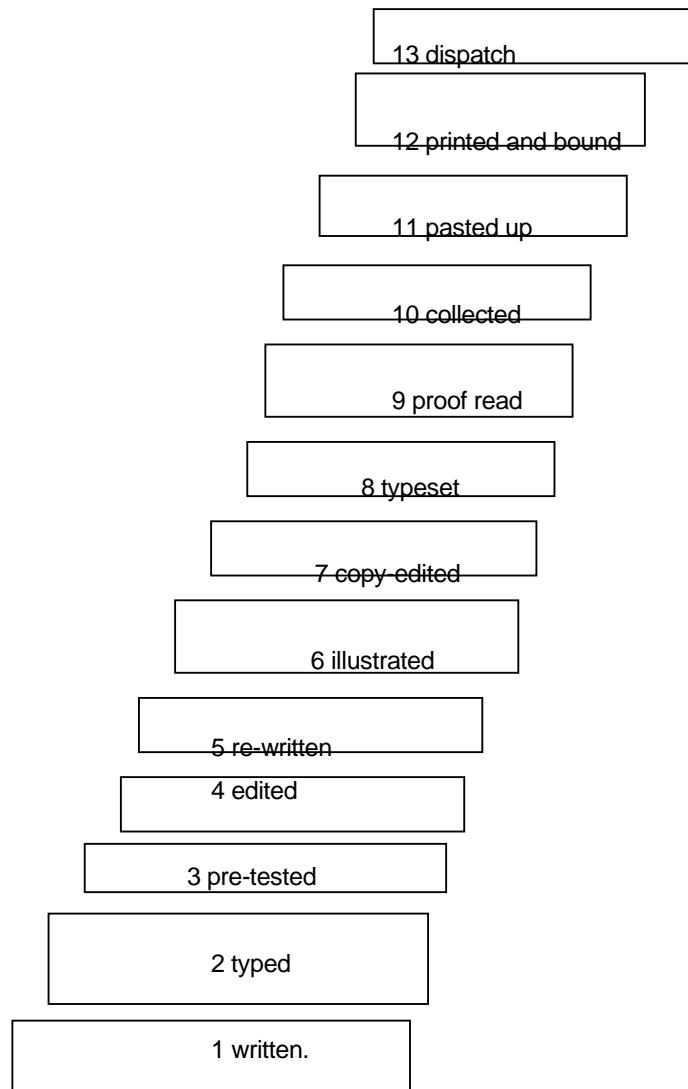
Whichever technology is used, there is need to make sure that the hard copy or the final draft of the manuscript is free from factual errors, grammatical mistakes and no gaps in content have been left unattended. There is nothing as frustrating to a distance education learner as a study material full of mistakes. It is even worse when this is the case with assignments or timed tests or examinations. This is not idle talk since there are recent cases of such lapses leading to appeals to the Vice Chancellor or to Senate for remedy. If it is repeated a few times, then it will make the institution not credit worthy.

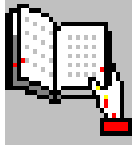
It is important at this stage to agree on a format of the unit as well as its layout. Several institutions have developed house styles which make their study materials recognisable at first sight. Students also identify with study materials whose style they are familiar with.

Illustrations in distance education study materials are very important. Over a number of years practitioners in distance education have developed symbols that draw readers attention to special features such as objectives, self tests, further reading, things to remember etc. Also many concepts and processes become clearer when diagrams, charts, figures, pictures and so on are used. When corrections have been made routine work leading to printing, binding and dispatch follow.

GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

Even with advancement in technologies, the following chart would still represent in a reasonable form, steps from writing to dispatch.





7.4

Case Studies from Tanzania and South Africa

At the end of the unit you should be able to :

- π conduct an in-depth case study of a distance education institution in a developing country- Tanzania;
- π describe examples of distance education delivery systems in South Africa; and
- π apply experiences learned from the case study to your institution.



SPECIFIC OBJECTIVES

Tanzania- Decision to go single mode

The first critical decision for Tanzania was how best in a cost effective manner address itself to the very low transition rate from Secondary education level to the tertiary level. Tanzania has one of the lowest transition rates in Africa a fact that has worried policy makers, politicians, parents and the students alike.

Two options were considered a) expand existing university enrolments by constructing more hostels, lectures theatres, laboratories, staff houses; b) adopt distance education strategies. Option a) was found to be unattainable due to the very high costs involved.

Option b) was explored further so as to decide on the single or the dual modes. A committee set up to weigh the pros and cons of the two modes travelled extensively around the world and reported back in 1990 in favour of the single mode. The Committee thought the single mode option gave the institution greater autonomy to plan and execute those plans. It also argued that in times of economic squeeze, distance education in a dual mode setting would be suffocated whereas in a single mode variation, it would still be left with something to keep going.

The next critical step after Government approval of the single mode option was to translate recommendations on paper to implementation packages. To handle this stage, an ad-hoc Planning Committee was established to do the following :

- propose an appropriate draft Bill that would govern an institution devoted to distance education
- propose where to obtain initial study materials for adoption or adoption since the 1990 Committee recommendations had stressed the need to begin with what was already available rather than wait for another 3-4 years while writing materials from scratch.
- simultaneously set up machinery to develop new materials in areas not covered from adopted ones and to cover gaps where adopted materials were found inappropriate for Tanzania.
- establish admission criteria, regional centres from which to serve students, propose various other regulations on fees, assignments, assessment.
- identify teaching staff-academic, administrative full-time, part-time
- propose and make contacts with external support services as the library, Post Office, Telephone.

The Ad Hoc committee worked for two years after which many things had happened. First, an Act of Parliament establishing the single mode university had been passed. Key officials had been appointed including the Chancellor, Vice Chancellor, Chairman of Council and Council members. This step was crucial since without them, there would be no legal body to approve programmes, admission and examination regulations, budgets, contracts and agreements with publishers, printers, and all the important things that make a university work.

Then came the acquisition of study materials. As pointed out in this module, the University of Nairobi had already been conducting the B.Ed programme by distance education for seven years. It was to this university that the new institution turned to for

- a) supply of the first materials and audio cassettes
- b) syllabuses for the B. Ed. programme for first year to the final year
- c) experts to run training workshops

These workshops introduced workshop participants to the philosophy concepts and practice of distance education, to how distance education systems work; planning distance education programmes; writing of study materials - step by step to the dispatching stage. In the case of materials already written, there were live examples to work on. In new areas such as the B.Sc. and LLB Study materials, workshop participants worked from scratch until the first units had been produced. Guidebooks were also produced for future writers, for tutors who would work with the students and for students explaining what it meant to be a distance education student and how to effectively and efficiently work their way through the system.

d) Supply of sets of assessment tools developed over the seven years to go with their study materials. These included ordinary assignments on a unit being studied, timed tests at end of a unit and examinations at the end of a course.

Techniques and skills acquired at these workshops were very useful in developing new materials in areas Nairobi had not written any. They were also useful in the writing of Additional Notes to fill the gaps to replace chapters or Units in the Nairobi study materials. It was felt that certain treatments were Kenya-specific and a Tanzanian student would have to be exposed to knowledge and skills peculiar to his situation. Examples are to be found in History, Economics, Geography and Education.

1. If distance education was adopted in your country, what mode would you recommend (single or dual) and why?
2. What would you consider to be the advantages and disadvantages of adopting and adapting instructional materials from other countries or distance education systems for distance education system in your country?
3. If you were in a similar situation would you insist on producing your own materials first?
4. Which disciplines would you begin with?
5. Is there adequate expertise at your University to do this or would you have to engage outside help?
6. If you were to adopt existing materials, are you aware of institutions in your country or outside the country which would have them in the disciplines you decide to begin with?
7. What disadvantages do you see in this approach?



Activity 7.7



Student Support Services

How does a country go about deciding on the establishment of regional centres? In the case of the National Teachers Institute (NTI) of Nigeria, the political divisions of the country and states were used to create regional centres. Other institutions used criteria they find suitable for their purpose and those of their students. For example in Tanzania, a large country where it is impossible to establish Regional Centres to serve the students all at the same time, a simple rule of thumb was adopted namely that any Region with 40 or more registered students would qualify for a Centre. Those which did not would be served by those which did. Once a year, these Regional Centres are used for up to three weeks for annual examinations, supplementary examinations and for resits for those who missed out in earlier sessions.

For financial reasons, it has been possible to post full-time Directors at these Regional Centres in only eleven of them so far. The rest are activated when activities are in session. For those with Directors, there are mini-libraries, a PC each, a reading room, copies of each study material published to-date, prospectuses, Guide books, joining instructions. The Directors are in touch with the Head Office by telephone, ordinary mail and some by fax. Similarly the students, a few who communicate via the E Mail. Some Regional Centres now keep stock of audio and video cassettes. With the African Visual University Project, it is hoped to get in touch with all the Regional Centres, through the Internet and Satellite. The World Space Foundation is actively promoting the digital radio technology which will improve even further the communication between the Main Campus, the Regional Centres and the students.

It has already been pointed out that the University makes full use of the Public Library network. There are 17 such libraries and the gaps are filled by using libraries owned and run by other institutions. The main contributors of books have been the Book Aid International of the UK and the International Book Bank of the USA. Publications with around US\$80,000 have been received and distributed to the 2 regions of Mainland Tanzania and Zanzibar. For efficiency, the Directors of Regional Centres meet in Dar-es-Salaam once every 3 months to share experiences, compare notes and propose new developments. There is a Dean of Students at the Main Campus whose counselling services are carried out by Directors of Regional Centres. She also coordinates supports for the handicapped, especially to blind. A grant of UK£36,000 will enable blind students to register in January 1999 using audio cassettes to be produced at the Main campus in recording books now under construction.

It is worth mentioning that the first prisoner has applied for admission. The university has already sought permission from the Ministry of Home Affairs to register him. The UK Open University has shared with us their regulations on how to provide support services for such students. Support services for foreign students are a bit tricky but already the University has students resident in Kenya, Lesotho and other neighbouring countries. Regional Centres have been assigned responsibilities for a number of such countries. For example, the Kenyan student has travelled regularly to northern Tanzania towns of Arusha or Moshi but sometimes he has come to Dar-es-Salaam. For one student based in Lesotho, the University uses the authorities in that country, through mutual arrangements.

1. How do you handle students in detention or in prisons? Would the Tanzania, UK or South African experiences be worth considering?
2. How well placed is your library network to handle distance education students?



Activity 7.8



Quality assurance

The Open University of Tanzania commission competent individuals, most of them University based, to write study materials. The first draft is sent to a reviewer whose academic competence is vouched. Comments of the reviewer are used by the original writer to improve the manuscript before it is subjected to a second review to ensure that comments have been incorporated. At all stages the relevant subject specialists and faculty Deans are involved.

The final draft is submitted to an editor as described in a previous unit. The University pays a token honorarium of US\$700 for a unit equivalent to 35 hours of contact in a regular university. The reviewer is paid 10% of this honorarium while the editor is paid 20%. If the manuscript is translated into another language, the translator is paid 50% of the honorarium. Where a few hundred copies are required, all the steps from final stage up to dispatch are done in house. Where thousands of copies are required, the work is tendered to commercial printers. To-date, the University has published over 60 titles while it uses over 100 titles bought annually from the University of Nairobi. Quality of its programmes is also subjected to external scrutiny. External examiners have so far been appointed from the University of Malawi, University of Nairobi as well as the High Court of Tanzania and by academics now serving in both the public and private sectors.

Quality of the syllabuses, courses and study materials is guaranteed through the involvement of experts from traditional universities as well as experts in distance education. Good materials in incompetent hands could lead to disaster. The appointment of the academic staff observes merit and thus only those with First Class Honours or Upper Second (upper half) are appointed. If they do not possess the PhD degree, they are put on staff development programme. An annual staff review exercise is used to reward the good performers and counsel those not doing so well.

Because distance education is based on special methodologies all staff irrespective of priority, undergo training at workshops led by resource persons well informed on the philosophy and practice of distance education. This has also involved attachments to IGNOU, UNISA, University of Nairobi and UK Open University. Knowledge is advancing at a quick pace and diverse approaches are required to access it. The African Virtual University project has provided an opportunity for academic staff to update their own skills and knowledge.

Non-degree programmes

Many universities in Africa are establishing non-degree programmes within their distance or part time education offerings. Universities such as those in Ibadan, Zaria, Lagos, Accra, Khartoum, Harare, Nairobi, to mention but a few fall in this category. The Open University of Tanzania, for example, has established an Institute of Continuing Education to handle needs of men and women for tailor made courses lasting a few weeks up to one year. Currently there is the Foundation Course which is a bridging course for applicants who do not meet the minimum criteria for admission to the first year of the degree programmes. After one year, those who pass a university

set examination are admitted. To-date, two groups have qualified for admission under this arrangement.

A 13-module Commonwealth Youth Programme (CYP) diploma course is nearing finalisation. The Commonwealth Secretariat in London has requested the University to handle its Lusaka based (CYP) since the residential programme is not reaching many youth fast enough. It will be launched in January 1999. A certificate course on training of trainers (TOT) in distance education is being mounted in conjunction with South African Extension Unit (SAEU) which used to cater for South African refugees by distance education method. With political changes in South Africa the SAEU is turning its attention elsewhere.

Post Graduate Studies

Busy bureaucrats, college, tutors, public and private sector employees, graduates of the Open University of Tanzania have requested for access for post graduate studies by distance education. Later in 1999 or early 2000 the University will mount its first post graduate studies by distance education. It already has some experience since it was involved in the Rajiv Gandhi Fellowship programme for the Masters in Distance Education launched in 1994-1995 academic year. IGNOU provided the course, COL met the financial obligations and the University tutored the Tanzanian-based students.

Some South African Examples of Distance Education Delivery Systems

TECHNIKON SA

Technikon SA is the largest institute for career-related tertiary education in Southern Africa and offers students the opportunity to qualify in a chosen career no matter where the student lives or works. In 1998, over 75 000 students registered at Technikon SA for courses which will support their career development. Technikon SA promotes the concept of lifelong learning, which enables learners to improve their qualifications at any stage of their career. The courses at Technikon SA are drawn up with specific careers in mind and are market-related. Technikon education goes hand-in-hand with work experience, so when they qualify, students are ready for the job. Technikon SA is increasingly using technology to assist in student support, and soon this will include making study material available online.

The institution's head office is situated at its main campus in Florida, Gauteng. Lecture, research and office facilities are located here as is the Gold Fields Library and Information Centre that provides students with access to thousands of reference works. Students are spread across South Africa. To bring administrative and academic services closer to our students, twelve regional offices have been established and a further nine branch offices in the main centres across South Africa. Unlike a university, Technikon SA has Academic Divisions rather than faculties. Each of the Academic Divisions consists of a number of Programme Groups. The Programme Groups focus on specific careers with qualifications ranging in levels from Technikon certificates and national diplomas to degrees.

More About Technikon SA and Lessons Learned

- Fully distance education institution.
- Many of the materials are on the Technikon SA web site.
- Technikon SA books are on the Internet.
- Technikon SA distance education materials are 90% print, 10% electronic (make materials commensurate with the level of development).
- On the African Virtual University (AVU) Project, there is the need for inter-African exchange and African scholars producing and delivering the materials, with a link to African problems. AVU hardware are under-utilised in most of the 28 countries currently being serviced.
- Given the present state of development in SA (indeed in Africa), the print medium is the most viable way for packaging DE materials
- Electronic materials development should progress as more students gain access to the use of computers.
- IICBA could take the lead in suggesting and effecting the AVU plan whereby African scholars produce and deliver the materials now beamed from American universities, thus ensuring a link to African contexts.
- IICBA can share web-based textbooks and journal resources identified by Technikon SA.

UNIVERSITY OF SOUTH AFRICA (UNISA)

The University of South Africa, also known as Unisa, is one of 11 mega distance teaching universities in the world. It was established in 1873 as the University of the

Cape of Good Hope. To ensure the status of the university, hence the recognition of degrees conferred by it, the university administration hastened to apply for a royal charter. The governor, Sir Henry Barkly, made representations to the Queen and the charter was granted in 1877. In 1916 its name was changed to the University of South Africa. Under its auspices several colleges became autonomous universities. Over fifty years ago, in 1946, Unisa pioneered tertiary distance education in the western world, a move which heralded the beginning of Unisa as we know it today. Distance education provides a unique opportunity to all who wish to further their studies and who cannot attend residential institutions because of personal circumstances or occupational obligations.

The University is located in Pretoria, and its impressive campus on Muckleneuk Ridge is a major landmark of the capital city. It has provincial centres in Cape Town, Durban and Pietersburg, Nelspruit and Umtata. The University has 5 learning centres in Pretoria (Thutong), Johannesburg, Durban (Masifunde), Pietersburg, Cape Town and one satellite centre in Umtata. To facilitate its services to approximately 120 000 registered students all over the world, the Unisa Library stocks more than 1,6 million books and journals at the main campus, provincial centres and learning centres in most major centres of South Africa.

More About UNISA and Lessons Learned

- New programmes include (a) 4-year B. Pry Ed. – an integrated degree for the training of primary school teachers; (b) B. Sec. Ed.; and (c) Further Diplomas in Education with specialisations in Technical Education, Science Education, Multicultural Education, and Special Needs Education; (d) B.Ed. with

specialisations in Guidance and Counselling and Educational Management; (e) Masters entirely by research and course work in Environmental Education and Science Education; (f) Doctorate degrees in Education.

- It is practicable for DE to reach large numbers and be effective.
- A solid and well-oiled administrative machinery is important for effective DE practice.
- UNISA has well-tested teacher education and educational management DE materials at the further education and postgraduate levels that IICBA, AAU, EMA and TTCs in Ethiopia and other African countries can adapt/adopt.
- Laboratory practicals, workshop practice and field work for science and technology teacher education by distance requires a lot of thinking through and preparation.
- The Further Diploma in Technical Education and Science Education can be successfully offered with science kits.

CONFEDERATION OF OPEN LEARNING INSTITUTES OF SOUTH AFRICA (COLISA)

Colisa is a confederation of three higher education institutions, Unisa, Vista University and Technikon Southern Africa that remain autonomous members of a body which aims at close collaboration by consensus. It is a national resource and reference point for providing quality higher education in South Africa.

Colisa supports an integrated flexible learning system with regional nodal points within which quality distance education can be provided. It has the potential to

provide learning opportunities to a vast number of people, especially the disadvantaged, in an effective manner.

Why Colisa was established?

Distance education (including the capabilities of advanced technology) is a powerful means of addressing new challenges and the massification of higher education in Southern Africa. The rapid increase in student numbers; the demand for added services such as student support; the use of advanced technology; and new approaches in the design and development of courseware, are but a few of the demands. Southern Africa faces the challenge of a transformed higher education system that is aligned with the needs of a rapidly changing society. The capacity of universities and technikons to respond to these demands are severely constrained by limited resources, a built-in flexibility and the high cost of traditional education practices. Colisa, as a national distance education organization, is establishing a network of learning centres in collaboration with other institutions where quality study material will be supported by face to face tutorials and interactive higher-technology.

Functions of Colisa

Colisa strives to attain its mission by

- facilitating collaboration and communication between the constituent parties on both academic and administrative level;
- organising workshops, discussions and conferences and creating a forum for debate and the sharing of expertise amongst the constituent parties;
- disseminating information;

- establishing a Development Fund for the furtherance of the joint activities of the constituent parties;
- making joint submissions regarding higher distance education and open learning;
- promoting and coordinating joint research projects among constituent parties;
- cooperating with governmental and other bodies concerned with distance education and open learning;
- promoting the rationalisation and consolidation, where appropriate, of the educational, academic and administrative activities of the constituent parties;
- acting where appropriate, as a representative of the parties to regional and international associations.

Colisa Operations

The operations of Colisa are controlled by a Board consisting of representatives of the constituent partners.

Colisa emphasises the importance of interactive projects. Joint Task Teams are researching collaboration in

- Administration and logistics
- Courseware design and development
- Joint offerings, rationalisation, articulation, intermediate qualifications
- Learner support and community colleges
- Student governance
- Human resources development
- Technology
- Quality assurance

- Communication, marketing and fund-raising

The Task Teams develop their own terms of reference and with the Board liaise with the relevant bodies in order to initiate, assess, implement and coordinate projects between the three institutions. Savings are effected and improved services rendered to students.

More About COLISA and Lessons Learned

- COLISA is a facilitating body to help DE institutions in South Africa cooperate, collaborate and to attain economies of scale. It also facilitates international contacts for the DE institutions.
- Collaboration with University of Zambia and University of Namibia underway.
- University of the 21st Century should strive towards having distance education programmes.
- A rallying point for distance education institutions in a country or region is a viable pathway for sharing resources and for overall implementation of the DE agenda of the federating or confederating institutions including maintenance of standards.
- Joint examinations are possible by collaborating DE institutions.

VISTA UNIVERSITY

Vista is a multi-campus, mixed-mode university providing tertiary education at seven contact campuses based in major black urban areas and correspondence study.

through a Distance Education Campus based in Pretoria. With a total student enrolment of 32 182 students, Vista is the second largest university in South Africa, and, having been established in 1982, is also South Africa's youngest university.

Apart from its academic mission Vista places strong emphasis on community development. The university's Centre for Cognitive Development has extensive experience in providing cognitive education workshops for students and teachers from the pre-primary to tertiary level. A number of community projects are managed by the various campuses and the university has two research units; the Employment Research Unit which focuses on employment creation and the Research Unit for Indigenous Languages which focuses on the development of South Africa's indigenous languages.

During 1978 the National Party Government appointed a commission of inquiry to investigate university needs and requirements of urban blacks in the Republic of South Africa. The commission submitted its report to the Government during 1980, the outcome of which was the decision to establish Vista University.

Vista University was established in terms of Act 106 of 1981 and came into being on 1 January 1982 with a central administrative office in Pretoria and decentralised campuses in the main black urban areas. In addition the Distance Education Campus in Pretoria was taken over from the Department of Education and Training on 1 April 1982. Its original purpose was to improve the qualifications of teachers by means of distance tuition. Vista University's first academic year began on 1 January 1983.

The University currently has eight campuses:

- [Bloemfontein Campus](#)(in Bloemfontein)
- [East Rand Campus](#)(in Daveyton, near Springs)

- [Distance Education Campus](#)(in Pretoria)
- [Mamelodi Campus](#)(near Pretoria)
- [Port Elizabeth Campus](#)(in Zwide)
- [Sebokeng Campus](#)(near Vanderbijlpark)
- [Soweto Campus](#)(near Johannesburg)
- [Welkom Campus](#)(in Thabong)

More About VISTA and Lessons Learned

- Vista is the youngest of the universities in South Africa with a mission to foster the cause of the blacks.
- Vista has campuses within the old black townships.
- Upgrading of teachers' qualifications by DE is being successfully achieved (in 1982, 300 Diploma students were trained through DE)
- By 1996, 37,000 teachers have been upgraded.
- Between 1996 and 1998, significant decline in enrolment- qualifications offered by Vista no longer relevant for increased salary
- By 1998, enrolment dropped to 10,000.
- Challenges to DE include decline in enrolment because of cost. Also, many new players are coming into the market causing marketshare to drop. A solution is to market further afield.

Lessons Learned from VISTA

- Upgrading of teachers' qualifications through DE is a practicable way of reaching teachers in remote locations.
- Enrolment in DE for teachers declining (brought about mainly by competition among DE institutions). The need for collaboration is thereby underscored.

SOUTH AFRICAN COLLEGE FOR TEACHER EDUCATION (SACTE)

The South African College for Teacher Education (SACTE) came into being on 1 March 1996. Its establishment was the result of a merger between two distance education colleges (CESA and CCE) which were both involved in the further education of practising educators.

The College is a national distance education college, and all diplomas offered are thus recognised by all provincial education departments. The College was established to serve all teachers and all education departments in the country.

The main campus is located in Groenkloof in Pretoria. The College also has Regional Learning Centres (RLCs) at various regions throughout the country, and if the need arises more will be established.

At present the College has more than 14 000 active students who are either improving their teaching qualifications from m+0 to m+3 or upgrading to m+4 or m+5

As a national education institution, SACTE commits itself, through distance education and in-service training, to

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- improving classroom practice
- encouraging a culture of learning and teaching by promoting appropriate knowledge, values and skills
- facilitating lifelong learning opportunities for the educator
- augmenting educators' professional capabilities by providing relevant, quality-assured, purposeful courses
- providing community learning opportunities

The College is also committed to keeping tuition fees as low as possible.

The College offers all unqualified and underqualified educators and trainers the opportunity to obtain a teaching qualification or upgrade their qualifications through distance education. Entry requirements for the Diploma in Education are an appointment as a teachers, matric and three years' teaching experience or St 8 and five years' teaching experience. For the Higher Diploma in Education and Further Diploma in Education the requirement is an m+3 professional qualification. Candidates for the B Ed must be in possession of an m+4 professional qualification. The aims of the College are to provide an opportunity for learning almost at the educator's doorstep and to establish a culture of life-long learning.

The College prides itself in working closely with all the Education Departments and other tertiary institutions such as universities, technikons and colleges.

The College also maintains close contacts with its overseas counterparts to keep abreast of new trends and developments.

The College and its staff are directly involved in supporting, developing and promoting ventures such as Curriculum 2005 and Outcomes-Based Education.

Although training is through distance education, students are supported by means of ongoing lecturer support, regular tutoring services, supportive audio/video material and telephonic services.

The College is also involved in community projects such as environmental education.

Study material consists of packages of interactive learning modules which are frequently updated.

Study material is presented in an outcomes-based manner.

Production facilities

The College has the following production facilities in support of study material:

A video studio, with Betacam broadcast-standard equipment, where professional instructional videos are produced.

A sound booth with state of the art recording equipment for the recording of sound cassettes used for enrichment of study material.

A graphic studio where visual material, for use in study material, are created.

A printing unit where all study material and other supportive materials are printed.

Courses

SACTE offers the following Diplomas:

Diploma in Education (m+3)

Pre-Primary * Junior Primary * Senior Primary

Diploma in Education Secondary (m+3)

General * Home Economics * Technical

Higher Diploma in Education (m+4)

Pre Primary * Junior Primary * Senior Primary * Secondary

Higher Diploma in Education (Post Graduate)

Junior Primary * Senior Primary * Secondary

Further Diplomas in Education (m+5) in specialised fields of study

FDE Home Economics

FDE Education Management

FDE Economic Sciences

FDE English Language Teaching

FDE Computer Science

FDE Mathematics and Natural Sciences for the Junior Secondary Phase

FDE School Subjects

FDE Technical

FDE Special Educational Needs

B Ed degree

This B Ed offered in conjunction with the University of Natal, has been designed to provide educators and trainers with opportunities for career development. This degree enables the educators to develop additional competencies, equip them with an understanding of practices and enable them to make better decisions. The B Ed promotes appropriate skills and values.

All courses are offered in modular format.

More About SACTE and Lessons Learned

- Early childhood education is one of the strengths of College; so also the B.Ed programme which is highly practical in nature.
- Student support mechanism: students are encouraged to form study groups; encouraged to use the telephone for contact; tutors are appointed (1 for 20 students).
- For technical and science education programmes, there are three compulsory practical sessions a year at SACTE during the school holiday; mentor system with S&T companies; technical colleges in the provinces are used for practical work (students practical notebooks are signed by the Rector of the technical college and the Head of Department).
- Six Partnership Schools have been developed. This scheme enables SACTE to find out what goes on in the rural areas. Information from such activities is used for programme modification and for meeting the needs of the teachers.
- Excellent facilities for video and audio recording of DE materials.

- Student support should be given greater visibility in DE delivery systems.
- Science and Technology education can be successfully delivered by distance mode.
- Partnership schools help to invigorate and sustain teacher training by DE.

SOUTH AFRICAN INSTITUTE FOR DISTANCE EDUCATION (SAIDE)

SAIDE was formed as an educational trust in June 1992. For the purpose of :

- Promoting and establishing a commitment to open learning and quality distance education in key policy areas and in different educational sectors
- Supporting the development and/or transformation of identified institutions and programmes using distance education methods
- Developing a set of services and resources to support increased openness and quality in distance education. In carrying out its tasks, SAIDE places special emphasis on:
 - The production, dissemination and communication of information around open learning and distance education needed by SAIDE and its clients;
 - Training educators, managers and support staff in identified institutions and programmes to develop, organise, and implement programmes based on open learning principles.

More About SAIDE and Lessons Learned

- SAIDE does not have students but it helps to promote DE policy and its implementation.
- Connected with the University of Wits Further Education Teacher Training Programme.
- Actively involved in the World Bank Global Distance Education Network Project.
- Adult Basic Education and Training programme is one of the flagship projects of SAIDE
- Over 40% of all black students are undertaking university education through DE.

- In 1995 about a third of teachers in South Africa were enrolled in DE courses.
- Policy formulation and implementation on DE can be facilitated by SAIDE.
- SAIDE can collaborate with IICBA in the implementation of IICBANet with its (SAIDE's) experience with the Global Distance Education Network.

RAND AFRIKAANS UNIVERSITY (RAU)

The Rand Afrikaans University, situated in Johannesburg - the focal point of South Africa's mining, finance and manufacturing industries - was established in 1967 as the academic home of Afrikaans-speaking students of the Witwatersrand. It was the aspiration of the Afrikaans community in the Witwatersrand to establish its own Afrikaans university that would specifically meet the educational needs of the fast-increasing Afrikaans-speaking population of the Witwatersrand. RAU was intended, through its Afrikaans spirit and character, to further and enrich the culture, philosophies of life and pursuits of the Afrikaner nation. As the first stage in the pursuit of an Afrikaans university, the "Goudstadse Onderwyskollege" (the "Goudstadse" College of Education) was established in 1961. Negotiations were also entered into with the University of South Africa (UNISA) to move its headquarters from Pretoria to Johannesburg, but the effort failed. On 4 August 1965, Minister Jan de Klerk announced that UNISA would remain in Pretoria, but that an independent Afrikaans university would be established for the Witwatersrand, with its headquarters in Johannesburg.

RAU College of Distance Learning is committed to creating, for every teacher in South Africa, the opportunity to obtain the professional qualifications, knowledge and skills to reach the highest level in their careers and enjoy the concurrent personal

enrichment that will ensure a better future.

A number of contact lectures are held throughout the year at the RAU and other centres countrywide where course content and related problems are discussed. However, a minimum of 20 students must be registered in an area for a specific course, before a centre can be opened.

More About RAU and Lessons Learned

- Actively involved in upgrading teachers.
- Teacher Training Agreements also set up with Rwanda and Tanzania and eager to engage in partnership with other countries on equality basis.
- Runs programmes for squatter camps
- Has full DE programmes with about 14,000 students.
- New building with better facilities coming up.
- Problems encountered include providing student support and poor postal system.
- Going the virtual mode is becoming increasingly important and PRAUD hopes to take full advantage of this in future plans.
- Interactive TV, though expensive has been adopted as a form of student support.
- Considering opening Regional Offices.
- Community centres service local teachers (Internet cafes already exist).
- Science kits have been developed for science students.
- Contact sessions for students four times a year.
- Phone in sessions to lecturers already in place.
- Student Study Groups are formed as a form of student support.

- A typical DE package includes textbooks, study guide, reading package (extract of articles), information booklet.
- There are 80 examination centres.
- Two Newsletters are published once a year containing snippets, articles to help with loneliness, stress management and depression.
- Dedicated line for one week for 10 hours a day to each lecturer before every examination.
- Interactive TV is a viable complement to other forms of DE delivery systems.
- The virtual route will be a major pathway for DE of the near future.
- For now, only about 6% of teachers in SA have access to computers. This should guide the production in terms of quantity of electronic DE materials.
- Low fees can be charged while still being cost effective.



Activity 7.8



Give a comparative account of the distance education delivery system in Tanzania and that of a named distance education institution in South Africa. What lessons can be learned for improving DE in your institution or country?

World Bank Global Distance Education Network

The World Bank's Human Development Network - Education and Technology Team has developed the Global Distance Education Network (Global DistEdNet). Phase 1

consisted of the web site architecture, content selection, structure, and the provision of resources at the World Bank web site. Phase 2 involves further development of Global DistEdNet through partnerships among a number of institutions world wide. A number of institutions world wide have been invited as collaborating partners for the Global DistEdNet. The The South African Institute for Distance Education (SAIDE) based in Johannesburg, South Africa is the first partner in the Southern Africa region. Other regional partners are being identified. Eventually the Global Distance Education Network will consist of the World Bank's Global DistEdNet core site and a number of partner institutions representing different regions of the world. It is expected that in 1999, partner institutions identified as having established capacity for knowledge management in distance education will further develop their systems for collecting and disseminating information about distance education in that part of the world where they are located. The URL for the Global; DistEdNet is <http://www.globaldistancelearning.com>.

A consultative meeting was held at the World bank's headquarters in Washington DC in June 1998 to address the following :

- ◆ to brainstorm on the implementation of Phase 2 in order to develop DistEdNet as a truly global and co-operative resource guide and knowledge network for distance learning
- ◆ for participants to act as a focus group to provide practical suggestions on how to develop Global DistEdNet as a global resource, including ideas on the content, operational modalities, and time-frame for development, and specific ideas on how the institution might wish to contribute to this co-operative effort, and

- ◆ following the meeting, to report to their respective institutions on these discussions and to submit a proposal on how their institution could specifically contribute to the development of the Global DistEdNet.

The three-day meeting examined the following: overall vision of the Global DistEdNet, partnership and governance, operational issues (content focus, content generation and selection, copyright, content processing, content updating, monitoring & evaluation), technology issues, resources, and future steps.

The meeting agreed that (i) the global DistEdNet will foster co-operative pooling of knowledge resources by partner institutions around the world, which entails decentralisation of responsibility for developing, assembling and maintaining content-rich web sites which will be linked to sites at the other partner institutions, (ii) systematic management is required to deal with the large quantity and variability of distance education information. Thus the value added by Global DistEdNet is that the information sources have been screened, selected, and classified, and (iii) the development of this network is expected to be a source of learning on the specific needs, capabilities and resources in developing countries for learning about distance learning and sharing good practices across countries.

The prototype web has been organised using four domain frameworks of Teaching and Learning, Technology, Management, and Policy and Programs. Each partner institution will dedicate a portion of their web sites to Global DistEdNet. Through a structure of well-developed hotlinks, these various contributions from partner institutions will constitute the collective pool of knowledge resources developed for Global DistEdNet. The partner institutions are to function as cultural and geographical representatives in the development of the Global DistEdNet.

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The South African Institute for Distance Education

SAIDE's Resource Centre

Braamfontein, Johannesburg

Republic of South Africa

Summary and Conclusion

We set out in this module to learn about distance education delivery systems in higher education and to study some examples of successful practices with a view to learning lessons that can be applied to our different settings.

We learned in the module that:

- Courses and programmes to be presented using the distance education methodology are developed differently from courses meant for face-to-face education.
- The new planning continuum sees any distinctions between distance education and educational technology as becoming increasingly narrow.

- It is time to turn away from debating on the relative virtues and merits of distance education and consider instead the nature of learning and the educational value of a course's structure and content.

We also learned of four factors that need to be emphasised in distance education. These are (1) the need to define the educational objectives of the programme. This will constitute the syllabus. (2) Then there is need to carry out an analysis of the subject matter taking into account appropriateness and relevance. (3) There is need to look at learner needs and characteristics. (4) Lastly, there is need to look at the institutional framework which will determine manner of delivery, support services, type of technology in communication and several other issues.

To give concrete frame to these issues, the cases of The Open University of Tanzania and six distance education delivery institutions in South Africa were studied. It is hoped that as you worked through this module, you have been able to learn a number of lessons that you plan to deploy for improving distance education in your institution or country.

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International Development Education, Science and Documentation Centre, Bonn, 1989.

Mackenzie, Norman; R. Postgate, J. Scuphan (eds) *Open Learning : Systems and problems in Post-secondary Education*. UNESCO Press, 1975.

Newsletter of the Open University of Tanzania issued every three months since 1992.

The series is now at number 22 with number 23 to be issued in June 1998,

The Commonwealth of Learning (COL) in Vancouver, Canada has published manuals and guide books developed during its 10 years of existence. They have very valuable information

The UK Open University has an Institute of Educational Technology which has useful information

The ICDL CD ROMs are a useful database you may wish to access. These will open doors to other sources.

Prospectuses issued by the Open University of Tanzania for the years 1994, 1995, 1996, 1997 and 1998.

Tutors Handbook. Issued by the Open University of Tanzania, 1993, (revised 1994).

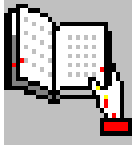
University of Nairobi, Faculty of External Studies, Department of Distance Studies.

Module

8

The Guidance and Counselling Role of the Teacher in Higher Education





7.0

Introduction and General Objectives

Introduction

As discussed in Module 1, learners in the higher education system come in with a wide variety of backgrounds. There is diversity in their entry socio-economic and academic profiles. This diversity translates into a differential in their behaviour patterns. Yet our desire is to ensure that all are found worthy in learning and character to justify the degree or diploma given after the course of study.

Seckle (1999) has stressed the need for specialised support in guidance and counselling in higher education, noting that each tertiary education lecturer/teacher should be familiar with the basic principles by which problems can be identified and appropriate interventions suggested to learners. The need for support for the tertiary teacher is becoming increasingly important. As we discussed in Module 1, learners in the higher education system come from a diversity of learning backgrounds. This means that there is diversity in their entry socio-economic and academic profiles, which translates into a differential in their behaviour patterns. Attention was paid to the subject of guidance and counseling in light of this diversity of quality higher education. There is the need to identify specialists who are trained to offer guidance and counseling services. The higher education teacher who is not trained should not be expected to offer such specialised services.

Beyond what can be referred to as “first aid” guidance and counselling that teachers could undertake as indicated in this module, more complicated cases should be referred to trained professionals.

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The variety of mix in preferences, interests and cognitive competencies in the school system require that learners are assisted in focusing and addressing their own particular interests if they are to receive quality higher education. This is done through guidance and counselling. The goal of guidance and counselling is to make it possible for an individual to see and explore his or her unlimited endowed options (Odeck, 1999). Educationally, *guidance should involve those experiences which assist each learner to understand and and accept oneself so as to live effectively in society.*

Down through the ages, a scheme of guidance and counselling has been found to be essential for all categories of learners. At the higher education level, this need becomes accentuated as we have the greatest mix of interests, preferences and cognitive competencies in the school system. Attention is turned in this module to the subject of guidance and counselling as a way for improving the quality of higher education.

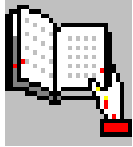
At the end of this module, you should be able to:

- ❑ identify some counselling and guidance functions of the teacher in higher education
- ❑ develop a conceptual framework for guidance and counselling in higher education; and
- ❑ carry out exercises on guidance and counselling on individual and groups of learners in higher education.



GENERAL OBJECTIVES

Note: It must be noted that there are individuals who are specifically trained to offer Guidance and Counselling services. The higher education teacher who is not so trained is NOT expected to offer such specialised services. The intention in this module is to give a **general hint** (drastically watered down) on what such specialists do. More importantly, the thrust of the Module is on informing higher education teachers about **non-specialised** guidance and counselling services they could offer their learners in order to promote meaningful learning.



7.1

Conceptual Framework

At the end of this Unit, you should be able to

- ❑ explain the concepts of guidance and counselling;
- ❑ identify the need for guidance and counselling in higher education
- ❑ distinguish between academic, social, personal and career guidance
- ❑ assess guidance and counselling within the context of higher education;
- ❑ demonstrate awareness of the ethics of guidance and counselling; and
- ❑ state the limitations of the higher education teacher in offering guidance and counselling services.



SPECIFIC OBJECTIVES

What is Guidance and Counselling ?

Guidance and counselling are two sides of the same coin. The goal in both cases is to give an opportunity for an individual to see a variety of available options and thereafter, assist the person in making a wise choice. Guidance is the process that is put in place at a time a choice is to be made. Counselling on the other hand

- i) helps with considering all sides of a potential choice even before the choice is made;
- ii) takes place when a choice has been made and there is a need to modify, reinforce or abandon such a choice.

Consider a new student in a university who is to register for courses in a programme.

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The course list has two categories - compulsory and elective courses. The compulsory courses are mandatory. The elective courses offer some choice. Your effort at assisting the learner to select suitable elective courses provides an example of guidance service. Assume after registration and some way into the programme, the learner has problems with some courses. Perhaps the learner is unable to cope with the rigour of work or is having some problems with a course lecturer. Offering informed advice on how to cope with emerging problems is counselling. *(though counselling is far more than advice since, among other things, it requires input from the counsellee)*

Definitions

Guidance is a broad term that is applied to a school's programme of activities and services that are aimed at assisting students to make and carry out adequate plans and to achieve satisfactory adjustment in life. Guidance can be defined as a process, developmental in nature, by which an individual is assisted to understand, accept and utilise his/her abilities, aptitudes and interests and attitudinal patterns in relation to his/her aspirations. Guidance as an educational construct involves those experiences, which assist each learner to understand him/herself, accept him/herself and live effectively in his/her society. This is in addition to the learner having learning experiences about the world of work and people therein.

Guidance can also be looked at as a programme of services to people based upon the need of each individual, an understanding of his/her immediate environment, the influence of environmental factors on the individual and the unique features of each school. Guidance is designed to help each person adjust to his/her environment, develop the ability to set realistic goals for him/herself, and improve his/her total educational programme. As a process, guidance is not a simple event but it involves a

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series of actions or steps progressively moving towards a goal. As a service, we can isolate three major services, that of educational, vocational, and personal and social guidance.

1. Educational Guidance

Educational guidance is so far as it can be distinguished from any other form of guidance, is concerned with the provision of assistance to pupils in their choices in and adjustment to the schools' curriculum and school life in general. Educational guidance is therefore essential in counselling service. Guiding young people to pursue the right type of education in which, for example the right balance is met for accommodating the human resource needs of a nation.

2. Vocational Guidance

Vocational guidance is a process of helping individuals to choose an occupation, prepare for, enter into and progress in it. Vocational happiness requires that a person's interests, aptitudes and personality be suitable for his/her work. It plays its part by providing individuals with a comprehension of the world of work and essential human needs, thus familiarising individuals with such terms as 'dignity of labour' and 'work value'.

3. Personal and Social Guidance

Personal and social guidance is the process of helping an individual on how to behave with consideration to other people. Primarily, personal and social guidance helps the individual to understand oneself, how to get along with others, manners and

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etiquette, leisure time activities, social skills, family and family relationships and understanding masculine and feminine roles.

Counselling is usually viewed as one part of guidance services; It is subsumed by the general term, guidance, in that it is one service within guidance rather than a synonym. It is difficult to think of one definition of counselling. This is because definitions of counselling depend on the theoretical orientation of the person defining it. Let us examine some of these definitions.

Counselling is learning-oriented process which usually occurs in an interactive relationship with the aim of helping the person learn more:

- 1) *about the self;*
- 2) *about others*
- 3) *about situations and events related to given issues and conditions*
- 4) *and also to learn to put such understanding to being an effective member of the society.*

Counselling is a process in which the helper expresses care and concern towards the person with a problem to facilitate that person's personal growth and positive change through self-understanding. Counselling denotes a relationship between a concerned person and a person with a need. This relationship is usually person-to-person, although sometimes it may involve more than two people. It is designed to help people understand and clarify their views of their life-space, and to learn to reach their self-determined goals through meaningful, well-informed, choices and through resolution of problems of an emotional or interpersonal nature. It can be seen from these definitions that counselling may have different meanings.



Activity 8.1



List any four activities you have carried out in your department within the last one year that are (a) guidance and (b) counselling in nature.

From your list, indicate the elements which distinguish each activity as either guidance or counselling.

In fact, counselling is provided under a variety of different labels. For example, there are instances where counselling is offered in the context of a relationship which is primarily focussed on other, non-counselling concerns. For example, a student may see a teacher as a person with whom it is safe to share worries and anxieties. In such a situation it seems appropriate to see what is happening as being a teacher using counselling skills rather than engaging in an actual counselling relationship. The teacher is counselling but not being a counsellor.

Guidance programmes and the counselling service within them, usually deal with situational and environmental conditions. Counselling is often seen as assistance given individuals to attain a clear sense of identity. Counselling, as well as the total guidance programme, stressed rational planning, problem-solving, and support in the face of situational pressures. The counselling relationship is usually characterised by much less intensity of emotional expression than that found in the therapeutic relationship. Counselling services are usually located in schools, universities, community service agencies, and pastoral organisations, while psychotherapeutic services are usually found in clinics, hospitals, and private practice. The recipients of counselling are 'normal' individuals rather than those who exhibit abnormal or extreme modes of adjustment. Psychotherapy exists for individuals with psychological disorders. Counselling helps the essentially normal individual remove frustrations and obstacles

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that interfere with development, while psychotherapy attempts to deal with disabling or disintegrating conflicts.

Counselling focuses upon helping the individual to cope with development tasks such as self-definition, independence, and the like. Attention is given to clarifying the individual's assets, skills, strengths, and personal resources in terms of role development. Counselling approaches, are based more upon emphasising present conscious material (material available within the individual's awareness) while psychotherapeutic approaches tend to emphasise historic and symbolic materials, relying heavily upon reactivation and consideration of unconscious processes.

Still More Views

1. An appraisal service which is designed to collect, analyse, and use a variety of objective and subjective personal, psychological, and social data about each student in order to better understand them as well as assisting them to understand themselves.
2. An informational service which is designed to provide students with a greater knowledge of educational, vocational, and personal-social opportunities so that they may make better informed choices and decisions in an increasingly complex society.
3. A counselling service which is designed to facilitate self-understanding and self-development through dyadic or small-group relationships. The major focus of such relationship tends to be upon personal development and decision making that is based on self-understanding and knowledge of the environment.
4. A planning, placement, and follow-up service, which is designed to enhance the

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development of students by helping them select and utilise opportunities within the school and in the outside labour market.

The aims of counselling are broad. They may, in certain cases, depend on the situation and environment, and also on the training. The basic aims of counselling include the following:

- ◆ To help students understand the self in terms of their personal ability, interest, motivation and potentials.
- ◆ To help students gain insight into the origins and development of emotional difficulties, leading to an increased capacity to take rational control over their feelings and actions.
- ◆ To alter maladaptive behaviours.
- ◆ To assist students in moving towards the direction of fulfilling their potentials or in achieving an integration of previously conflicting parts of themselves.
- ◆ To provide students with skills, awareness and knowledge which will enable them to confront social inadequacies.

- ◆ To help students gain some insight into the world of work, the realities therein and the relationships to their education and specialisation.
- ◆ To help students develop decision making skills.



Activity 8.2



Go through the statement of views on the meanings of guidance and of counselling. Review these views with a colleague in the department. Agree on a meaning for each of the two terms (guidance; counselling). What are the commonalities in your

meanings (or definitions) and those listed above?

Need for Guidance and Counselling

In Module 1, we found that higher education learners come in with a motley assortment of characteristics. In that module, we also identified what their exit profiles should be. Between entry and exit, we have some intervention, which include curricular, co-curricular and extra-curricular activities. Guidance and counselling come into play in this intervention to enable us achieve our goal of producing good quality graduates. The table below summarises some of the major reasons why we need guidance and counselling in higher institutions.

Table 6.1 Need and Focus of Guidance and Counselling in Higher Education

Need	Focus of Guidance and Counselling
To improve the internal efficiency of the system	Academic guidance for; - less able students thus reducing repetition, dropout and wastage - average students to sustain stability, and improve; - able students to enhance progress from one level (class) to the other.
to reduce/eliminate anti-social activities on campus	- Advice on social and academic clubs to join - counselling and dialogue on matters that can generate friction and students' unrest Counselling on emotional problems
To enhance career and job prospects of learners	- job and career advising - Relationship between course of study and world of work.



Reading 8.1

GUIDANCE AND COUNSELLING IN HIGHER EDUCATION

Aloyce Odeck

The major service areas of guidance and counselling are:

- **Educational guidance and counselling** which assists students in their curriculum and school life choices.
- **Vocational guidance** which assists the individual to choose and prepare for an occupation that is compatible with his interests and aptitudes.
- **Personal and social guidance** which assists the individual to behave appropriately in relation to other members of the society.

Counselling could be conceived as an interactive relationship between two or more persons that can take a variety of forms. It may address non-educational issues or even non-counselling concerns. Counselling should be seen as a service provided to normal individuals to assist them remove or cope with frustrations and obstacles that interfere with their development.

Guidance and Counselling in Teaching

In institutions of higher learning, guidance and counselling should address learners' difficulties. These difficulties encompass the whole spectrum of student life in institutions of higher learning. A number of them may have negative impact on the teaching/learning process. Counselling should probe what students' difficulties are and then approach them systematically. For example, in diagnosing learning difficulties the lecturer should focus on the following aspects:

- *Difficulties that arise during instruction:* these may be related to the content, the lecturer or the way of presentation.
- *Difficulties after instruction:* these may be related to social activities of the student or they may be related to the facilities themselves.

In such cases where should the information come from? The sources of relevant information about learners can be found or gleaned through the following:

Individual observation

This requires that individual lecturers are keen in noting any strange things that happen to the students or with the students. The observation should arise out of a genuine desire to help and get involved with the students.

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Student statements

Students invariably make statements and comments which are indicative of the struggles that they may face. The lecturers should be prepared to note these comments and statements which are indicative of or are symptoms of other things that may appear later.

Student records and follow up

These usually yield information that would facilitate a lecturer to assist a student whose problem may have been ignored or brushed aside for along time.

Major Service Areas

The major service areas of guidance and counselling include:

Educational guidance and counselling

This aspect of counselling should concern itself with assisting the students in their curriculum and school life choices. Students need assistance in subject choice and planning for the courses that they take at these institutions of higher learning. All lecturers could be involved in this without any need for specialised training in counselling.

Vocational guidance and counselling

This aspect of counselling addresses the learners' problems as regards to vocational choices. Again here the lecturers are best placed to give relevant advice to learners since they know their academic strengths and weaknesses in areas that may pertain to specific vocations, occupations or jobs. The fact that the lecturers know the interests and aptitudes of most of their students makes them the best persons to assist their students in areas that are related to their vocations.

Personal and social guidance and counselling

This aspect of counselling refers to the very personal problems that students meet. These problems may range from financial needs to interpersonal relationships. Although the lecturers may help to reduce these pressures, there is need for more specialised assistance from professionally trained hands. The fact that the lecturers may have an upper hand in interaction with the students only goes to show how crucial it is that they should get involved. As role models to the majority of students it is important the lectures are made aware of their crucial role in social guidance.



Activity 8.3



1. Comment on Odeck's view that: *"again here the lecturers are best placed to give relevant advice to learners since they know their academic strengths and*

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weaknesses in areas that may pertain to specific vocations, occupations or jobs. The fact that the lecturers know the interests and aptitudes of most of their students makes them the best persons to assist their students in areas that are related to their vocations”.

2. How are you as a teacher in a higher institution fitted to play these roles?

ASPECTS OF COUNSELLING

1. Educational Counselling

First coined by Truman Kelley in 1914 (Makinde, 1988), educational counselling is a process of rendering services to pupils who need assistance in making decisions about certain important aspect of their education such as choice of courses and studies, decision on interest and ability, choices of college and high school. Educational counselling increases pupil's knowledge of educational opportunities.

2. Personal/Social Counselling

Personal counselling deals with emotional distress and behavioural difficulties that arise when an individual struggles to cope with developmental stages and tasks. Any facet of development can be turned into a personal adjustment problem, and it is inevitable that everyone will at some time encounter exceptional difficulty with an ordinary challenge of life. For example;

- Anxiety over a career decision
- Lingering anger over an interpersonal conflict
- Insecurity about getting older
- Depressive feelings when bored with work

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- Excessive guilt about a serious mistake
- A lack of assertion and confidence
- Grief over the loss of a loved one
- Disillusionment and loneliness after parents divorce.
- Failure in examinations
- Inability to make friends
- Conflict with lecturers

3. Vocational Counselling

Vocational counselling is defined as individual contacts with counselees in which the counsellor's main purpose is to facilitate the counsellee's career development process. This definition and category would encompass counselling situations such as:

- Helping students become aware of the many occupations available for exploration.
- Interpreting an occupational interest inventory to a student
- Assisting a teenager in deciding what to do after school.
- Helping a student apply for a course in a university or technikon.
- Role playing a job interview with a counsellee in preparation for the real job interview.

Characteristics of Counsellors

The following are some of the characteristics of a higher education teacher as a counsellor;

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- abiding interest and faith in students capabilities
- understanding of students' aspirations
- sympathetic attitude
- friendliness
- sense of humour
- patience
- objectivity
- sincerity
- tact
- fairness
- tolerance



Activity 8.4



Prepare a checklist using the characteristics listed above (and others you may think of) for assessing the guidance and counselling traits of a higher education teacher. Use the checklist to carry out a self assessment. Administer the checklist on other staff in your institution. How will you rate yourself and your colleagues who responded to the checklist? How can your ratings be improved?


Tips for the Higher Education Teacher when Counselling Students

- Assist the student to make adjustment to life in the university, polytechnic, technikon, or college of education.
- Encourage the student to participate in appropriate college/university activities with a view toward increasing his or her effectiveness in personal

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and social activities.

- Show concern for and assist in the planning of the student's educational, career, personal, and social development.
- Aid the student in self-evaluation, self-understanding, and self-direction, enabling him or her to make decisions consistent with immediate and long-range goals to higher education opportunity granted him or her.
- Assist the student in developing healthy and positive attitudes and values
- Help the student to acquire a better understanding of the world of work through the acquisition of skills and attitudes and/or participation in work-related programmes.
- Encourage the student to plan and utilise leisure time activities well.
- Assists the student in understanding his strengths, weakness, interest, values, potentialities and limitations.

1. State two differences between guidance activities and counselling activities that you carry out as a teacher in a higher institution. 
2. List any four things that your students refer to you for guidance and any four that they refer to you for counselling.
3. Why do you think students do not like coming to their lecturers for counselling?
4. How would you get your students to develop sufficient confidence in you to enable them confide in you and come to you for counselling?

Activity 8.5



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Guidance and Counselling at Three Points in Higher Education

Table 8.2 shows guidance and counselling activities that are commonly provided at point of entry, during and at the point of exit into higher education.

Table 8.2 Guidance and Counselling Activities at Three Points in Higher Education

	Guidance Functions/Activities	Counselling Functions/Activities
Guidance & Counselling at Point of Entry	<ul style="list-style-type: none"> • Orientation, • Registration • Choice of electives • Familiarisation with important sites and locations on campus (library, dining, health centre etc.) students unionism 	<ul style="list-style-type: none"> • Self understanding • Individual counselling • Understanding others including lecturers and significant others in the institution • Group counselling in the three areas of academic, personal-social, career.
Guidance & Counseling during the Course /Programme	<ul style="list-style-type: none"> • Advanced Effective study habits • Intensive library use and search • Course changes • Strategies of keeping steady academically, socially etc. • Test taking behaviours; examination behaviour etc 	<ul style="list-style-type: none"> • Relationships between courses/programmes subject selection and future plans • Academic counselling in various forms • Stabilising inter-personal relationships etc. • The ethics of examinations
Guidance & Counselling on Exit	<ul style="list-style-type: none"> • Seeking a job • Writing applications and gathering information about openings • Interview attending skills • Exit Orientation • Steps and stages in getting clearance, etc. 	<ul style="list-style-type: none"> • Life as a young graduate • The realities of the world of work • Frustrations of seeking for employment • Coping with the labour market; Alternatives to paid employment etc.

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The internal efficiency of the higher institution is the success rate in the use of available human and material resources for the pursuit of organisational goals. Some of the prominent indicators of internal efficiency are the success rates in the transition of students from one level to another, repetition rate, dropout rate and graduate output. For example, a college where 90% of its first year students move successfully to the second year can be said to be more internally efficient than one with 85% transition rate.

There are several factors which can positively influence internal efficiency. One of these is guidance and counselling. If repetition and dropout are indicators, guidance and counselling, therefore, have booster roles to play. Through proper guidance and counselling, students who would have otherwise dropped out are retained and have success stories to tell.

Guidance and counselling are needed to reduce and possibly eliminate anti-social activities on our campuses. There is a rising tide of campus unrest, gangsterism, closures and lockouts. If the tempo of dialogue and counselling is increased, there is little doubt that the tempo of crises in our campuses will drop.

It is not only the fresh entrants and the seniors that need and could benefit from guidance and counselling; those students who are about to graduate need job and career guidance. How do I know where the vacancies are? How do I apply? What should I look for in job positions? These are some of the questions this category of learners ask. The questions are best answered through a carefully planned guidance and counselling scheme.

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There are general circumstances as well as circumstances that are specific to your institution that demand the use of guidance and counselling services. Prepare a table such as that of Table 8.1 that is specific for your institution. In the table, list the needs of your institution and indicate the corresponding focus of the guidance and counselling service.



Activity 8.6



2. Study Table 8.2 and map out various things you would do in each segment of the students' stay with you.

Academic, Social and Career Guidance and Counselling

There are different types of guidance and counselling services that can be offered to learners in higher institutions. The focus of our attention should be to determine what kind of non-specialised guidance and counseling service higher education teachers can offer in order to promote meaningful learning. Some programmes that could be instituted include, mentoring, tutor systems, pre-university/college and specialised programmes for teaching assistants. These needs could be accommodated by academic/institutional development centers where they exist. Other suggestions include the setting up of 'help desks' to deal with such issues as drug or excessive alcohol related disorders and sexual abuse. It is also necessary to explore the provision of job placement and career advice services. Establishing clinics on campus for social, health and legal aid need to be considered as essential student services. It is suggested that awareness could be enhanced by celebrating certain days for particular events, e.g. such as HIV/AIDS awareness days. Financial aid centers are also

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appropriate to cater for students who are increasingly required to pay their own way. Let us now shift attention on academic, social and career guidance and counselling.

Academic guidance and counselling is mainly on the curriculum-related needs of the learner. Courses to enrol, how to carry out assignments and projects, how to prepare for examinations, effective study habits, and how to remedy weaknesses in particular courses are some of these needs. These form the core of the business the learner routinely engages in academic institution. The finer focus of this module will, therefore, be on this category of guidance and counselling service.

Since the learner is constantly interacting with peers and significant others in the university or college, some form of guidance and counselling is necessary to enable the learner make the best of such social interactions. Guidance on social clubs to join, advise on use of free time, counselling on the use of drugs such as cigarettes and alcohol and guidance on burning issues that could precipitate crisis in the school are some of the social guidance and counselling issues. To the extent that they determine the internal and external images of the institution, to that same extent could one say that social guidance and counselling is important in higher education. A university or college with poor record of students' unrest and drug abuse is probably one with a poor scheme in social guidance and counselling.

The third category is career counselling. It is not only at the pre-university level that career guidance is necessary. It is estimated that not less than 10% of university or college students would want to undertake courses other than that to which they were admitted. The Physics student prefers to be in Engineering. The Biochemistry student prefers to be in the Medical School. The History undergraduate would feel happier in the Law Faculty. On graduation, many of these students feel disillusioned since they

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lay the recognition that there are equally exciting career options in Physics, Biochemistry and History. The goal of career guidance and counselling at the higher education level is to address the needs of the students.



Activity 8.7



Case 1;

Tunde has just enrolled in a university. He found his first few days to be exciting. He also found that life in the university was quite different from that of the secondary school. He concluded his course registration and participated actively in the orientation for freshmen. Unfortunately, Tunde is yet to secure accommodation in the hall of residence. Also the little pocket money he got from his poor parents had gone into settling unexpected expenses. Three days later, he was approached by two students who asked him to join a club that has been banned by the University management but which was still operating underground. Only two weeks into his studentship in the university and Tunde is confused and in a great deal of emotional stress.

Assume Tunde is a student in your Department. After his first lecture in your course, he walks up to you and ask for an appointment in the office which you share with another colleague, he narrates his ordeal.

1. After listening to Tunde's story, which of the following will you do and why?
 - (a). Refer him to the Head of Department/Dean
 - (b). Ask him to see the University Guidance Counsellor
 - (c). Refer him to appropriate sections of the university where his problems can be solved.
 - (d). Offer him advice on all the problems.

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- (e). Tell him you are not a trained Guidance Counsellor and he should seek help elsewhere.

- 2. Which aspect of Tunde's problems have to do with (a) academic counselling; and (b). social counselling ?

Case 2

Ngozi is a final year female undergraduate. She is easily one of the most brilliant in class. Within the last two semesters. Her attention had been diverted by her boyfriend to social rather than academic activities. She justifies this shift by claiming that she has to get married to her boyfriend immediately after graduation to avoid his being 'snatched' by other girls. By her engagement in social activities. She cuts classes and galls to do most of her assignments. Her Grade Point Average (GPA) fell drastically. The sudden drop in GPA was noticed at a meeting of Senate. As Head of Department, you were asked to investigate and counsel Ngozi accordingly.

Describe in detail your plan for tackling this Senate assignment.

Ethics of Guidance and Counselling

Some ethical codes of behaviour should guide the manner in which we offer guidance and counselling services. These apply to both the counsellor (person offering counselling service) and the counsellee (person being counselled). Adherence to such ethical behaviour is important if successful practice is to be assured. **Confidentiality** is one of such ethical behaviours. The identity of the counsellee, problems discussed and advice given should be within strict confidential limits. It is out of place during a lecture

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or public discussion to narrate what student 'A' told you about a problem he/she had and what you gave as advice. Apart from the public embarrassment to the student, such student and many others will hesitate to come again to you for guidance and counselling. **Tolerance** is another behaviour that should be maintained by the person offering guidance and counselling service. You must be sufficiently tolerant to hear out the counsellee. As much data as you can get must be sufficiently tolerant to hear out the counsellee. By being tolerant, you get full information and hence vantageously positioned to offer good advice and counsel.

The request for guidance and counselling service should be **voluntary**. It is improper for the counsellor to force the service on the counsellee. On the part of the counsellor, it is the prerogative of the counsellee to elect to take up the service. This is in a way similar to selling insurance. You are not forced to take the insurance. If you are, however, convinced in favour, you then go ahead to buy the insurance.

Objectivity is another ethical issue. We must remain completely impersonal in proffering advice. The counsellee should have the benefit of objective views on the matter at hand. Final decision making lies with the counsellee. The counsellor provides possible options, stating their merits and demerits. On the basis of the prevailing circumstances, the counsellee is then assisted to make a decision. The counsellor's point of view should not be forced on the counsellee.

The Practice of Individual Counselling

Counselling involves two people in interaction. The interaction is highly confidential and since counsellees discuss themselves in an intimate fashion, it is highly private and unobserved by others. The mode of interaction is usually limited to the verbal realm,

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the counsellor and counsellee talk with one another. Counsellees talk about themselves, their thoughts, feelings, and action. They describe events in their life and the way they respond to these events. The counsellor listens and responds in some fashion to what the counsellee says to provoke further responses. The two think, talk and share their ideas and feelings.

The interaction is relatively prolonged since alteration of behaviour takes time. In contrast to a brief conversation with a friend in which distortions or unconscious desires are usually maintained and usually only temporary relief is gained, counselling has as its goal the change of behaviour. It is assumed that through the counselling interaction the counsellee will in time revise his distortions and alter his behaviour.

THREE STAGES OF THE HELPING MODEL

1. The Present Scenario

- i. Help clients tell their stories. In telling the story, clients reveal and discuss their problem situation and missed opportunities. Some clients are vocal while others may be almost mute. Some will be reluctant to reveal everything that is bothering them, while others will do it very easily. The story needs to be told whether all at once the beginning of the helping process or in bits and pieces. For this to come out, counsellors need to develop an effective relationship with clients as helpers. They need assess rather than judge their clients. They need to assess such things as the nature and severity of the problem situation, limits at further problems that are not being discussed, the impact of clients environment

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on their problems, the personal and interpersonal resources clients have access to.

- i. Help clients become aware of and overcome their blind spots and develop new perspective on themselves and their problem situation; Many people fail to cope with problems in living or fail to exploit opportunities because they do not see them from new perspectives. They lock themselves in self-defeating patterns of thinking and behaving. Using imagination and brainstorming in the service of problem management and opportunity development is one of the ways counsellors can empower clients. Challenging blind spots is not the same as telling them that what they are doing is wrong. It is helping them to see themselves, others, and the world around them in a more creative way.

- iii. Help client search for leverage: The clients should be helped to identify and work on problems, issues, concerns or opportunities that will make a difference. Leverage includes three related activities. First, the cost of the problem has to be screened in terms of effort and time to be spent on it. Secondly, if clients, in telling stories reveal a number of problems at the same time or if the problem situation discussed is complex, then criteria are needed to determine which concern to be dealt with first. Lastly, the problem, issue concern, needs to be clarified in terms of specific experiences, behaviours and affects (feelings, emotions).

2. THE PREFERRED SCENARIO

i. Help clients develop a range of possibilities for a future: If a client's state of affairs is problematic and unacceptable, then he/she needs to be helped to imagine, conceptualise, or picture a new state of affairs, that is alternative more acceptable possibilities. Ask right future oriented questions like;

"What would this problem look like if I was managing it better?"

"What changes in my present life styles would make sense?"

"What would it look like if it looks better?"

Clients should be helped to find right and realistic models. Another ways could be reviewing better times or getting them involved in new experiences. A writing approach and use of fantasy and guided imaginary has also proved beneficial for most clients.

ii. Help clients translate preferred scenario possibilities into viable AGENDA: The variety of preferred scenario possibilities developed constitute possible goals or desired outcomes of the helping process. The client is helped to choose the possibilities that make the most sense and turn them into agenda; a set of goals that need to be accomplished.

iii. Help clients identify the kinds of incentives that will enable them commit themselves to the agendas they fashion: ideally the agendas a client chooses are on their face, appealing. If not, then incentives for commitment need to be discovered. The goals that are set in the agenda need to be owned and appealing to the client. It is better if they are

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chosen from among options. The focus should be on those that will reduce the client's crisis or pain. Challenging goals should not be avoided. The counsellor can help clients see ways of managing current dis-incentives that stand in the way of goal attainment. Contracts can also help clients commit themselves to choices and the client needs to be helped to identify action strategies for accomplishing their goals.

3. STRATEGIES (GETTING THERE)

- i. Help clients brainstorm a range of strategies for implementing their agenda. Clients are helped to ask themselves questions like "How can I get where I want to go?" Strategies tend to be more effective when chosen from among a number of possibilities. A strategy is a set of action designed to achieve a goal. If the preferred scenario is complex, then it needs to be divided into a number of interrelated outcomes or accomplishments. Each of these sub-goals will then have its own strategies. This divide and conquer process can lead to accomplishment that seemed impossible. One reason people fail to achieve goals is that they do not explore the different ways in which the goal can be accomplished. Brainstorming plays a role by suspending judgement, producing as many ideas as possible, using one idea as a take off for others, getting rid of constraints to thinking, and producing even more ideas by clarifying items on the list.
- ii. Help clients choose a set of strategies that best fit their environment and resources. "Best" here means the single strategy or combination of strategies that best fit the client's needs, preferences, and resources, and that is least likely to be blocked by factors in the clients environment. They should be clear and

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specific, tied to the desired goal, realistic, effective, owned by the client, and in keeping with his or her values.

- iii. Help clients formulate a plan that is, step-by-step procedure for accomplishing each goal of the preferred scenario. A plan then takes strategies for accomplishing goals, divides them into workable bits, puts the bits in order, and assigns a timetable for the accomplishment of each bit. Formulating plans helps clients search for more useful ways of accomplishing goals, that is, even better strategies. Plans provide an opportunity to evaluate the realism and adequacy of goals. They tell clients something their strategies. Clients are also helped to uncover unanticipated snags or obstacles to the accomplishment of goals.



1. List four ethical behaviours of a counsellor
2. Give descriptions of four unethical behaviours of a counsellor, giving examples in each case
3. Not all lecturers in the university or college or polytechnic can offer quality guidance and counselling'. Discuss.
4. Why do some lecturers use the confidential discussions they earlier had with some students as examples in the open class? How do you rate such a behaviour?

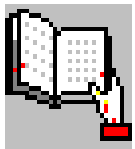
Activity 8.8



Limits of the Teacher in Offering Guidance and Counselling

Most higher education teachers are not trained guidance counsellors . This lack of formal training places limits on the extent to which the untrained can go in offering guidance and counselling services. One hates to believe also that only the supposedly trained and qualified guidance counselor can attend to the guidance and counselling needs of the learner. There are some services that the untrained can offer on account of personal experience. In all circumstances, the important thing to note is that we should not be "Mr. Know All". We should carry on only to the limit of our knowledge and experience. We should, thereafter, identify other resource persons in and outside the school community that can fill the gaps.

The typical higher education teacher is tooled to offer mainly academic counselling. Most are able to guide learners in their discipline of specialisation and counsel when students have learning difficulties in these areas. If this is your limit, stay within it and do not stray into unfamiliar territory of social guidance. Perhaps the school counselling office will fill the gap.



8.2

Techniques in Guidance and Counselling

After completing this Unit, you will be able to;

- develop or adapt instruments for data gathering for guidance and



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counselling.

- use the instruments developed/adapted for data collection
- process data collected;
- conduct group and individual interviews and observations;
and
- keep anecdotal records of learners.



**SPECIFIC
OBJECTIVES**

INSTRUMENTATION IN GUIDANCE AND COUNSELLING

We need as much information as possible from learners in order to make a success of guidance and counselling, It is when most, and perhaps all the information is in that we can take a global look at the problem and offer meaningful guidance. The tool for gathering information is known as the instrument. Such tools include tests, questionnaires, inventories, interview guides and observational schemes. Just as the thermometer is an instrument in the hands of the scientist, so also is the questionnaire the instrument in the hands of a guidance counsellor. For data collected to be useful, the instrument should be valid and reliable. In this section, you will learn to develop instruments for data collection and adapt existing instruments for your case. First, let us see the different types of instruments.

Types of Instruments

Several typologies exist for classifying instruments. For example, instruments can be grouped on the basis of (a) what they measure, e.g. cognitive (achievement tests); affective (attitudinal inventories and questionnaires); psychomotor (practical skill tests);

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and (b) how they measure e.g. power and speed tests. For the purpose of this Module, we shall adopt the scheme presented in Table 8.3.

Table 8.3
Instruments for the Guidance Counsellor

PURPOSE	TYPE AND USE
Cognitive Measure	Psychometric Tests; e.g. for measuring intelligence Quotient (I.Q), cognitive style/preference; self concept, reasoning skills and problem solving. Achievement Tests: for measuring achievement in cognitive domain such as subject matter test.
Affective Measures	Questionnaires Inventories Opinionnaires For measuring attitudes, perceptions and affective behaviours.
Psychomotor Measures	Observational Schemes Practical skills inventory For measuring different aspects of practical abilities

Instrument Development and Validation

Figure 8.2 gives the stages in the development of any of the instrument listed in table 8.2

DOMAIN SPECIFICATION
PREPARATION OF BLUEPRINT
ITEM WRITING
FIRST LEVEL VALIDATON AND REVISION
PILOT TESTING
FINALISATION

Domain Specification; This is where the construct, attitude or skill to be measured is identified and specified in both general and specific terms.

Preparation of Test Instrument This is an important stage of preparing the plan or blueprint for writing items for the instrument. The plan showing coverage of the instrument in terms of objectives and domain content are put on a grid. This is to ensure that the domain in focus is covered in breath and in depth.

Item Writing

This is the process of composing the first draft of the instrument by writing its component items. The structure of the instrument starts developing from this stage. It

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is perhaps the most intellectually demanding step in the process of instrument development. The process ends when the distribution of items in the test blueprint is completely covered.

First Level Validation and Revision; After the first draft of the instrument is composed, it is subjected to validation for face and content validity. Comments from the validation items are used to revise the structure and items on the instrument.

Pilot Testing; The revised draft is pilot tested on a sample of the population for which the instrument is meant. Further refinement of the instrument is made on the basis of pilot test data.

Finalisation; Data from the pilot testing exercise are used to further refine the instrument. At this time, the reliability values are determined.

Adapting Instruments

Sometimes, it is not worth the effort developing and validating a new instrument if standardised forms exist. It could be like re-inventing the wheel. Most times however, it may not be able to use the standardise instrument in the pure form without adapting it to our situation.

Adaptation could be with minimum modification. The modification could also be major.

The direction of modification are usually in the areas of -

- Degree of fit with the test blueprint
- Cultural bias
- Length.

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After modification, the instrument should be subjected to validation and reliability examination as if it was a new instrument.



Activity 8.8



Develop and validate the following instruments which could facilitate your providing objective guidance and counselling service to your students (refer to Module 5 for further assistance).

1. A questionnaire to collect background data on your students that are relevant to their academic, social and career guidance needs.
2. A questionnaire to measure their attitude towards the course you teach.
3. A 50 item achievement test in your course which will reveal the learning difficulties of your student.
4. Adapt a standardised psychometric inventory e.g. for measuring self-concept for use in your class.
5. Provide an opportunity for your students to talk about themselves: their “now” and their “tomorrow”. Note what they avoid saying, what they emphasise and relate these to your prior knowledge of each student. Do you gain a better understanding? Are you confused the more?

Data Collection and Processing

Instruments can be administered individually or to a group of learners. After administration, the responses should be scored and the data recorded in a manner that is amenable to processing. Data processing can simply involve manual calculation

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(using the hand-held calculator) of percentages and means and drawing of graphs to show the distribution of scores. It can also be through the use of a personal computer for more elaborate analysis.

Processed data should be stored in such a way as to facilitate retrieval when needed for offering guidance and/or counselling to individuals or groups of learners.



Activity 8.9



1. Administer the questionnaire you developed in 6.4 for measuring the attitude of your students towards your course. Score the items in the questionnaire. Remember to reverse scoring for negative terms. Take the total for each section of the questionnaire and for the whole instrument. Calculate the mean for the group. Record the scores for each student in the different sections and also the total scores. What counselling decisions need to be taken on the basis of the graph?
2. Call selected students on individual basis and get to know them better based on item 5 of exercise 6.3. e.g. "You said in class that you were xyz, but efg is what I knew of you. Can you explain further? Or can you help me reconcile the two views about you?"

Group and Individual Interview

The interview is a good technique for getting in-depth information that could otherwise not be obtained from most instruments. In a relaxed atmosphere, the interviewee (the person being interviewed) could furnish the interviewer (the person conducting the interview) with a large volume of information. In order not to be drowned by the avalanche of information, we need to systematically plan for, execute, and follow-up interviews that we conduct during guidance and counselling exercises.

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Planning The following steps need to be taken in planning and interview:

Step 1	Stage Setting Identification of characteristics of the interviewee
Step 2	Arranging the sitting, audio/Video recording Developing an interview guide
Step 3	Pilot testing the instrument
Step 4	Finalisation of the interview guide

Executing: In executing the interview plan, the interviewer needs to -

- present the questions audibly and ensure that the interviewee fully understands the demand of the question.
- Avoid forcing the pace of response
- Complete the question and answer session for a question before moving on to the next.
- Take notes as the responses are given.

Follow - Up

- Develop the interview transcript
- As follow-up questions if there are areas that need clarification from the interviewee.

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For group interviews, target respondents should be identified. Agreements should be reached by the group on a subject before being recorded by the interviewer.

Group and Individual Observations

Observations are designed to provide perspectives to data gathering that are not captured by test administration and interviews. These perspectives include non-verbal behaviours and interaction patterns. A sad look, a look of excitement, gait when walking, shy tendencies in class, and aggressive tendencies are some of the characteristics of the learner to be counselled that a questionnaire may not reveal in full. By observing the learner, we are able to record in graphical and direct form, such physically observable behaviours.

The development of an observation instrument is the first step to be taken. We should follow the sequence shown in steps 1 to 4 on the previous page. After developing the instrument, we could use it in gathering data by observing the group as a unit or for observing individual students with specific problems.

There are two main types of observation. The observer, in this case the teacher, participates in the activities given to learners. This enables the teacher to put himself or herself in the place of the learner (empathy). In non-participant observation the observer looks from a distance and records unobtrusively. This is the more common mode of observation in guidance and counselling.

Anecdotal Record

This is a record of snapshots of significant events in the life of the learner. The events can be recorded either by the teacher or by the learner. Whichever way, the teacher

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keeps the record for the purpose of having insights into the behaviour patterns of the learner. This record is important as the teacher prepares to attend to the counselling needs of the learner.

Student Advising

This is an organised scheme for offering guidance to students. The focus is usually on academic guidance although it could be stretched to include social guidance if social activities in the life of the learner impacts negatively on learning.

In many institutions, the scheme is department based. Each lecturer in the Department is assigned a group of students. The students are expected to meet periodically with the Advisor, as a group or individually. Where such schemes exist, they have been known to be effective in helping students overcome their learning difficulties.

Records to be kept by the Teacher/Counsellor

Records of Achievement

A good record of achievement test can serve as an effective instrument with which we can measure an individual's performance with (a) those of others in his group and (b) his past achievement. With this one can diagnose his weakness and strength. School progress of each student can also be measured, need for remedial measures determined and the progress of the entire students improved. For instance, a Mathematics test if well constructed could provide information as to whether or not, students' weakness is in the fundamental operation.

Personality Information Records

Personal qualities and interests are equally important as factors which affect one's success in occupation, life, social life, and in school. The only way to measure personality is by observing how the individual behaves in different situations. Such observations can be made in the classroom, at playground, during social gathering, etc. when the individual is quite himself or herself.

Personality records should contain the following views about the students;

- (a). Concern for others - antisocial, indifferent, dependable, sometimes socially concerned or deeply concerned.
- (b). Responsibility - unreliable, somewhat dependable, usually dependable, conscientious, assumes much responsibility.
- (c). Emotional stability - hyper-emotional, excitable, usually well balanced, exceptionally stable.

Health Records

Though the university teacher cannot have this, it is necessary that the school counsellor has a record about student's health. This should be made up-to-date indicating the type of disease from which the individual must have suffered, the duration of illness and the time of the year, if possible. Medical statements about student's ears, eyes, teeth, posture, nervous symptoms, or speech defects should also be included. A cumulative up-to-date health record will help the school counsellor refer particular students at different times to specialists for treatment. This also helps to decide the type of job to which a student can be assigned. A research fellow on school

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discipline has suggested that the offence should not determine the punishment but instead type of punishment recommended should depend on the physical strength of the individual offender. It therefore follows that a detailed, up-to-date health record will help remind the counsellor and the school authority of the importance of individual differences in dealing with the children.

Family Records

The home is one of the major factors which affect the education of students. An unstable home causes the student emotional imbalance. The family record should include name and address of parents, their nationality and occupation, and the socio-economic status.

If family records are kept and maintained up-to-date by the counsellor, clues can be found in an attempt to spot out student's difficulties with the aim of helping to alleviate his or her suffering. A good knowledge of the family records of the student will help to foster the triangular relationship, which should exist between the teachers, the parents and the student.

Cumulative Records

The counsellor should examine the cumulative records of each student to;

- (a). Help the counsellor get acquainted with a new student more quickly at the beginning of the semester or session.
- (b). Help students who are not working up to class level to cope with their problems. The under-achievers and those students who need remedial courses are this identified and helped.

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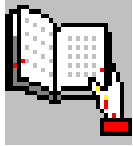
- (c). Identify gifted students and other students of unusual ability and help them by finding appropriate and challenging work for them.
- (d). Find out students who attend classes irregularly and encourage them towards regular attendance.
- (e). Study the personality traits of students who misbehave and suggest ways for their learning other adaptive behaviours.
- (f). Help the counsellor to study students for whom special aids, such as scholarship are being considered.
- (g). Gain background knowledge about students before assisting them in the choice of course for study.
- (h). Gather some information about a student before conferring with his parents.
- (i). Discover students of exceptional talents in such special fields as arts, music, athletics or creative writing.



Activity 8.9



1. Which records of the students in your class do you have?
2. How do you obtain them?
3. Of what use are the records to you?
4. Which ones would you have loved to have but which you do not have? Why would you wish you had them?
5. Think of your student's days, did any of your lecturers ever give you any advice, suggestion, threat etc. If "yes", What was it upon? Why did he have to do so? What was your reaction?
6. Find out if any of your students would have loved to discuss his life, programme, career, or future plans with you but was afraid or reluctant to do so. How many students? Why were they afraid or reluctant? What do you intend to do after this discovery?
7. After a class test, do you discuss students' performance with them?



8.3

General Practices in Guidance and Counselling

In this Unit, you will

- (a). review general practices in academic, social and career guidance and counselling; and
- (b). carry out exercises that are aimed at improving such practices.

SPECIFIC OBJECTIVES

General Practices in Academic, Social and Career Guidance and Counselling

In higher institutions, there are various schemes of guiding students and counselling them on their academic, social and career needs. Practice varies from one institution to another. At one end, we have institutions with well-developed central Guidance and Counselling Office. As well as Faculty/Department levels offering such service. Trained counsellors with access to data on each student and a host of other resources are found in such institutions. At the other end are institutions without any of such facilities. Many of the higher institutions in Africa are in between. In some, a central office exists without Faculty/Departmental branches. In others, there is no central facility. The Department/Faculty organises guidance services for the students.

The practice that is most common is to have a University/Technikon/College Guidance and Counselling Unit. Such Unit takes responsibility for academic, social and career guidance of the students. At the time of registration, packages are handed out which

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provide the learner with basic information on the operations of the institution. This is expected to serve as a road map for the activities of the learner. The office has one or more trained Guidance Counsellor. There are consulting hours during which students with problems have sessions with the counsellor.

There is also the Orientation Committee. In all higher institutions, arrangements are made for the immersion of the new entrant, usually from the secondary school, into the higher education sub-culture. This is done during what is popularly known as the Freshstudent Orientation week. The typical programme for the Week includes lectures, symposia, guided tours and social events. Students get to learn about life on campus, rules of the institution, rights of the student, teaching and learning styles and procedures as well as assessment and grading systems.

Another common practice is informal counseling of freshmen by seniors. This is important in the breaking-in process. There are several elements in the hidden curriculum of the institution that need to be known by the fresher. The seniors are in the best position to transmit the contents of such curriculum. This is done through information interactions, chats and guidance in the hall of residence and lecture rooms. How you can succeed in X; understanding the behaviour of Lecturer Y; and the attitude of the Management of the institution to certain students' behaviours are some examples of the information the seniors pass on to fresh students.



- Give a critical review of existing guidance and counselling practices in your institution stating the strengths and weaknesses.

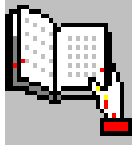
- If you are asked to recommend areas for movement, what areas will you list and what improvements will you suggest?

Activity 8.10



GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION

- State the pattern of Orientation Programme in your institution. What changes would you want to see effected?
- In your own view, how effective are the yearly orientation programmes for fresh intakes in your institution? What problems and difficulties do you think the organisers have? How could these be overcome?
- What percentage of new students participated in the Orientation programme during the last exercise?
- How would you organise an Orientation for students who are transferring into your institution?



8.4

Guidance and Counselling in Teaching

At the end of this Unit, you should be able to;

- (a). diagnose students' learning difficulties; an
- (b). offer guidance to students with learning difficulties.



**SPECIFIC
OBJECTIVES**

DIAGNOSING LEARNING DIFFICULTIES

Many learners including the supposedly brilliant, have difficulty with understanding some concepts. Cell biology may be easy while physiology may be difficult for Student A. for student B, the reverse may be true, while Student C may find both aspects of biology difficult. Learning difficulty is expressed in poor performance in the concept and in a demonstration of negative attitude towards the subject or a particular topics in the course.

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When students find difficulty with learning some concepts, frustration results. Further learning may also be impeded. It is useful, therefore, to detect students' learning difficulties and through a systematic regimen of guidance, assist the learner to jump the barrier posed by the difficult concepts. How do you as a teacher know that a learner has difficulty with learning? What techniques do you employ to detect students' learning difficulties? These questions will be addressed next.

Diagnosis During Instruction

Use of questions: As the lesson progresses, well-structured and modulated questions that are thrown to students in a random manner would reveal those with learning difficulties. Even if the learner does not signify intention to answer the question, the teacher should still direct the question to the learner. Those with 'wobbly' answers give away their deficiency in understanding the concept being taught.

Apart from oral questions, written tests should be given. Questions should be set in a way that would expose learning difficulties of students. Questionnaires could also be administered to provide an insight into students' attitude towards the concept.

Use of Concept Maps: Ask your students to prepare concept maps from the lesson you just completed. The maps will give a detailed clue of misconceptions and aspects of the concepts that students have difficulty with.

Observation of Class Behaviour: a frown on the faces when the lesson is progressing could give indication that there is some problem with getting the gist of the lesson. Their manner of response and their show of anxiety are other pointers to how easy or

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difficult they are finding the lesson. Available facilities permitting, audio and video recording of lessons are useful ways of capturing classroom climate and in detecting learning difficulty.

Diagnosis after Instruction

Item Analysis of Performance: In scoring the test given to students, score and record item by item. Analyse performance on each item. Summarise your findings. Such a summary will give a good view of understanding of students on the concept to which each item is directed. If a questionnaire was administered, it will provide a feel of the attitude of students towards the concept. This information is important since negative attitudes impede learning.

Group and Individual Interview of Students: Interview the students in a group and then a random sample of individual students. Use the procedure in 6.2.4 to conduct the interview. The thrust of the interview is to find out where students find difficulty with learning the concept. Students should also give suggestions as to how the difficulties encountered can be removed.

Analysis of Audio/Video Recordings:

Analyse the audio/or video recording of your lesson . From the transcript, make notes of your actions (and inaction) that contributes to the difficulty that students had with learning the concept presented during that lesson.

Describe three ways by which you can detect students' learning difficulties in:
a) a course taught by you



Activity 8.11



8.47

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b) a course taught by another lecturer

2. After assessing a test you gave to students, you discovered that none of them had a pass mark.

What will be your most immediate reaction?

What would you do to find out what was responsible for such a poor performance?

Summary and Conclusion

In this module, we discussed and carried out exercises aimed at enhancing the skills of the higher education teacher in guidance and counselling. These activities are expected to:

- Assist the student to make adjustment to life in the university, polytechnic, technikon, or college of education.
- Encourage the student to participate in appropriate college/university activities with a view toward increasing his or her effectiveness in personal and social activities.
- Show concern for and assist in the planning of the student's educational, career, personal, and social development.
- Aid the student in self-evaluation, self-understanding, and self-direction, enabling him or her to make decisions consistent with immediate and long-range goals to higher education opportunity granted him or her.
- Assist the student in developing healthy and positive attitudes and values
- Help the student to acquire a better understanding of the world of work through the acquisition of skills and attitudes and/or participation in work-related programmes.
- Encourage the student to plan and utilise leisure time activities well.

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- Assists the student in understanding his strengths, weakness, interest, values, potentialities and limitations.

As we wrap up the discussion, we should note the limitation of the teacher. Specialised cases should be referred to the specialist- the trained guidance counsellor.

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Module

9

Empowering Women for Success in Higher Education





On Equity Issues in Higher Education

Reflect on the following as you work through this Module

84. The Tokyo Conference also requests an increase in participation rates in higher education and asks that appropriate strategies be adopted for increasing the participation of disadvantaged groups, including women, who must be encouraged to undertake higher degrees and enter academic and graduate employment. Similar efforts are also needed to encourage the participation of ethnic minorities.
85. The Dakar Conference, in addition to a strong recommendation concerning the participation of women 'in all possible areas' recommends 'that measures be taken to double the number of women (students, teachers and decision-makers) in higher education, within the next ten years. Particular attention should be paid to orienting women towards scientific and technological disciplines'.
86. The Beirut Conference recommended that 'Arab Governments must expand and diversify opportunities for every citizen to upgrade his or her qualifications'. For this, 'appropriated strategies should be elaborated' in particular 'for those already involved in the world of work' or for those who drop-out of the education system, 'through flexible programmes and schedules, allowing for part-time study and diversified short-qualifying or diploma-granting programmes'.



**CONSOLIDATED
DECLARATIONS
AND PLANS OF
ACTION OF THE
REGIONAL
CONFERENCES ON
HIGHER
EDUCATION HELD
IN HAVANA,
DAKAR, TOKYO,
PALERMO AND
BEIRUT 1997-98**

Article 3: Equity of Access

- a. In keeping with Article 26.1 of the Universal Declaration of Human Rights, admission to higher education should be based on the merit, capacity, efforts, perseverance and devotion, showed by those seeking access to it, and can take place in lifelong scheme, at any time, with due recognition of previously acquired skills. As a consequence, no discrimination can be accepted in granting access to higher education on grounds of race, gender, language or religion, or economic, cultural or social distinctions, or physical disabilities.
- b. Equity of access to higher education should begin with the reinforcement and, if need be, the reordering of its links with all other levels of education, particularly with secondary education. Higher education institutions must be viewed as, and must also work within themselves to be a part of and encourage, a seamless system starting with early childhood and primary education and continuing through life. Higher education institutions must work in active partnership with parents, schools, students, socio-economic groups and communities. Secondary education should not only prepare qualified candidates for access to higher education by developing the capacity to learn on a broad basis but also open the way to active life by providing training on a wide range of jobs. However, access to higher education should remain open to those successfully completing secondary school, or its equivalent, or presenting entry qualifications, as far as possible, at any age and without any discrimination.
- c. As a consequence, the rapid and wide-reaching demand for higher education requires, where appropriate, all policies concerning access to higher education to give priority in the future to the approach based on the merit of the individual, as defined in Article 3 (a) above.
- d. Access to higher education for members of some special target groups, such as indigenous peoples, cultural and linguistic minorities, disadvantaged groups, peoples living under occupation and those who suffer from disabilities, must be actively facilitated, since these groups as collectivities and as individuals may have both experience and talent that can be of great value for the developing of societies and nations. Special material help and educational solutions can help overcome the obstacles that these groups face, both in accessing and in continuing higher education.

Extracted from the:

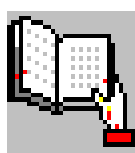
*DECLARATION
OF THE UNESCO
WORLD
CONFERENCE
ON HIGHER
EDUCATION
(1998)*

Article 4. Enhancing participation and promoting the role of women.

- a. Although significant progress has been achieved to enhance the access of women to higher education, various socio-economic, cultural and political obstacles continue in many places in the world to impede their full access and effective integration. To overcome them remains an urgent priority in the renewal process for ensuring an equitable and non-discriminatory system of higher education based on the principle of merit.
- b. Further efforts are required to eliminate all gender stereotyping in higher education, to consider gender aspects in different disciplines and to consolidate women's participation at all

levels and in all disciplines, in which they are under-represented and, in particular, to enhance their active involvement in decision-making.

- c. Gender studies (women's studies) should be promoted as a field of knowledge, strategic for the transformation of higher education and society.
- d. Efforts should be made to eliminate political and social barriers whereby women are under-represented and in particular to enhance their active involvement at policy and decision-making levels within higher education and society.



9.0

Introduction and General Objectives

Introduction

Ensuring gender equity in education (as well as in other endeavours) has been the lodestone guiding the work of feminist activists. The last fifteen years has witnessed an increasing tempo in the voice and action of the activists and wider acceptance of the message. “In most parts of Africa, the birth of a boy puts broader smiles on the faces of parents and relations than that of a girl. Indeed, raising a girl is likened to watering the plant in a neighbour’s garden”. This was the remark of Djenaba Doumbia of the University of Cocody as prop for the socialisation thesis to explain gender inequalities in education in Africa.

A lively debate has been on-going on the issue of closing the gender gap in education, a debate which has now found its way to the higher education sub-sector. In contributing to this debate at UNESCO-BREDA Workshops on Teaching and Learning in Higher Education, Fay Chung and Sylvie Kodjo at the Abidjan Workshop, Carlos Machili at the Maputo Workshop and Agnes Njabili in Johannesburg demanded a more thorough analysis of the subject – proper understanding of the

concept of gender, knowledge of the indicators which inhibit and promote the participation and achievement of girls and women in higher education and what short-term and long-term strategies can be put in place especially by teachers in higher education in Africa to “right the imbalance”. It is to these issues and more that we turn in this module

After completing this Module, you should be able to:

- ❑ clarify the concept of gender;
- ❑ recognise different forms of gender inequalities in higher education;
- ❑ state some of the factors contributing to women's limited access; participation and achievement in higher education;
- ❑ describe teaching and learning strategies for promoting gender equality in higher education;
- ❑ analyse teaching behaviours from gender perspective;
- ❑ develop teaching skills and attitude that are gender inclusive; and
- ❑ propose ways of enhancing women's access, participation and achievement in higher education.



GENERAL OBJECTIVES

9.1

Gender Issues in Higher Education

At the end of this Unit, you should be able to:

- ❑ differentiate between gender and sex;
- ❑ enumerate manifestations of gender inequity in higher education; describe the factors that bring about gender inequity in higher education; and
- ❑ state the negative experiences of female students in institutions of learning that impede access and participation.



SPECIFIC OBJECTIVES

The Concept of Gender

Gender has become a very important word in discussions on development. As education a major part of the subject of development, it is important that all practitioners in the education become familiar with the meaning of the word “gender”. Perhaps we should start with what gender is not. Gender is **not** synonymous with women. Gender is not synonymous with sex either, although it can be best understood when contrasted with sex. Sex is the biologically determined characteristics or functions of males or females. For these include possession of ovaries, fully developed breasts, pregnancy and giving birth, breastfeeding etc. For males, these include possession of beard, penis, pregnancy, etc. As noted by Njabili (1999),

Gender on the other hand refers to those characteristics and functions society ascribes or assigns to males or females.

...sex is a biological phenomenon that an individual acquires immediately after fertilization (as X and Y chromosomes pair up, i.e. before birth.) The result of this is observable female/male characteristics that cannot be changed. Gender is a socially constructed phenomenon that is brought about as society ascribes different roles and duties, behaviours, and mannerism to the two sexes. Unlike sex, it is a perceptual feature and, therefore, subject to change as it affects the way in which people act/behave towards each other.

Gender is a social construct, which is culturally determined. It is based on the beliefs and traditions of a given society and refers to the roles; behaviours and qualities ascribed to each sex.

The biology of each sex determines the sex characteristics and functions of each sex. Gender on the other hand refers to those characteristics and functions that society ascribes or assigns to males or females. For instance, society expects males to be aggressive, independent, rational, assertive but not so for females. They are expected to be gentle, submissive, dependent, passive, emotional etc. As a child is socialised to fit into those societal expectations. That is to say the behaviours mentioned above are learned and internalised giving the erroneous impression that they are biologically determined. Davies (1999) states as follows:

Gender is a social construct, which is culturally determined. It is based on the beliefs and traditions of a given society and refers to the roles; behaviours and qualities ascribed to each sex. It is how we define what it means to be male or female.

female. Yet, it is these man made distinctions that determine the status of the sexes: male superior and female inferior.

Gender is known to permeate every human endeavour resulting into categorisation of roles, activities, responsibilities, careers as suitable for females or for males. Indeed it has led to what is described as gender stereotyping. **Gender stereotyping** is defined as a collection of commonly held beliefs or opinions about behaviours and activities considered by society as appropriate for males and for females. Njabili (1999) notes that there are four causes of gender stereotyping, namely, socio-cultural; economic; education and training; and media. Socio-cultural roots emanate from the common-sense belief that the girl's place is in the kitchen (with her mother), while the boy should work in the field (with the father). Economic root causes suggest that men be providers in the family. Thus, the migrant labour system in some countries, for example, Lesotho, Botswana, and Namibia, there are more women in the countries because men have gone to work in the mines in South Africa. This tends to negatively impact on the society.

Certain careers such as engineering are said to be unsuitable for women while Catering or Secretarial studies are deemed unsuitable for men. As a matter of fact, gender is a strong determinant of access to formal education in favour of males. The gap in enrolment and achievement at all levels of education is largely due to gender role expectations and gender stereotyping. Thus any attempt to promote women's access to education must recognise the influence of gender on the teaching and learning as well as policies.



- Prepare a table showing a list of features and characteristics that can be labelled as “sex” and another list for “gender”. Discuss this list with a colleague and note those characteristics on which you reach agreement.

Activity 9.1



- List several classroom behaviours of your students. Classify them as illustrating either gender or sex.
- Identify some gender based expectations of students in higher education.
- From your observations, would you say these expectations are being adhered to?

Gender Inequalities in Higher Education

There are numerous manifestations of gender inequalities in higher education in favour of males.

1. Gender gap in enrolment: Enrolment statistics in most higher institutions in Africa show that men clearly outnumber women with women averaging about 38% of overall enrolment (Makhubu, 1997). For example, for the years 1980, 1988, 1992 the total enrolment of students in Southern Africa per '000 was 528, 718 and 1510 respectively. The percentage of women was 25% and 32%. For the same period in America, the figures were, 15957, 21732 and 49%, 51% and 52% respectively. There are instances, however, where female students are not necessarily disadvantaged. In Namibia, for instance, there is a high level of enrolment at all educational levels.

men clearly outnumber women with women averaging about 38% of overall enrolment

2. Gender gap in faculty and administrative staff positions

Published statistics of staff in higher institutions in Africa as reported by Mbanefo (1996) show under-representation of women. Among female staff, only a small proportion are Professors. Vice Chancellors, Rectors, Provosts or principal officers of institutions of higher learning are rarely women even in institutions that have large female student population. Deans of Faculties and Heads of Academic and even non-academic departments are predominantly males.

3. Near absence of women in certain disciplines: Engineering, agriculture, physics, physical education, architecture, surveying, estate management and such other disciplines that carry masculine label or image record little or no presence of female students or teachers.

4. Gender gap in achievement: In many disciplines especially in science and technology based courses, males perform better than females. The number of males who earn first class degrees is greater than that of females (see Mlana, 1997).



Activity 9.2



- π Go through your institutions Statistics on Enrolment, Staffing with special reference to staff in high administrative positions and find out the representation of males and females.
- π Do the same for the different faculties and check for gender gap if any noting the sex favoured.
- π To what extent do you agree that there are gender inequalities in your institution?
- π Are you satisfied or dissatisfied with what you observed?
- π Do you think that women were deliberately discriminated against in admission? in employment and in appointments?
- π Based on what was said above on gender, suggest possible factors contributing to the observed

Factors Associated with Gender Inequalities

A lot of research has been carried out in many countries of the world on the issue of equal opportunity for women and men especially in education. Much of the literature is on the factors that contribute to gender inequalities. It is very important that we should be familiar with the factors and how they operate to give rise to the noted inequalities. These factors include:

1. *Primary socialisation process of females and males* tend to produce learners with very different learning experiences and personality characteristics along gender lines. The fact that males are socialised to be aggressive, assertive, domineering and encouraged to be explorative, engage in mentally challenging activities while women are socialised to be submissive, dependent and passive, and engage mainly in mundane activities place males at educational advantage over females.
2. *The school learning environment* appears to be more supportive of males than of females. A learning environment where female students have to compete for

Primary socialisation process of females and males tend to produce learners with very different learning experiences and personality characteristics along gender lines.

scarce learning resources, live in fear of sexual harassment, be in gross minority relative to males, is discouraging to female learners.

3. *Classroom interactions* tend to disfavour females. It is a fact that teachers as well as learners carry into class their societal values of females and males. Thus they set up different levels of academic expectations for male and female learners, which turn out to be self fulfilling prophecy. Even the verbal and non-verbal feedback teachers give to learners convey suggestive messages of the educational chances of learners
4. *The curriculum content* in various disciplines carry gender bias. The impression that education is only for males and females are just intruders. In various disciplines carry gender bias giving the impression that education is only for males and females are just intruders. For instance the science and mathematics curricula at all levels of education give a masculine image by the content drawing heavily from the life experiences and interests of males. Curriculum materials, texts, illustrations and even subtly convey sexist messages known to discourage either male or female learners. Indeed, there is gender stereotyping of disciplines where the humanities and social studies is typed feminine while science, mathematics and engineering is typed masculine. Such practice limits women's educational access and opportunities.
5. *In the instructional process*, the strategies teachers employ can produce different effects on male or female learner. For example, research has shown that the use of cooperative learning style increases the achievement and interest of females more than the use of competitive learning styles. This is not the case with males in terms of achievement.

Again placing problems in social context or emphasising its relevance has been found to enhance the achievement and interest of females while males tend to be comfortable with abstractions. In addition, more males than females volunteer to answer questions in class which is a manifestation of the psycho-social characteristics of each sex.

These are only a few of the several factors that have been found to be influencing women's entry profile, achievements, exit profile and general access to education at all levels.

- π Consider the factors mentioned above and reflect on them. From your experiences as a student, can you recollect instances that illustrate some of the factors.
- π As a lecturer can you remember instances your strategy tended to put female students at disadvantage?
- π Take up one or two textbooks and examine the pictures if any, or the examples the author used to explain concepts, or the language of she and he. Would you say that male and female learners have equal considerations in the materials?
- π If you are a lecturer in a science and technology-based disciplines, do you believe that these factors have a lot to do with the dearth of females in these disciplines?



Activity 9.3



It is important to point out that most of these factors derive from socio-cultural interpretation of gender. The education process, that is teaching and learning can be effectively used to promote women's access and performance in education at all levels. A number of strategies have been found to be effective in enhancing women's participation in education including higher education.



Points to Ponder



- How deep-rooted is the gender problem in education?*
- Would all female universities alleviate the problem?*
- Would affirmative action in terms of entry requirements be preferable?*



Do a gender desegregated analysis of:

- student enrolment;
- staff in senior administrative positions;
- lecturers in the various disciplines according to rank in your college.

Activity 9.4



Do you think that there is discrimination against women in terms of admission and appointment

The Right to Higher Education and Equal Opportunity Particularly for Women: The Major Challenge of Our Time



Reading 9.1

Lydia P. MAKHUBU

Several observations may be made from the preceding presentation. Suggestions for promoting women's access to higher education are also made in the belief that women's greater involvement in higher education is a vital ingredient in enhancing the contribution of universities to Africa's advancement, particularly in an age which demands a strong knowledge base, commitment and a daring spirit to craft strategies that target Africa's problems in a specifically unique way. The observations are as follows:

- (a) The poor participation of women in higher education, both as students and academics, may be linked to the traditional social attitudes regarding the role of women. While universities may open their doors to women, the apparent contradictions between those aspects of African culture which designate women as mere tools for homemaking and the aims of a modern university to admit women on an equal footing with men, still impede women's access to both higher education and to playing a meaningful role in the development of our institutions of higher learning. For example, the transition from high school to university is the most difficult stage for women; in addition to a high drop-out rate created by a variety of factors, girls are quite frequently subjected to tremendous social pressures to embark on careers that do not require long years of study so that they may assume their traditional roles at a socially acceptable age. This view seems to remain both dominant and wide spread in a number of our countries.
- (b) There are countries like Botswana, Lesotho and Swaziland where women's enrolment in universities is relatively high compared to other African institutions due to socio-economic reasons which are specific to these countries. These countries are characterized by high enrolments of girls at both the primary and secondary levels, thus providing a pool from which to draw university entrants. This highlights the importance of basic education for girls as a prerequisites for embarking on university careers, and the need for countries to continue efforts to increase access of girls to education at the lower levels. It is noteworthy, however, that in spite of the relatively favourable situation for women advancement at the undergraduate level in these three countries, female academic staff have not managed to climb the ladder to high academic leadership as fast as men have. This seems to implicate other factors that hinder women's advancement in Universities.
- (c) At the end of the first degree, many girls get married and immediately embark on raising a family, thus limiting their chances for postgraduate training. This situation is

exacerbated by the fact that postgraduate training is mostly undertaken in universities abroad, making it extremely difficult for many young married women to leave their families behind for up to four years, without causing family dislocations. The development of postgraduate studies in local universities to expand opportunities for women to study at home is of paramount importance in ensuring access of women to higher education. Equally important is finding ways to enable women to re-enter postgraduate studies after raising their families. Post graduate distance education programmes as well as special scholarships for the mature women have been cited as ways to promote women access to post-graduate training and university careers.

- (d) The presence of more women on the staff as lecturers and professors is likely to serve as a base for role models for female students and for minimizing the "hostility" of institutions of higher learning to women. There are other phenomena, such as sexual harassment, lack of confidence among women themselves, which are emerging as important issues in the whole debate on how to make university environment less hostile to women. The issue of harassment, in particular, requires careful research and careful articulation if it is to remain alive in university communities which are still bastions of male domination.
- (e) The introduction of Women Studies Departments has also been suggested as a concrete way of bringing gender issues into an institution-wide forum. However it has also been pointed out that these stand the danger of being relegated to a corner as "female ghettos" while at the same time enabling universities to complacently make claims that they have found a solution for taking care of the problem!. It is incumbent upon African universities, to introduce programmes for promoting women's access to universities and their greater participation within the institutions. The Association of African Universities must take a lead in confronting this challenge.
- (f) For those women who have been recruited to the staff of universities, there are still numerous hurdles to overcome in order to rise to higher academic and administrative echelons. Some of these are occasioned by social and cultural demands on their time, making it extremely difficult for them to devote the kind of time required for excellence in research and scholarship. For many it becomes a choice between family and career. This, in the main, explains the inability of women to satisfy the promotions criteria of universities, many of which are based on strong research and publication records.
- (g) There are mainstream academic areas in which women excel. These include the humanities, social sciences, and the life sciences. All these areas are of tremendous importance to Africa and women should capitalise on their strength and carve themselves a niche through which they can work towards capturing the academic and managerial leadership of university and perhaps avoid the creation of the "female ghetto" mentioned above. Organisations like the Forum for African Women Educationalists (FAWE) should mount strong advocacy and lobbying infrastructure and suggest ways to

promote women's access to higher education. The major role of FAWE is to empower women and to give them a strong voice to argue for the position of women in higher education and for the recognition of the potential contribution that women can provide in making our countries strong.

- (h) The under representation of women in science and technology is a serious bottleneck in endeavours for building scientific capacities in Africa. Organisations such as the Third World Organisation for Women in Science and other national women in science organisations should work ceaselessly and collaboratively to encourage girls to study science at school and to support women scientists to rise in their professions. The provision of research grants which encourage university grassroots activities should be a priority in order to build a society-wide appreciation of the importance of science and technology in Africa.

Excerpted from:

Makhubu, L.P. (1998). The right to higher education and equal opportunity particularly for women: The challenge of our time. In J. Shabani (Ed.). *Higher Education in Africa: Achievements, Challenges and Prospects*. Dakar: UNESCO BREDA.

Increasing Access and Equity in Higher Education: Gender Issues

Penina M. MLAMA



Reading 9.2

For example, in order to increase access to higher education the Universities of Makerere in Uganda and Dar-es-Salaam in Tanzania adopted affirmative action. At the university of Dar-es-Salaam, female candidates are admitted at up to 1.5 points lower than male candidates but not lower than the University entry points. As a result the enrollment percentage rose from 17% in 1995/96 to 29% IN 1996/97. Makerere's girls enrollment percentage is now about 30% after several years of similar admission approach.

Gender studies have also been introduced in such forms as the Women Studies Centre at Makerere University or the Gender Studies Institute at the Cape Town University in South Africa. In other cases specific courses on gender have been introduced or a gender perspective adopted in the mainstream curricula. At the University of Dar-es-Salaam for example gender studies courses have been introduced in the Institute of Development Studies and Sociology while a gender perspective has been adopted from some courses in the Faculties of Arts and Social Sciences, Law and Education, and the college of Lands and Architectural studies. The Institute of Finance Management and the Sokoine University of Agriculture also have a few courses with a gender perspective (UDSM: 1996). Such studies

have assisted the articulation of gender issues and the raising of awareness on gender for both staff and students.

To increase access and encourage excellent performance, scholarships awards and prizes have been introduced through various schemes. The Directorate of post graduate studies of University of Dar-es-Salaam offers graduate scholarships for female candidates which has benefited over fifty women in the last four years. Similarly the Gender Management Committee of the same University has sponsored female academic staff for Ph.D. training.

Activists groups on higher education institution campuses have played an active role to keep gender on the academic and social agenda. They have organised seminars, workshops, support groups to sensitise the communities and often to combat gender related problems like sexual harassment. The University of Dar-es-Salaam has quite a number of such groups including the Institute of Development Studies Women Studies Group (IDWSWG), Women Research and Documentation project (WRDP), Women in Education (WED), Tanzania Women in Science and Technology (TAWOSTE) and The Gender Management Committee (GMC). In 1994 the University of Dar-es-Salaam formally established The Gender Dimension Task Force to operationalise the gender balance articulated in its Corporate Strategic Plan (1994).

The Association of African Universities (AAU) and the Forum for African Women Educationalists (FAWE) both of which involve University Vice Chancellors, have adopted strategies and recommendations for addressing gender issues in African Universities. The AAU has even adopted a system of gender studies chairs.

The list of pro gender-balance activities may not be exhausted here. The point for noting is the fact that more attention is now directed at addressing gender issues in higher education than twenty years ago. Credit goes to local, regional and international activists and pressure groups as well as the realisation that higher education must not miss the gender equity boat if it has to effectively fulfil its mission. We realise however, that at times pressure had to come from donors of higher education who put gender as a string to funding. It is also no secret that a lot of the research on gender was done because that is where the donor funds were.

Excerpted from:

Mlama, P.M. (1998). Increasing access and equity in higher education: Gender issues. In J. Shabani (Ed.). *Higher Education in Africa: Achievements, Challenges and Prospects*. Dakar: UNESCO BREDA.

Negative Experiences of Females in Higher Education



Activity 9.5



Have informal discussions with three female students (one from the sciences) about their experiences in their first year in your institution.

Ask them to draw on the experiences of other female students. Relate their comments to the experience of male learners during the same period. Make notes and suggest some measures that might improve retention rates and achievement patterns of females. You will find this useful as we discuss learner needs in the next section. It will also guide you in determining the contributions you can make to the process of empowering women for higher education a little later in this unit. You may compare your findings with what follows or you may use them as guidelines for the discussion with the learners.

The following are some of the negative experiences of women in higher education.

1. Sexual harassment - instances of these are quite common in educational institutions the world over, Africa not being an exception. Male learners often harass women who refuse them sexual favours by putting up damaging cartoons about them. They also have the tendency to diminish female achievement by linking it with payment to male lecturers for sexual favours. But the most common form of this is when lecturers attempt to trade good grades for sex. Learners who refuse are penalised in the teaching /learning situation. Sometimes these women are so terrified that they transfer to other disciplines. Your informants might say that female learners are also guilty of sexual harassment, peddling sex for grades. Clearly, only weak and desperate learners would be involved in such activities. However despicable it may appear, sadly, it does indicate that such learners conform to society's view of women as sex objects.

2. Gender stereotyping - which determined the subjects studied in school, continue to dog them, this time in the form of gender streaming. They find themselves down there among the women in the so-called soft options.

3. Problems in the classroom - further lowering of self esteem and erosion of self confidence because of the sheer "maleness" of the environment; the superior attitude of lecturers, (some of whom take pleasure in making work seem much more difficult than it really is) and their own deficiencies resulting from poor preparation for higher learning. Because they are afraid of exposing their ignorance they miss classes. When they do attend they make themselves invisible by refusing to participate and not submitting assignments.

4. Isolation and struggle for acceptance - female learners in male dominated subject areas are sometimes lonely in the learning environment because of isolation from other

women with whom they could exchange ideas or discuss difficulties without feeling threatened.

9.2 Teaching and Learning Strategies that Promote Gender Equity



At the end of this Unit, should be able to:

- ❑ identify strategies for promoting gender equity ;
- ❑ describe when and how to use these strategies; and
- ❑ demonstrate the use of these strategies in your classroom

SPECIFIC OBJECTIVES

Introduction

The teaching and learning strategies that can promote women's participation in higher education are based primarily on the factors known to create gender gap in education. These can be grouped into **Curriculum related; instructional process; administrative.**

Curriculum-related strategies: The curricula in higher educational institutions must be reviewed with a view to removing all forms of gender bias in content. Select content and learning experiences that depict the contributions of women in human endeavours. For instance, curriculum in History or Political Science needs to include and make prominent the contributions of women in nation building or peace making between nations just as those of men. What comes straight to mind is the woman who has helped to bring stability in the governance of Liberia after several years of civil strife. Similar to this is the case of the women in South Africa who laid down their lives fighting to eradicate apartheid. The inclusion of women in historical records generates values and assumptions which improve the general image of women.

In selecting concrete examples to illustrate concepts, these should be drawn from both male as well as female experiences. For instance, friction can be illustrated using two grinding stones or moving bicycle tyre on the ground. In order to make curriculum female-friendly, the content must be perceived to be relevant to life. For instance, highlighting the relevance and application of aspects of trigonometry such as tangents, sines and cosines in building and in construction can go a long way in attracting women to the subject of mathematics.

Review all curriculum materials used in higher education such as texts, audio-visual aids to eliminate gender biases. For instance, pictures and illustration in textbooks should be drawn to represent women and men as active participants in the whole process of education. Women must be shown as active science students not passively watching the males as they perform experiments and lead discussions.

Subjects or disciplines should not be gender stereotyped. Rather subjects should be portrayed as being masculine or feminine. What constitutes real Science and technology for example needs to be re-defined to include those activities performed by women which also utilise the scientific method of problem solving. It is a fact that Home Science is under rated not because it is any easier than other science courses but simply because it deals with what is typed female domain.



Activity 9.6



- ❑ Carefully go through the curriculum in your subject area and criticise the content from the gender perspective. Suggest modifications to ensure gender equality.
- ❑ Select two or more popular texts in your discipline and check out for gender bias in illustrations and in language.
- ❑ Using any topic of your choice, write out some concrete examples that explain given concepts and then examine these from gender perspective.

Instruction-related strategies: It is a fact that a good proportion of females who gain admission into higher educational institutions come in with varying degrees of deficiency in experience (cognitive and affective) and self confidence. To be effective, a lecturer should through diagnostic tests determining the entry behaviour of students with special reference to female students. The information so gathered should form the

basis for organising new learning experiences in the form of lectures and practical work. As often as possible special compensatory learning activities should be provided by teachers especially in science and mathematics based courses. These could be in form of remedial instruction, or special projects and assignments. When the females have acquired the requisite knowledge and practical skills in the subject matter their self concept and self confidence improve significantly.

Individual lecturers must examine their classroom behaviours with a view to eliminating all forms of expressed and unexpressed expatiation, praise, criticism, reward, interaction level, language and communication favouring males. The secret lies in being constantly aware that though female and males may be in the same lecture room or laboratory, social pressures and a hidden curriculum may be creating a different learning environment for males and females. Specifically, teachers avoid creating a psycho-social learning environment that is threatening to females such as obtains when grouping is based on sex. Instead effort should make learning environment warm and inviting to all including females through setting equal expectations for females and for males in their classes. Teachers should ensure that they provide positive feedback that convey overt and covert messages to women that they too are capable. In laboratories and workshops teachers should interact with the males and females paying as much attention to females as to males irrespective of the tendency for males to be pushy and attention seeking.

Learning experiences should be organised utilising a variety of teaching approaches such that women can learn through any of the teaching approaches that appeal to them. For instance, lecturers must reduce the use of lecture method which promotes competition and employ also the cooperative learning approach which tends to fit the personality characteristics of women. Harvard University Teaching Fellows Guide provides useful tips that encourage female participation when using the Discussion method of instruction. These include: calling on men and women equally even though men may want to monopolise the discussion; calling on women directly rather than wait for them to volunteer to

participate, avoiding addressing the class as if there is no female or that the females are of no consequence; speaking directly to males and females calling each person by name; not allowing women to be interrupted by peers; avoid patronising female students by making "helpful" comments that imply female incompetence; avoiding the use of examples and anecdotes that reinforce negative stereotypes of women.

Topics for seminars, field trips and experiments conducted could be made relevant to women without tampering with the essentials. Stereotypical and sexist presentations of women in curriculum materials could be challenged and learners alerted to the danger of uncritical acceptance of such materials. In this way, learners who may have been intimidated by the course description may well become highly motivated to do well. Below are some examples of what is possible. You may wish to add to the list.

Economics: Is it not possible to teach principles and concepts, for example, macro and micro economics, IMF conditionalities, structural adjustment and debt relief with reference to their relevance to the lives of women?

History/Political Science” Let’s take a course on ‘Independence struggles in Africa 1950-1965.’ We can be sure that men will feature prominently in the syllabus and women’s contribution would be virtually invisible. Could it be true that only men make decisions and actions, which change our lives in one way or another? We can correct this erroneous view by including topics on women’s contributions for seminars and project work and encouraging learners to see that historical records which exclude women are distorted and incomplete.

Linguistics: Surely it must be possible to illustrate grammatical structures using sentences that do not define women by their appearance or as objects of the male gaze or that are not sexually suggestive, for example, “John’s turned on by Mary in tight trousers.” Some recent studies have shown that such sentences are consistently used in Linguistics texts. You can use them in your teaching but at the same time sensitize learners to the stereotypical images or, better still you can simply replace them.

Sciences: Science permeates all aspects of life on this planet, yet it is considered a male preserve into which females venture with trepidation. We need to be serious about educating women in the sciences because this knowledge is germane to the solution of some of our pressing problems. Society does not encourage women to be curious and explorative so

they are disadvantaged when they study the sciences along with males. Science lecturers must bring the curriculum to life so that women would appreciate its relevance and be motivated to do rather than learn second hand about the role of science in their lives. They must see science in use. Principles and laws, which might seem very abstract, could be understood if they were related to the female experience. For example, experiments in physics, chemistry, marine biology could be designed to reflect women's interest in order to avoid gender bias and its negative effect on women's learning. This is one area where the lecturer's ingenuity could be vital. Lecturers could also point up the links between the sciences and other subjects in the curriculum, where these exist. The following anecdote is instructive in this connection:

A female learner gained admission into the Home Economics programme in a particular college. She was very certain of success."After all wasn't Home Economics all about cooking and sewing, which were her best subjects?"What she did not know was that, physics, chemistry, biology and maths were prerequisites for the programme. Our learner was dropped from the programme before she 'd had a chance to do any cooking or sewing! Nobody had told her at school that Home Economics was science based. What is worse, the lecturers at college missed the opportunity of relating the subjects to the learner's interest. A few years later she obtained a Msc. from the United States and she now teaches home Economics at the college.

Teachers in higher education should learn to evaluate their gender sensitivity in pedagogy through having colleagues observe and offer comments or through self evaluation of video-recorded teachers' classroom interaction. Such evaluation will serve as a useful feedback in lecturers' attempt to encourage greater participation of females in higher education.

- ❑ Video-record 2-4 classes including laboratory work you organise for your students. Have this replayed and you evaluate the extent to which females participated in the work.
- ❑ In addition note all your teaching behaviours such as feedback messages that promoted women's participation and the ones that hindered expected participation.
- ❑ Choose one topic in your discipline and try organising learning experiences using the cooperative learning style. Try it out and note any effect on your female students.



Activity 9.7



The Social Context of Teaching and Learning and Enhancement of Female Participation
Amy Davies



Reading 9.3

Lecturer behaviours that erode female learners' self esteem include being overtly partial to male learners by praising their efforts; confirming high expectations by verbal and non verbal means; offering help with their formulations; allowing space for them to organise their thoughts as they respond to questions; giving the impression that you think they are capable by directing most of your questions at them and listening attentively only to their views; making eye contact with them; using illustrations mainly from their experience; showing concern when they appear to have learning difficulties; and constant use of the generic masculine pronoun, even where it would be appropriate to use feminine pronouns.

The above would exclude women from the teaching/ learning event and thus demotivate them as well as lower their self esteem. There are yet other anti female acts which lower self esteem by devaluing women and by reinforcing the judgmental aspect of stereotyping which they would have already internalised These would include destructive criticism; open rebuke; show of impatience at request for explanations; questions asked to catch them out , mock or belittle them- this could be conveyed through sarcasm, for example, "I'm sure Musu would like to react to that comment," when the lecturer is fully aware that Musu has no thoughts on the subject; make them the butt of jests and so offend and embarrass them. A sentence from a Linguistics text, which is obviously intended to be funny, comes to mind: 'Don't touch my projectile!' With it's sexual undertone, such a sentence would amuse the male learners, but would definitely embarrass female learners; cracking risqué jokes which subtly portray women as sex objects and generally show them in a poor light; this might cause male learners to smirk or giggle in a conspiratorial manner and perhaps enliven an otherwise boring class. But for the women it would be in bad taste, especially if there are only a handful of them in the class.

Further examples of such behaviours are:

Using body language to transmit negative messages, for example, rolling the eyes heaven wards, contorting the face, shrugging, throwing up the arms, sucking in of the breath, pursing of the lips and smiling wryly- all intended to convey feelings of exasperation and low perception of women's capabilities; assuming a superior attitude and using bombastic language (which even the favoured males have difficulty understanding) to impress them; and closely related to this is the exercise of power and control by stressing that the subject is difficult and by giving strong indications that s/he has the power to make or break them. This last is not limited to interactions with women but it is women who are usually more vulnerable and who are more likely to cower.

Negative behaviours outside the normal classroom:

Touching is not common but it does occur on field trips and in face to face or one to one encounters. A female learner who requests private help from a male lecturer might be forced to endure touching which reduces a lecturer/learner relationship to a male /female one, thus demeaning the female.

Workshops, seminars, labs and field trips

These are ideal situations for promoting learning but if not properly handled they could be threatening for females. Lecturers should not only avoid gender bias, in favour of males but they should also actively help female learners avail themselves of the kind of learning offered. This they can achieve by not giving women traditional female roles, like recorder, for example; by setting up mixed ability groups comprising male and female, so that the weaker females can learn from the better learners; and by gradually giving them greater responsibility to enable them function as chairperson, interrogator, presenter, critic or designer of experiment so that they are no longer just one of the crowd.

You might think that the negative behaviours described above could not occur in your college, but they could and do occur sometimes. Normally they are apparent only to the gender sensitive ear or eye. Sometimes such behaviours are inadvertent but because of their potentially damaging effect on the learning process, we should be vigilant and avoid them at all cost.

Excepts from:

Davies A. (1999). Empowering women for success in Higher Education. Contribution to UNESCO Draft Guide to Teaching and Learning in Higher Education, BREDA, Dakar.

Administrative Strategies: Here the focus is on administrative policies that can promote gender equalities in access and participation. First, there must exist clearly defined affirmative action in admission policies in order to increase the proportion of women in higher education. A 30% quota may be set aside to give more women opportunity to obtain higher education. This argument is based on the fact that the social factors that operate negatively affect their performance in selection/admission examinations resulting in lower scores than males. The lower scores may not be an objective measure of their intellectual capability.

In the same way, special effort should be made to increase the number of women occupying high positions in higher education administration. For instance, by deliberately appointing a woman as the Chief Executive of Universities' commission, or Chancellor or Vice Chancellor, or Registrar or Bursar, one is subtly saying women are not inferior to men

in education matters. Affirmative action is required to increase the visibility of females in administration of higher education.

Each higher education institution must have a strong Career and Guidance Counselling outfit that is gender sensitive to take care of the problems of girls who often find college environment harsh and even threatening especially in struggling for scarce resources such as water and in managing sexual harassment. Institutions should develop a definite policy on sexual harassment as a means of restoring the confidence women and their parents have in administration of higher education in terms of protection and security of women and girls.

Universities and Colleges should organise training and seminars on confidence building for women so that they can become assertive and maintain their human rights.

A mentorship programme can be set up whereby experienced and professional women and even men can be linked up with young women in higher education for purposes of mentoring these students and helping them surmount any obstacles to the realisation of their academic dreams.

Periodically conduct gender analysis of administrative and academic activities in institutions of higher learning as a basis for initiating changes in teaching and learning process as well as administrative policies which are meant to enhance the status of women in higher education.

Women Studies should become a feature in institutions of higher learning to create an interdisciplinary, academic forum for research, teaching and discussion on gender issues. A curriculum guide for Universities' Women Studies in Nigeria for instance is currently being developed by the Network for Gender and Women's Studies in Nigeria. The establishment of Women's/Gender Studies will definitely promote awareness of gender in higher education.

Organise gender sensitive seminars for all academic staff and administrative staff in higher education to make them aware of the influence of gender on equality of access and achievement and bring about a change of attitude to assist women participate fully in higher education.

Still More Strategies

- Course content in all subjects needs vetting for the inclusion of women-oriented examples and practice, and for the recognition of women' interests. This can be at the level of ensuring that women authors appear on a literature syllabus, women in history

on a history syllabus, women artists and the representation of women on an art syllabus, each signalled through the name of the course and as a matter of course.

- ❑ With subjects more 'traditionally' studied by men, examples from the domestic sphere or gender-free examples can be chosen to illustrate rules and points. The adult education/Access experience is helpful here: assessing and recognizing the transferability of prior learning by women in a science context leads to many hitherto 'non-scientifically oriented' women being able to undertake and succeed in subjects like Physics and Chemistry.
- ❑ We should consider how we can develop course content which reflects and causes reflection upon women's lives. We should ensure that all subjects are welcoming to women, in terms of course content, examples, structure and modes of presentation.

In addition, for mature women in particular:

- ❑ Creche and nursery facilities need to be provided, with times that span the college day (nurseries that close earlier than lecture schedules cause immense problems).
- ❑ Interviewing and admissions procedures should be flexible so that times suit women with children. During interview, women with domestic responsibilities should be made aware of the possible ways in which they can combine these responsibilities with study: the flexibility of modes of study, the availability of concessions (which could enable them to take part in courses for which they have to pay fees, without feeling they were taking the money out of the family food allowance) need to be explained.
- ❑ Accessible returner courses should exist to ease the move from home and/or work into study, for women who have been in paid or unpaid work, inside or outside the home, and for whom the institution might seem threatening, the course 'not for them' because of low self-perception.
- ❑ Course should be available in part-time, so that women can take them alongside child-rearing and part-time work, and can move courses if their partners move jobs.
- ❑ Award of scholarships/bursaries for women from less-privileged homes.
- ❑ Effective utilisation of guidance and counselling service units on campuses.
- ❑ Group practical work where women are made leaders.

Improving Lecturers Attitudes and Teaching Skills

The module concludes with this activity for good reason. The relationship between teacher and learner in the learning situation has a powerful influence on the nature of the learning that occurs or indeed on whether or not any meaningful learning takes place at all! The activities below are intended to make you see to what extent your teaching strategies and your classroom interactions in general are suitable for teaching our female learners in male dominated classroom. Before you begin, read the following, which summarises a number of the points, made above. It will be useful as a check list as you analyse your classroom interactions for gender bias as well as for good teaching/learning strategies:

INDIVIDUAL lecturers must examine their classroom behaviours with a view to eliminating all forms of expressed and unexpressed expatiations, praise, criticism, reward, interaction level, language and communication favouring males. The secret lies in being constantly aware that though females and males may be in the same lecture room or laboratory, social pressures and a hidden curriculum may be creating a different learning environment for males and females.

Specifically, teachers should avoid creating a psychosocial learning environment that is threatening to females such as obtains when grouping is based on sex. Instead efforts should be made to make the learning environment warm and inviting to all by setting equal expectations for both sexes. Teachers must ensure that they provide positive feedback that conveys overt and covert messages to women that they too are capable. In laboratories and workshops lecturers should interact with males and females paying as much attention to females as to males irrespective of the tendency for males to be pushy and attention seeking.



Request help from the faculty of education or its equivalent or the Pedagogy Guidance Centre on how to conduct Action Research to correct flaws in your

Activity 9.8



teaching strategies; and try out new strategies to improve your performance. You might start with your marking and attitude to written work. You can ask others to join you so that you can share your findings. This could be a very humbling but extremely useful experience!

In conclusion, when lecturers become gender sensitive and readily apply some of the strategies described above, the chances of increasing the proportion of women who participate in higher education is bound to increase.

SUMMARY

In this module we:

- ❑ developed a conceptual framework for the need to empower women for success in higher education;
- ❑ reviewed factors which hinder their participation in higher education; analysed their needs;
- ❑ identified sexist behaviours which demotivate them;
- ❑ identified a number of gender related interventions for improving the female success rate in higher education
- ❑ examined our teaching behaviours in the light of our goals;and
- ❑ acquired teaching skills and attitudes that are women friendly.

References

Corrected references to be inserted

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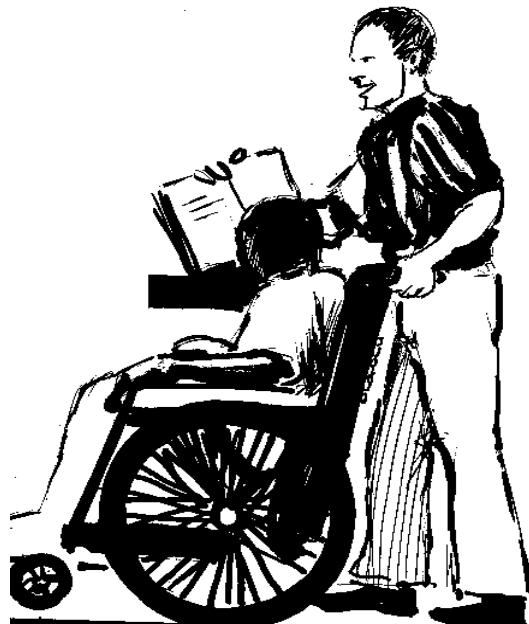
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Module

10

Empowering Special Groups for Success in Higher Education





Reflect on the following as you work through this Module

84. The Tokyo Conference also requests an increase in participation rates in higher education and asks that appropriate strategies be adopted for increasing the participation of disadvantaged groups, who must be encouraged to undertake higher degrees and enter academic and graduate employment. Similar efforts are also needed to encourage the participation of ethnic minorities.

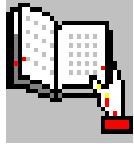


Article 3: Equity of Access

- d. Access to higher education for members of some special target groups, such as indigenous peoples, cultural and linguistic minorities, disadvantaged groups, peoples living under occupation and those who suffer from disabilities, must be actively facilitated, since these groups as collectivities and as individuals may have both experience and talent that can be of great value for the developing of societies and nations. Special material help and educational solutions can help overcome the obstacles that these groups face, both in accessing and in continuing higher education.

Extracted from the:

*DECLARATION
OF THE UNESCO
WORLD
CONFERENCE
ON HIGHER
EDUCATION
(1998)*



Introduction and General Objectives

Introduction

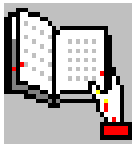
This module focuses on students with special learning needs such as the gifted and the handicapped/disabled. The module emphasises strategies that can be used by the teacher in a higher educational institution in promoting access, participation and achievement of students with special learning needs.



After completing the module, you should be able to

- π describe how teaching and learning in a higher institution can be made friendly for students with special learning needs;
- π ensure full participation of this group of learners in class work, laboratory work and field work; and
- π state equity considerations that should be underscored in teaching this group of higher education learners.

GENERAL OBJECTIVES



10.1

Special Needs Education in Higher Institutions

Introduction

Most often, people ask “What is Special about Special Needs Education?” or “What makes Special Needs Education Special?” Special Needs Education is special because of the consideration it gives to the factors that make learning possible for some learners, easier for others and optimum for everyone who have unusual learning needs. The consideration include:

- Special methods of instruction
- Special materials of instruction
- Educational placement alternatives.

Attention is turned to these three areas in this Unit.



At the end of this Unit, you should be able to:

SPECIFIC OBJECTIVES

- π explain the concept of Special Needs Education; and
- π identify the uniqueness in developing curriculum for the special student.

The issue of special needs education in higher institutions of learning has become a major problem and yet ignored. Very often, people tend to think special needs education begins and stops at the primary school level. Yet, it is in institutions of higher learning that the major challenges are found. Let us reflect on some of the problems that are encountered in colleges and universities.

Naidu is a 25-year old science education student in the University. Naidu was not only emotionally attached to his father, they were both playmates. His father was the breadwinner of the family. Two years ago his father died in a motor accident. This devastated him and he could not cope with the emotional trauma. He became depressed and withdrawn. He became short-tempered and aggressive at the simplest provocation. He started staying away from classes and at the end of the term failed his exams and was asked to withdraw from the university.

Mogobe is an asthmatic student. She was always irritated by the dust from the chalk and dust in the class during lectures. She stayed away from classes most of the time. This affected her performance. Michael is epileptic. He remained withdrawn. He was afraid to attend classes taking place upstairs. He was always worried about having an attack. The uncertainty of the unknown for example when the next attack will take place – the humiliation the attacks bring with them. This affected his learning, academic performance and social life.

Paul was a Home Economics student. He was always among the top five in the class. Paul's performance was consistently and gradually dropping. It was later found out that Paul's girlfriend had left him for another boy. Paul could not take it. He became depressed and withdrawn. This affected his class performance. He received serious counselling. This helped him to come to terms with his disappointment. He later picked up in his class work.

Jane is an albino. She was admitted into the University to read B.Sc. Chemistry. Despite her outstanding performance in the Cambridge School Certificate Examinations, she could not do well in Physics and her vision was very poor to read Chemistry. She became more frustrated. She was not allowed to make use of her tape recorders in the class because that was seen by students and lecturers as cheating. She was advised to withdraw or change courses. A survey carried out in a particular university with nearly 9000 student population shows that there were over 53 students with variety of disabilities needing special services. These disabilities include visual, hearing, hypertension, asthma, hayfever, emotional, allergy, spine, ulcer, physical, respiratory, HIV/AIDS and poverty problems.

The conditions described here are quite common in most institutions of higher learning. These students feel worried about their conditions and how they will cope with their academic work especially if the support services are not available.

The need for this description is to help teachers to understand situations which are usually common in their classes that affect learning and teaching. Very often, there is a misconception of what special needs education is all about and who receives it. Special needs education is tailored for students who may be experiencing difficulty with their learning due to identifiable or unidentifiable factors. Let us examine the subject in a little more detail.

The Concept of Special Needs Education

Special Needs Education is the education of individuals who have learning difficulties because of some handicaps resulting from visual, auditory, emotional, or other physical disabilities due to circumstances of birth, mental or physical health patterns or accident in later life. **It also caters for the Gifted and Talented.** Special Needs Education can be looked at as a way of treating people as individuals. The gifted and talented are provided with programmes to encourage them to go at their own pace while those with physical problems which affect their education are provided with such programmes that take care of their individual learning needs with the goal of making them enjoy and benefit from available education. In other words, Special Needs Education focuses on the individual who experiences difficulties with his or her academic and adaptive behaviour as well as general learning problems.

The behaviour deficits shown by such people are:

- hearing impairment
- visual processing problems
- speech and emotional disorders
- attention problems
- social withdrawal
- absenteeism
- hyper-activity (in the case of the Gifted).

Students who exhibit these problems can be found in all institutions of higher learning.

According to Abosi (1999), 'special groups' of students can be defined as those students who experience difficulty with their learning due to physical, psychological, health, school and/or environmental factors. This group includes both gifted and non-gifted students. For example, a 'gifted/talented' learner could experience learning difficulties if not catered for. This could result in the development of subversive behavior.

Special needs education is part of general education which treats people as individuals, adapting relevant equipment, personal curriculum and methods to overcome both identifiable and unidentifiable problems that obstruct learning. Lecturers should become more sensitive towards a heterogeneous student body. There is a wide range of special needs in the same classroom today. Some of the concerns of 'special needs' education in higher education include the fact that some students experience difficulties in learning and thus not make the grade. It is important to establish institutional support services that can accommodate problems.

Every individual has his or her characteristic way of learning and each disabled and gifted student's learning patterns may or may not relate to conditions of disability defined in medical terms. In the teaching and learning situation, it is important to stress that no method is best except that method which effects a positive change in the individual.

For proper understanding of other terms that have direct bearing with the issue of persons with special needs, it is necessary to further distinguish between DISABILITY, HANDICAP and IMPAIRMENT.

Special needs education is part of general education which treats people as individuals, adapting relevant equipment, personal curriculum and methods to overcome both identifiable and unidentifiable problems that obstruct learning.

DISABILITY

This involves health deterioration or a stable impairment of body functions which restrict the functional organs. It is usually caused by diseases, heredity, accident and trauma after effects of deficits. They include:

- absence of an arm or both arms.
- defects in the legs.
- spine.
- eye or ear.
- other functioning body parts.

When a victim of an accident becomes crippled and could not walk, he or she is disabled, but if such a person can get around to do what he or she desires, the person is not necessarily handicapped.

IMPAIRMENT

This is the condition of mental, physical and sensory deficits that range from mild to profound. It is an abnormal deviation, defect, damage or malformation in the structures affecting the organs of the body. Disabilities and Impairments without appropriate intervention can result into permanent handicap.

HANDICAP

This refers to obstacles, difficulties a person encounters on account of a particular visible or invisible disability. If a person can no longer carry out normal duties or does so with a lot of difficulty because of a disability, such a person is handicapped. Handicap connotes barriers, difficulties or problems that place limitation in one's way to perform normal activities. The effect of a physical disability may result into problems of perception, co-ordination, as well as mobility which may limit the participation in the optimum teaching and learning as in a class of non-handicapped persons.



Reading 10.1

Categories of Disability in Higher Education

C.O. Abosi

There is need to highlight some of the disabilities that are generally present in higher institutions.

Speech and Language Disorders

Some students have difficulty in communicating with their lecturers and peers. They find it difficult to participate in oral activities. Friend and Bursuck (1996) maintain that when a student experiences extraordinary difficulties in communicating with others on account of causes other than maturation, a speech and language impairment is implicated. Speech and language impairment are usually associated with articulation problems. Students with articulation problems experience trouble in production of speech sounds, omit words, have difficulty in fluency and in some cases, students stammer. In extreme cases, students with speech and language disorders have difficulty in language production.

Emotional Disturbance

Students with emotional disturbance are usually withdrawn. This kind of behaviour affects their learning. Students with emotional disturbance experience difficulty with interpersonal relationships – they find it difficult in making friends since they are always on their own or easily get irritated when teased by mates. Loss of a close relative could cause this situation especially in death or broken homes.

Hearing Impairment

Hearing impaired students are students who experience difficulty with their hearing. This problem may be mild such as in hard of hearing students. Students with this difficulty have problem hearing or listening to lectures from the back of the class. Hard of hearing students could be assisted by providing them with hearing aid. The other extreme condition is deafness. Students who are deaf have difficulty understanding spoken words in the class even when they have been provided with hearing aid. Students who are deaf could be assisted in the class by total communication approach. Total communication involves sign language, finger spelling, gestures, lip-reading, auditory training, use of flash cards and displays. A deaf student definitely needs the services of sign language interpreter in the class.

Visual Impairment

Although it attracts more attention and sympathy visual impairment poses the least difficulty in learning and teaching situation provided the basic provisions have been made. Such provisions include brailers, tape recorders, tapes, typewriters, eureka, mobility and orientation training mobility materials, magnifiers, etc. Students with visual impairment are students who experience difficulty in their vision. Visual problems can be divided into two major groups. These are students with visual handicap for example, blindness, low vision and partial sight. Students who are blind or low vision need to be trained in braille reading and writing. They also need tape recorders in the class to record their lecturers which they can transcribe later into braille. Students who are partially sighted can fit into normal class using magnifiers and the lecturers write in bold print. The other group of students with visual impairment are students described as suffering from errors of refraction. They may be short sighted (myopia), long sighted (hypermetropia), or with blurred vision (astigmatism). Such students are provided with such aids as concave, convex lenses as the case may be.

Physical and Health Impairment

These are the commonest problems in the universities and colleges. Physical and health impairment include students with orthopedic condition or inability to move about. Other conditions include students with neurological disorders such as epilepsy, spina-bifida, cerebral palsy, sickle cell anaemia, respiratory disorders (tuberculosis), asthma. Students with orthopedic conditions are provided with wheel chairs. Modifications are usually needed with the buildings, for example the provision of ramps are required. Students may also require muscle support materials that will assist them when writing. Some physical and health conditions would need education and enlightenment of the generality of the students to encourage change of attitude or adoption of positive attitude in helping students who may be having such conditions as epilepsy, tuberculosis, cerebral palsy, asthma, etc. Experience has shown that students generally avoid them.

Other Students Requiring Special Needs Services

The concept of special needs education has recently been broadened. In a UNESCO (1999) workshop held in Dakar, African expert group broadened the concept of special needs education to include marginalised group. The marginalised group include students with HIV/AIDS, abused students, poor students, gifted students, abandoned children and children on the street. The issue of HIV/AIDS has become one of the most sensitive discussions in the universities because the prevalence of the condition has become a source of worry not only to the students but also to the administrators. The HIV/AIDS manifests itself in different forms. A fourth year student suddenly started losing her sight. The University got worried and rushed her to the hospital. After series of tests it was discovered that she had AIDS. Students who have AIDS or who come from extreme poverty background, or who have been

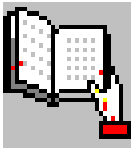
abused by step parents find it difficult concentrating on their studies. Students who fall within this category are usually referred for counselling using multi-disciplinary approach.

It may be necessary to establish a unit to deal with the teaching and learning needs of learners with special needs. Teaching and learning materials may need to be specially developed for these learners. Lecturers would, for instance, need to consider classroom and laboratory activities for learners with special needs. Examination material may also need to be modified. It may also be necessary for more time to be allocated for these students in paper and pencil examinations and tests. Institutions will need to review the extent to which their infrastructure for the special learner is friendly enough to accommodate learners with special needs. A resource center can enable the provision of appropriate equipment, e.g. Braille machines, embossers, hearing aids, canes, tape recorders, empty tapes, wheelchairs, crutches, etc. This center could serve as a link between special needs learners and the various other teaching and learning facets of the institution.

The issue of African beliefs and traditions in so far as it affects societal perceptions was also discussed. It was believed in some societies that disability is a curse or punishment, or that 'albinos' are spirits. As a result, learners with special needs suffer rejection and/or isolation from the rest of the student body. This impacts not only the learners themselves but on the way in which lecturers/teachers relate to them. There is a need to sensitize higher education educators (and learners) regarding these learners irrespective of the size of the class. This will entail observing the characteristics of various disabilities, where established and make referrals to appropriate societal sectors.

Excerpted from:

Abosi, C.O. (1999). Special Needs Education in Higher institutions in Africa. Paper presented at the Regional Workshop on Teaching and Learning in Higher Education, University of Witwatersrand, Johannesburg, South Africa, September 13-16.



10.2

Teaching Students with Special Needs in Higher Institutions



SPECIFIC OBJECTIVES

At the end of this Unit, you should be able to:

- π critically review the process of selecting and implementing learning activities for students with special needs in higher institutions; and
- π describe appropriate educational settings that can be effectively used in educating students with special needs.

Use the following observation instrument to assess the special needs of the students in your class. Retain the information collected for preparing your remediation measures.



Activity 10.1



Things to observe in the classroom

- ❖ Does the student bring materials too close or too far from the eye?
- ❖ Does the student frown or bends forward in order to hear?
- ❖ Does the student remain passive and withdrawn?
- ❖ Is the student restless?

❖ Does the student perform poorly in some or all the courses
❖ Does the student look unhappy?
❖ Does the student daydream?
❖ Does the student absent him/herself from classes?

Expected Competencies of the Teacher of Learners with Special Needs Education

The teacher of learners with special needs education needs should be able to;

- use and interpret a wide range of individual assessment measures.
- make and record objective observation of students behaviour in a wide range of structured and unstructured situation.
- design, implement and evaluate individual programme plans based on assessment and observation.
- possess proficiency/expertise in the specification of behaviour objectives, goal setting, task analysis, programme writing etc.
- use skills in teaching community living by exposing students to gradually increasing levels of demand in the real situation rather than in the classroom.
- possess the skills for working with parents like applying a range of counselling skills needed in the homes.
- competent in working with other professionals and in learning and acquiring beneficial information for the students.
- understanding of general curriculum and working capacity to make the special adaptations needed for developing and implementing programmes for handicapped students.

Students who have some form of disability or the other are a rapidly growing population on campuses of higher institutions. Though it is difficult to obtain accurate figures, between two and six percent of higher education students have physical or learning disabilities that require compensatory classroom teaching.

Ask your students to clarify any special needs. At the beginning of each semester, you might make a general announcement: "Any student who feels that he or she may need help in connection with any sort of physical or learning disability, please speak to me after class, make an appointment to see me, or see me during my office hours." When you meet with a student, explain the course requirements and ask what intervention would aid the student. Students are usually their own best advocates, and they know the techniques and adaptations that best suit their needs.

Remember that disabled students are students first, disabled second. It is natural for able-bodied people to feel hesitant or uneasy when first meeting people who are disabled. But disabled people are neither more or less emotionally fragile than able-bodied people. Thus you needn't worry about hurting the feelings of a student who is blind by mentioning the word see. Students who are blind "see" ideas or concepts, just as students who are deaf "hear" what someone means and wheelchair users "walk" to class. Offer physical assistance only if a student requests help or if the need is immediately obviously.

Be flexible about attendance and promptness. Students who use wheelchairs may encounter physical barriers in getting to class on time. Other students may sometimes feel fatigued or have difficulty concentrating as a result of their disability or their medication. Try to distinguish students' physical problems from apathetic behaviour.

Be sensitive to "non-visible" or "hidden" disabilities. Three principal types of disabilities may not be immediately visible:

- Learning disabilities hinder students of average or above-average intelligence from easily and dependably processing various types of information. Dyslexic students, for example, have a perceptual deficit that prevents them from unerringly interpreting sequences of letters or numbers. It is important to realize that learning disabilities are not a reflection of a student's intelligence, physical or emotional health, or cultural or socioeconomic background. In general, using a variety of instructional modes enhances learning for such students, as it does for all students, by allowing them to master material that may be inaccessible in one particular mode.
- Mild to moderate sensory deficits (low-level vision, slight hearing impairment) should be accommodated by appropriate seating and room lighting.
- Chronic disabilities (diabetes, seizure disorders, cardiac or respiratory conditions, lupus, cancer, AIDS) may interfere with stamina, attention span, and alertness. The attendance and performance of affected students may be erratic, and they may need flexibility in the scheduling of assignments.

Observe seating needs. Students who use canes, crutches, or walkers appreciate having a chair or desk that is close to the door. Access to these seats should be flat: no steps, no uneven surfaces. Wheelchair users need flat or ramped access, and classroom tables or desks must have enough clearance for them to get their legs underneath. Laboratory tables and computer consoles should be set up so that wheelchair users can comfortably reach the equipment.

Follow good teaching practices. Many techniques that will help students who have sensory or learning disabilities will also benefit all the students in your class. For example:

- Open each session with a brief review of the previous session's material and an outline of that day's topic. Conclude each session with a summary of key points.
- Emphasize new or technical vocabulary by presenting it visually (on the chalkboard, an overhead slide, or a handout) as well as orally.
- Describe all visual examples (board work, demonstrations, props). As you work at the board, instead of saying, "Adding this here and dividing by that gives us this," narrate what you are doing: "Adding all scores and dividing by the number of scores, gives us the mean."
- Give students opportunities for questions, clarification, and review.

(Sources: McGuire and O'Donnell, 1989; Smith, n.d.; Wren and Segal, 1985)

Face the class when you are speaking. Deaf or hearing-disabled students who read lips cannot follow the lecture or conversation when your back or head is turned. If you are writing on the board or narrating a desktop demonstration, try to avoid talking when facing the board or the desktop. Remember that, at best, people who are deaf can read only 30 to 40 percent of spoken English by watching the speaker's lips. Augment their understanding by using facial expressions, gestures, and body language.

Arrange for classroom participation or an alternative activity. Students who cannot raise their hand to answer or ask questions may feel isolated or ignored in class. During your first private meeting with such a student, ask how he or she wishes to be recognized in the classroom. Some students will want to be called on; others may prefer to meet periodically with you before or after class to ask questions about course content.

Listen attentively when a student with a speech disability is speaking. Do not finish a student's sentences or interrupt. Never pretend to understand if you are having difficulty doing so. Instead, repeat what you have understood and allow the student to respond.

Give options for oral presentations, if needed. Oral presentations may pose difficulties for students who have speech disabilities. Students who wish to give their presentation without assistance should be encouraged to do so. But some students will want to give the presentation with the help of an interpreter, and others may want

to write out their presentation and ask an interpreter or another student to read it to the class.

Curriculum Concerns for the Special Learner

Curriculum concerns for students with special needs is designed to meet the unique needs of those who may be basically disabled or gifted.

The following areas are to be emphasised.

- Self-help skills.
- Social adjustment in the home and neighbourhood.
- Economic usefulness.
- Academic skills

A useful curriculum therefore, must be built upon the results of a comprehensive analysis of the particular students to be taught. The analysis of the curriculum should also consider the following:

- Forecast the knowledge, skills and attitudes that will be useful when formal schooling ends.
- Should accurately diagnose each student's present level of knowledge and ability.
- Instruction should begin where students can earn the greatest benefit.
- Ensure good instructional setting with its accompanying physical and emotional environment.

Regardless of whether instruction is delivered in residential or mainstream settings, there must be a concern with its efficiency in terms of how well the special child is acquiring needed skills. Some factors that are necessary in providing appropriate instruction for the special child include:

- The curriculum must delimit specific goals and objectives that permit a continuous and smooth progression in skill attainment.
- The curriculum should be thoroughly understood by the teacher and whenever feasible be designed by the teacher.
- The manner in which various curriculum components are presented to the child should be monitored closely to determine whether changes in presentation could facilitate achievement.
- The emotional climate present in the instructional setting should be positive, warm and encouraging.

Methodology in Special Needs Education

The following general methods are characteristic of Special Needs Education:

- work is planned so that each student is rewarded by self-interest activities after completing an assignment.
- individualisation of instruction is stressed.
- work is characterised by less structure and more self-selection on the part of the student.
- learners are motivated by achievement, hence, work is geared to success and chances of error are minimized.
- teacher's encouragement and support are indispensable, in order to motivate the children and raise their expectations from time to time.
- exciting materials likely to generate anxiety in the students are neutralised or removed.
- sensory avenues are used and remedial corrective approaches are stressed.
- there is less academic stress, and evaluation is carried out in a relaxed atmosphere.
- manipulate materials and games so as to have great value for classroom activity.
- group projects have an important place and students are allowed self-selection of groups for instruction, project or play.
- audio-visual aids, such as films, recorders and others are liberally used.
- competition is reduced to a minimum and each student is allowed to pass judgement on his own work.
- Learning environment must be conducive and suitable to special needs of the disabled.
- Removal of architectural barriers that may inhibit movement of students who use wheelchairs and inability devices.
- Provision of entrances/ramps in all buildings for accessibility.
- Ensure the student is trained in the use of all devices and technological apparatus useful to the process of academic learning.
- Teacher should understand the unique needs of the individuals with special needs.
- Teacher should act as catalyst in developing understanding of the handicapped student with their 'normal' counterparts.
- Integrate adjustments needed in assignments or standards in the regular classrooms.
- Ensure that students have all educational materials in the appropriate media.

- Instruct the students in academic subjects and activities requiring adaptation and reinforcement as a direct result of handicapping condition.

Individualised Education Programme (I.E.P)

The primary intent of Special Needs Education requires educators to focus on the needs of individual student with disabilities. The individualised educational programme (IEP) is the most important aspect of the focus for it spells out what teachers plan to do to meet an exceptional student's need while the plan must be approved by the student's parent or guardian. The process comprises six phases which are:

1. *Referral:* The teacher or the parents make a referral of a learner with special needs to professionals for necessary remediations.
2. *Assessment:* This is done to identify the students' present level of academic performance through formal assessment instrument (standardised tests) and informal procedure (observation, checklist etc.).
3. *Instructional Planning:* Planning of a suitable programme for the student. The planning entails establishing goals and objectives of the programme stated in measurable terms (short term or long range goals). Specific instructional methods and materials to be used are also included. The method may include team teaching, modelling, performance contracting, counselling services etc.
4. *Placement:* Parents and guardians can make suggestions as to the kind of placement they want for their child. In any case, they have a right to object to any recommended placement.
5. *Instruction:* Instruction involves implementation of the educational programme and it normally entails methods of instructional techniques specifying the expected number of hours to be spent with the student by the teacher or the child with non-handicapped students.
6. *Evaluation Procedure:* It entails continuous assessment of the student to determine the extent of progress and to identify new or additional educational needs.

It can be carried out at intervals of time such as every four or six months. Through this the educational setting objectives of the plan and teaching strategies are all re-examined.

**Reading 10.2****Educational Needs of Disabled Students**

Sabou SARR

Larousse Dictionary of Psychology defines the word **need** as the state of an individual in relation to what is necessary for him/her. But the most common definition in literature describes the concept of need as the difference between a current situation considered to be unsatisfactory or imperfect and a desired situation deemed ideal, satisfactory or perfect.

Examples : the need to eat, drink, entertain oneself, etc.

The different connotations of the term : There are different types of needs :

- physiological needs determined by living conditions
- educational needs
- psychological needs
- social needs.

The needs we have just listed are essential and of vital importance. Other needs connected with deprivation such as ignorance, poverty, etc, are referred to as **secondary needs** but they do not compromise existence.

In the sphere of education, the terms **felt needs** and **expressed needs** are used in describing the learner's needs. Hence, needs assessment constitutes the first stage used by the teacher in preparing and planning a training programme for a given target group.

The learner's needs are contingent on space, time and his/her environment. It is for this reason that needs assessment is considered as a continuous and regular activity and not as a unique operation that is carried out once.

- *Classification of needs*

The student in higher education today and the institutional environment bear characteristics that are different from those of the 1960s and 1970s. Thus, the needs of students in higher educational institutions in contemporary Africa are different from those of the colonial era.

These needs should be classified according to the following parameters :

- Cultural identity and environment
- Types of curricula
- Identification of objectives – cultural content -methods
- Participatory approach (University institution/students)

- Identification of educational objectives of co-operation agencies and societal needs.

Special Needs Education refers to the type of education given to persons having some sort of learning disability attributed to eye, ear, emotional or other troubles caused by delivery conditions, various forms of mental or physical health or accidents incurred in the latter part of life. It also covers gifted (exceptionally gifted) and talented persons.

The types of deficiencies are :

- Hearing problems
- Eye troubles
- Speech impediments and emotional troubles
- Inattention
- Social isolation
- Absenteeism
- Hyperactivity (in the case of gifted persons).

Teachers assigned to train individuals with special needs should :

- manage an increasingly limited educational system that allows for and encourages competition
- take account of the rapid increase in knowledge and technical innovations in a context where teachers' competence constitutes a key element of the success of advanced training.
- prepare better to meet the present-day challenges
- constantly pursue refresher courses since efficiency is synonymous with competence
- use and interpret a wide range of tools for self-assessment
- make and record objective observations about students' performance in a variety of structured and non-structured situations
- design, implement and evaluate projects under individual programmes based on observation and evaluation
- demonstrate competence/expertise in the identification of objectives, performances, definition of objectives, job analysis and programme formulation
- use skills in community education to expose students at levels presenting an ever-increasing demand for a real situation rather than in the classroom
- have the potential to work with parents, for instance, in using a variety of skills to provide the necessary guidance and counselling services to the groups
- develop skills in intervention with specialists as well as in learning and acquisition of useful information for students

- understand, in general, the curriculum and working capacity permitting the adaptations necessary for the formulation and implementation of curricula for handicapped students.

Enhancing Learning Environment for Students with Special Needs

For teachers in higher education, the following suggestions are helpful in facilitating learning of students with special needs:

- The educational environment should be conducive, suited to the specific needs of handicapped students and to the integration process
 - The need to remove architectural barriers that could limit the movement of students using wheel chairs.
 - Inclined planes: creation of approach ramps in buildings for easy access (space structuring)
 - Training students, using all appliances and useful technological tools
 - Audio-visual aids such as films, tape recorders, etc, should be used without restriction.
 - Ensure that the students are granted the same rights in the common law examinations : Part 1 (DUJEL), First Degree, Master's Degree and Doctorate.
- The institution should conduct examinations with special conditions for handicapped students :
 - extension of the duration of examinations : 1/3 of the time allowed
 - technological tools : braille – transcribing machine
 - cultural contents similar to those for the able-bodied students.

Excerpted from:

Sarr, S. (1999), Higher education in Africa and students with special learning needs. Presented at the Regional Workshop on Teaching and Learning in Higher Education, University of Cocody, 10-14 May.

Least Restrictive Environment

Education of the handicapped in a Least Restrictive Environment provides limitless schooling situations which does not limit their experience and integration with the non-handicapped in the society. The education of the handicapped which include institutionalised and integrated systems should provide each child with a least restrictive environment based on the nature of the need of the student.

Residential Schools: The system provides boarding facilities for the handicapped. Sometimes, the residential schools become a dumping ground and thus there is the trend for de-institutionalising the system.

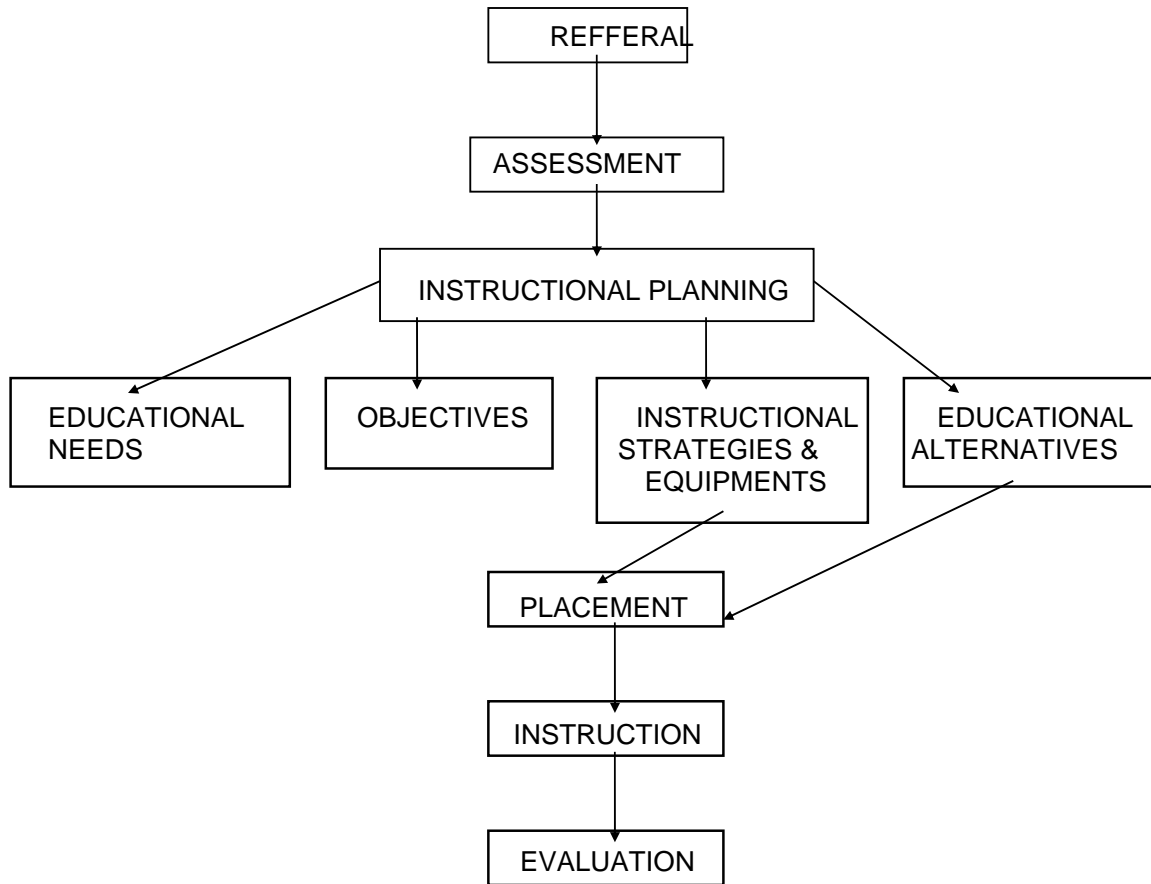
Integration: It refers to the practise whereby handicapped persons are educated with their non-handicapped counterparts in regular schools. Other name for integration is mainstreaming. It is cautious to realise that all handicapped persons cannot be effectively integrated.

Normalisation: The systems allows for the same rights and opportunities as available to the non-handicapped persons.

Services: For effective programming in the least Restrictive Environment, all necessary help and assistance should be rendered to avoid further limitations. Where there are needed devices they must be available to assist the system.

Rehabilitation This is a way of restoring someone back into his/her normal or former condition in order to get useful to self and the society by means of psychological, medical, vocational and therapeutic training. Since disability can disrupt the individuals' abilities to practice their vocation, effective rehabilitation can change the situation.

INSTRUCTIONAL ALTERNATIVES (DIAGRAM MODEL)



Adapted from P. O. MBA (1991) - Elements of Special Needs Education:

Support Services

Maximum result, efforts, effectiveness and efficiency could be achieved through the co-operation of Special Educators and non-professionals. The services of these non-professionals are required in Special Needs Education because of its inter-disciplinary nature. Supportive personnel are professionals in their own fields but provide services needed for optimal achievement of the stated objectives of Special Needs Education. No single professional and or non-professional is exclusively responsible for handling all areas of health, physical, cognitive, affective, social and psychological spectrum of Special Needs Education. Among the supportive services required in Special Needs Education are:

Social workers.
Medical Practitioners.
Parents.
The Psychologists
Occupational Therapists
Speech and Language Therapists
Physiotherapists
Neurologists
Ophthalmologists
Guidance Counsellors
Braillists
Sign Language Interpreters
Readers for the Blind

Training for Employment Opportunities

Higher education training programme for the Gifted, disabled and their handlers should be tailored towards self-employment as well as employment in the public and private sectors so as not to make the huge investment a waste. To this end, there is need for:

- (1) Establishment of a placement centre to explore possibilities of employment for both undergraduates and graduate handicapped persons.
- (2) Granting soft loans to trained/professional handicapped for purpose of self-employment.

Technology in Special Needs Education

It can not be over-emphasised that there is increasing awareness about the role information and technology play in the education of the handicapped. With the knowledge explosion and rapidly advancing technologies, much impact has not been felt by handicapped persons in developing countries. In other words, those handicapped persons have not obtained the full benefit of information and technology breakthrough. The educational technology in Special Needs Education as it relates to each handicapping condition is classified as follows: (a) Visual media (b) Auditory technologies (c) Audio-visual equipment (d) Mobility Aids. Textbooks, Magazines and Journals and other Print or Electronic materials are essential for students to update their knowledge.

For the Blind/Visually Handicapped

- Braille machine, Braille duplicator and Typewriters are some of the most crucial equipment necessary in the education of the visually handicapped. They are to facilitate the production of Braille books, Braille Mathematics, Shorthand Braille code, Chemical formula and equations, Nigerian Braille code, Braille Computer code, Music Braille code and talking book.

- Smellen Chart: It is designed to screen for visual problems.
- The Optacon: It is an electronic service that convert print materials to tactile images.
- Electronic Calculators: The devices can assist in Mathematical calculations and adapted to produce speech or to speak.
- Abacus and Taylor frames: They are used to teach the visually handicapped mathematics.
- Guide Dogs: They are trained to guide the blind.
- Talking Calculator: The calculator provides an auditory display.
- Canes: Collapsible and Electronic canes are helpful for effective mobility.
- Reading Computer Machine: A computer designed to convert prints into speech when it is placed face down on a scanner.
- Thermoform Machine: It is used to make copies of brailion papers.
- Audio-tape: Tapes are used for dictation or recording of lectures.

Hearing Impaired

- *Audiometre*: This is an instrument used to measure the hearing level of an individual. It is graduated in frequency and intensity. There are types like Diagnostic, Audiometre, portable Audiometre, Tympanometer.
- *Hearing Aids*: They are devices designed to aid hearing in an individual with hearing problems.
- *Group Hearing Aids*: These are designed for more than one person. It is for auditory and speech training.
- *Speech Trainers*: They are acoustic devices used to teach children speech.
- Sign Language books are very important in the education of the Deaf/Hearing Impaired.
- *Computers*: They have greater potential for assisting teachers in the delivery of instructional programmes for students with special needs.

Computer assisted programmes have helped students with special needs and freed the teacher from some difficulties on information dissemination.

Technological Aids for the Physically Handicapped

- Electric and manual wheel chairs: They are used by students with limited strength for their mobility.
- Braces and Artificial Limbs: The former are used to strengthen the body while the latter replace portions of the body.
- Crutches: They are made of wood and metals to provide support during movement.

- Electrical Typewriters: They are recommended for students who experience difficulties when writing with the hand.

Learning Disabilities and Persons with Severe Learning Difficulties

- Audio-visual materials e.g. Radio set, Television set, Over-head projector, Opague projector.
- Magnifier
- Computer Machine
- Cubicles with chairs

Gifted and Talented

- Puzzles
- Computer simulations
- Internet



Activity 10.2



- π Describe three ways by which you can identify students with special learning needs in your class.
- π How would you tailor curriculum and instruction to cater for the learning needs of such students?
- π Prepare a proposal to your Vice-Chancellor, Rector or Provost on how to address the learning needs of special students in your university, college of polytechnic.

Summary

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Module

11

Evaluation of Teaching and Learning
in Higher Education



GUIDE TO TEACHING AND LEARNING IN HIGHER EDUCATION



Reflect on the following as you work through this Module

On Evaluating Teaching and Learning in Higher Education

36. One consequence, as the Tokyo declaration mentions, is that it is not possible to arrive at one set of quality standards applicable to all countries, and against which institutions can be assessed. Quality embraces all the main functions and activities of higher education: teaching and academic programmes, research and scholarship, staffing, students, infrastructure, community services and the academic environment. The Arab States declarations consider that 'all higher education systems and institutions should give a high priority to ensuring the quality of programmes, teaching and outcomes. Structures, procedures and standards for quality assurance should be developed at the regional and national levels commensurate with international guidelines while providing for variety according to the specificities of each country, institution or programme'.

37. The Dakar declaration includes the idea that quality 'entails the operationalization of the envisaged outcomes (a clear definition of goals and objectives), of the inputs the institutions will work with (thus a review of admissions criteria) and the processes and procedures for working with the inputs (the way the management system coordinates structures, resources and the institutional culture to obtain the required products)'. The Arab States Conference states that 'quality mechanisms are implemented through continuous assessments and comparisons between observed and intended processes and constant search for the sources of dysfunctions to correct them'.

65. Recommendations addressed to each higher education institution were approved by the Tokyo Conference and seem also implicit in the Havana and Dakar Conferences. The Tokyo statement says:

- Each higher education institution must define its mission in harmony with the overall goals of the sector itself, translate this mission into observable indicators and allocate the required resources'. In the same vein, the Beirut Conference states that the missions 'should be translated into well-defined objectives, with allocation of the required resources, and the establishment of concrete

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mechanisms proper to ensure adequate monitoring and evaluation of progress and achievements based on observable indicator’.

109. The Dakar Conference urges that each institution ‘create appropriate structures for evaluating and controlling the quality of its curricula (including the performance of students) in keeping with agreed guidelines’ and recommends that ‘each Member State establish a mechanism for evaluating the quality of higher education institutions, building on existing practices in the region. Such a body would be responsible for evaluating training, research and consultancy activities in the light of institutional missions, national education programmes and the needs of changing times. This should be a control rather than a punitive mechanism, and should use a combination of external and internal evaluation strategies’.

110. The Tokyo Conference proposals are summarised through the affirmation that ‘each country of the region should establish a mechanism for evaluating the quality of its higher education institutions. Countries must introduce quality assurance methods at both institutional and systemic levels. These may include academic accreditation, academic audits and institutional evaluations, performance funding, review of disciplines and professional areas, qualification frameworks and competency-based approaches to vocational education and training’.

113. The Dakar Conference proposes that institutions of higher education should be required to establish minimum teaching-learning guidelines for each course model. It says that they should be explicit about ‘entry and exit behaviours in terms of skills, values and attitudes, the teaching and evaluation methods, all within a specific time frame’.

Article 11. Qualitative evaluation

- a. Quality in higher education is a multidimensional concept, which should embrace all its functions, and activities: teaching and academic programmes, research and scholarship, staffing, students, building, facilities, equipment, services to the community and the academic environment. Internal self-evaluation and external review, conducted openly by independent specialists, if possible with international expertise, are vital for enhancing quality. Independent national bodies should be established and comparative standards of quality, recognised at international level, should be defined. Due attention should be paid to specific institutional, national and regional contexts in order to take into account diversity and to avoid uniformity. Stakeholders should be an integral part of the institutional evaluation process.
- b. Quality also requires that higher education should be characterised by its international dimension: exchange of knowledge, interactive networking, mobility of teachers and students, and international research projects, while taking into account the national cultural values and circumstances.

Extracted from the:

*DECLARATION
OF THE UNESCO
WORLD
CONFERENCE
ON HIGHER
EDUCATION
(1998)*

11.0

Introduction and General Objectives

Introduction

“The Dakar Conference proposes that institutions of higher education should be required to establish minimum teaching-learning guidelines for each course model. It says that they should be explicit about ‘entry and exit behaviours in terms of skills, values and attitudes, the teaching and evaluation methods, all within a specific time frame”.

Evaluation is a core part of the educational delivery process. The Dakar Conference endorses this view as can be seen in the Declaration quoted above. Many practitioners in the higher education system are reasonably skilled in the art (and science) of evaluating teaching and learning. Yet, many lack essential skills of evaluation. This module is to provide learning experiences for the “experts” and “novices” alike. Dison and De Groot (1999) have stressed the need for compatibility between content, teaching methods and assessment procedures. It is only when these are in tandem that learning can be appropriately assessed. The outcome-based evaluation (OBE) model of student assessment in higher education is now gaining wide acceptance.

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After completing the module, you should be able to :



- π explain concepts used in evaluation
- π develop techniques for evaluating the performance of your student:
- π analyse and interpret learner's assessment results ; and
- π conduct self evaluation of your teaching.

**GENERAL
OBJECTIVES**

11.1

Clarification of Key Concepts

At the end of this Unit, you should be able to:



- π define the following concepts - measurement, assessment and evaluation; and
- π differentiate between various types of evaluation.

**SPECIFIC
OBJECTIVES**

Measurement, Test, Assessment and Evaluation

With regard to education, distinctions can be made between measurement, test, assessment and evaluation as follows:

MODULE 11: Evaluation of Teaching and Learning in Higher Education

11.5

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Measurement is a procedure for assigning numbers or specified attributes or characteristics in a manner that conveys the real world nature of what is being measured. **Tests** on the other hand are systematic procedures for observing persons and describing them with either a numerical scale or a category system. Thus, tests may give either qualitative or quantitative information. To arrive at an evaluation, you use various means of **assessment** such as observation, interviews, and administration of tests. Thus assessment is the process of judging the worth of a person, programme or event using tests as tools. **Evaluation** goes beyond measuring, testing or assessment. It involves judging the value or worth of a student, of an instructional method, or of an educational programme and making decisions. Such judgements and decisions made, may or may not be based on information obtained from tests.

Tests are used regularly in relation to a number of classes of decision:

- **Selection** decisions are made when it is necessary to accept some persons and reject others.
- **Placement** decisions involve assigning persons to different levels of instruction or work.
- **Classification** decisions involve the assignment of persons to one of several categories, jobs, or programmes that are not necessarily thought of as levels of work or instruction.
- **Career counselling and guidance** decisions are made by individuals as they explore possible careers and the world of work. These are individual decisions as contrasted with institutional decisions.
- **Educational diagnostic and remediation** decisions relate to the question, “what learning activities will best adapt to this student’s individual requirements and

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thereby maximise the student's opportunities to attain chosen goals?" Diagnosis implies that both the content and the nature of the instruction the student will receive are known.

- **Programme improvement and evaluation** decisions are often improved by the use of test information. It is frequently helpful to measure the instructional process as well as the outcomes or products of instruction.

Tests serve other purposes, such as:

- (a) providing information for grading students,
- (b) giving feedback to students to facilitate learning,
- (c) providing feedback about the effectiveness of learning,
- (d) motivating students to study, and
- (e) serving as scientific tools in research in education and the social sciences.



A teacher corrects exam papers handed in by his learners. He puts a grade (figure) on each of the papers without adding any comments on the learner's work.

Activity 11.1



a) Has the teacher evaluated the work of each of the learners ?

or

b) Has the teacher measured the performance level of each of the learners ?

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In Yoloye's (1998) view, a decision-making definition of evaluation is very appropriate for higher education. Whatever definition of evaluation one uses however, the following three components of the evaluation process remain valid:

- The entity to be evaluated which could be a product, a process or a performance.
- Measurement of the entity to arrive at a score, grade or other quantitative representation.
- Evaluating the quantitative measure by putting a value on it. The value could take various forms such as pass/fail, first class/second class/third class/pass/fail.

The nature of evaluation

Evaluation varies based on its nature, which may be **quantitative** or **qualitative**. In the field of education, evaluation is usually of a **quantitative nature**. Grades (marks in figures) and ordered categories (A,B,C,D) used to measure the scope of results scored by learners relate to a quantitative type of evaluation. For example, the quantitative evaluation of the internal efficiency of an academic year may be quantitatively evaluated based on :

- . the ratio between the number of degree holders and the number of registered learners
- . the ratio between the number of repeaters and the total enrollment figure.

Evaluation may also be qualitative. For instance, the internal efficiency of an academic year may be qualitatively evaluated by :

- . comparing skills acquired by the end of the school year with learners' skills in the beginning of the year,

. comparing targeted skills with acquired skills.

The method of evaluation

Depending on the goals aimed at, evaluation may be conducted based on various methods. The method of evaluation may be:

- a. diagnostic
- b. normative
- c. criterion-based

Evaluation is diagnostic when it aims at assessing the individual features of learners in relation to the requirements of courses or curricula. Therefore, the goal of diagnostic evaluation is to identify the distinguishing features of the subject targeted by the evaluation as such features may determine the expected results.

Diagnostic evaluation may be conducted at the beginning of any new course or curriculum. In such cases, its aim is to ascertain whether the learner has the skills required to enrol for the course. Diagnostic evaluation may also be implemented during or at the end of a particular course.

An evaluation is **normative** when it compares the performances of a particular learner to the performances of the other learners of the same level or class taken as the reference group. The merit-based listing of learners relates to such a normative evaluation.

Evaluation is **criterion-based** when it seeks to assess a learner's performance level based on success criteria implicitly or explicitly defined according to the objectives. It does not involve comparing a learner's performance level with other learners'

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performance levels. It seeks to determine the extent to which goals and objectives targeted by a particular course have been reached.

Forms of Evaluation

The primary objective of evaluation in an educational context is to prepare the ground for decisions to be made on educational activities. Activities to be evaluated may relate to:

- a. learners' achievements
- b. Courses
- c. Teachers
- d. Educational institutions



Applicants for enrolment in the first year of a particular higher education institution have to take enrolment tests. Enrolment tests are designed on the basis of subject content necessary for good performance in the first-year

Activity 11.2



courses. Applicants for enrolment in the first year will be listed on a merit basis after taking the tests. Only the first 20 applicants will be authorised to enrol.

Which method or methods of evaluation are used by the higher education institutions to select candidates for enrolment in the first year ?



Activity 11.3



A teacher has arranged the content of his annual courses in modules. He gives tests at the end of each module. The teacher has in mind a double objective: 1°.

To compare all learners' performance levels and to classify them based on their achievements with each test ; 2°. To provide each learner with adequate information to help him improve his performances. What is the type of tests organised by the teacher at the conclusion of each module?

11.2

Tools and Techniques for Evaluating Learning

At the end of this Unit, you should be to:

- . identify various evaluation tools;
- . analyse data collected for evaluation; and
- . interpret results of evaluation



SPECIFIC OBJECTIVES

Evaluation Tools in Higher Education

The major tools used to evaluate learning are :

- a. Tests
- b. Questionnaires

- c. Observation Schedules
- d. Interview Guides

Tests as Tools for Evaluation

The major tool of evaluation in higher institutions are tests. Tests can be of various types. They can be classified on the following basis :

By Kind of item

- Choice items (true-false, multiple choice, matching)
- Completion items
- Short answer items
- Essay items

By how observations are scored

- Objectives tests
- Subjective tests

By degree of standardization

- Standardised tests
- Non standardised tests

By administrative conditions

- Individual tests
- Group tests

By language emphasis of response

- Verbal tests
- Performance tests

By emphasis on time

- Power tests
- Speed tests

By score-referencing scheme

- Norm-referencing
- Criterion-referencing

By what attribute is measured

- *Achievement tests*
 - Survey batteries
 - Specific subject tests
- *Aptitude tests*
 - General scholastic aptitude tests
 - Readiness tests
 - Tests of specific aptitudes
- *Personality and adjustment measures*
 - Projective techniques
 - Structured tests

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- Self-report questionnaires
- *Interest inventories*
 - Vocational or career interests
 - Other interest inventories
- *Attitude and values questionnaires*

Description of Tests

Tests can be described in a variety of ways:

- Group and individual tests differ in the number of persons to whom they are simultaneously administered as well as in the manner of their administration. Group tests sacrifice maximum examinee-examiner interaction, personalised testing conditions, and clinical observations for cost and efficiency.
- Tests differ in their objectivity – the extent to which every observer of the examinee’s performance on the test will give exactly the same report of what was observed. The scoring of a test is subjective if the report of the observed performance varies a great deal from one observer to the next.
- Standardisation is the extent to which a test’s observational procedures, equipment and materials, and scoring rules are pre-established so that exactly the same testing procedure can be followed at different times and in different places. This view of standardisation has nothing to do with whether norm-referenced data are provided. It provides a way to improve a test’s objectivity and the interpretation of the examinee’s performance on the test.
- Verbal tests focus on the verbal responses of examinees, while performance tests focus on non-verbal responses. Verbal ability may be necessary to

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understand the directions on performance tests and to mediate the non-verbal responses.

- If a test is designed to measure speed of responding, then the items are generally not difficult under unspeeded conditions. Many tests are concerned with assessing the amount of knowledge or understanding an individual possesses, independent of speed, and testing conditions are essentially untimed. Such tests are called power tests. Many tests in education are partially speeded; often this is unknown to both the examinee and examiner.
- Norm-referenced tests describe the examinee by stating where an examinee is located in a specified group of persons. Criterion-referenced tests describe the performance repertoire of an examinee, independent of group membership.
- The questions on a test are called items, and a test can be described in terms of the types of items it contains. There are choice items: true-false, multiple-choice, and matching exercises. There are also supply items: completion, short answer, and essay. No item type has a uniformly distinct advantage under all circumstances.
- Tests are described also in terms of the attributes they are designed to observe. Among these attributes are academic achievements; scholastic – and other – aptitudes; personality traits; and interests, attitudes, and values.

General Principles of Test Construction

Planning the test

To plan a test, you prepare a two-way table, called a **test blueprint**. The names of the major categories of a taxonomy head the table columns while the row heading

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indicates the major topics of the subject matter to be tested. In the body of the table, the “cells”, formed by a combination of a particular taxonomy category and a particular subject-matter topic, contain specific instructional objectives. Thus, the blueprint serves as a double-entry classifying scheme for specific objectives. After objectives are classified, the number of test items that will be used to test each objective is recorded in the table. Thus, the test blueprint serves as a plan which assures that all important objectives are included and that they receive the proper emphasis on the test.

Hints for Constructing Essay-type Tests

- ◆ Define the behaviour the examinee is expected to exhibit or describe the process to be exhibited before beginning to write the essay question.
- ◆ Ask questions that require the examinee to demonstrate the ability to use essential knowledge and to do so in situations that are new or novel for the examinee, rather than simply recalling information from a textbook or a classroom.
- ◆ Ask questions that are relatively specific or focused, and which require relatively brief responses.
- ◆ If a test includes several essay questions, be sure that they cover the appropriate range of topics and complexity of behavior called for in the test blueprint, but be sure that the complexity of the questions are within the educational maturity level of the examinees.
- ◆ Require all examinees to answer the same questions; don't give optional questions.
- ◆ Word questions so that all examinees will interpret the task the way you intend.

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- ◆ Word questions so that all examinees know the limits of the tasks, their purposes, and can answer them in the time allotted.
- ◆ Word questions so that experts can agree on the correctness of an examinee's response.
- ◆ Word questions calling for examinee opinion on controversial matters so that they ask the examinee to give evidence to support the opinion and evaluate the examinee's response in terms of the evidence presented rather than the opinion or position taken.
- ◆ Word questions so the examinee can judge the approximate length of the answer desired and knows the point-value of weight each will be given.

Phrasing Essay-type Questions

The following are some hints in phrasing essay-type questions

1. **COMPARING:**

Describe the similarities and differences between.....

Compare the following two methods for.....

2. **RELATING CAUSE AND EFFECT:**

What are major causes of?

What would be the most likely effects of ...?

3. **JUSTIFYING:**

Which of the following alternative would you favour and why?

Explain why you agree or disagree with the following statement:

4. **SUMMARISING:**

State the main points included in

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Briefly summarise the contents of

5. GENERALISING:

Formulate several valid generalisations from the following data.

State a set of principles that can explain the following events.

6. INFERRING:

In light of the facts presented, what is most likely to happen, when...?

What deductions can you make from the statement of....?

7. CLASSIFYING:

Group the following items according to....

What do the following items have in common?

8. CREATING:

List as many ways as you can think of for....

Write a list of questions that should be answered before....

9. APPLYING:

Using the principle of.... As a guide, describe how you would solve the following problem situation.

Describe a situation that illustrates the principle of...

10. ANALYSING:

Describe the reasoning errors in the following paragraph.

List and describe the main characteristics of...

Describe the relationship between the following parts of...

11. SYNTHESIZING:

Describe a plan for proving that...

Write a well-organised report that shows...

Write a set of specifications for building a...

12. EVALUATING:

Criticise or defend each of the following statements.

MODULE 11: Evaluation of Teaching and Learning in Higher Education

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Describe the strengths and weaknesses of the following...

Using the criteria developed in class, write a critical evaluation of...

Hints for Scoring Essay-type Answers

1. Prepare some type of scoring guide (e.g., an outline, an “ideal” answer, or “specimen” responses)
2. Grade all responses to one question before moving on to the next question.
3. Periodically re-score previously scored papers.
4. Score papers without reference to the identity (e.g. registration or matriculation number or name) of the student.
5. Provide students with feedback on the strengths and weaknesses of their responses.
6. When the grading decision is crucial, have two or more readers score the essays independently.

Hints for writing short-answer (completion) items

1. Use the question form of the short-answer variety if possible.
2. Word each item in specific terms with clear meanings so that the intended answer is the only one possible, and so that the answer is a single word, brief phrase, or number.
3. Word each item so that the blank or answer space is toward the end of the sentence.
4. Avoid copying statements verbatim from texts or classroom materials.
5. Omit important rather than trivial words.

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6. Avoid “butchered” or “mutilated” sentences; use only one or two blanks in a completion sentence.
7. Keep the blanks of equal length and arrange the items so the answers are placed in a column at the right or left of the sentences.
8. State the precision, numerical units, or degree of specificity expected of the answer.
9. Word the items to avoid irrelevant clues or specific determiners.

Hints for writing true-false items

1. Make sure the item is either definitely true or definitely false.
2. Avoid verbal clues (specific determiners) that give away the answer.
3. Test important ideas, knowledge, or understanding (rather than trivia, general knowledge, or common sense).
4. Keep the word-length of true statements about the same as that of false statements.
5. Avoid copying sentences directly from textbook and other written materials.
6. Avoid presenting items in a repetitive or easily learned pattern.

Hints for constructing matching exercising

1. Within a single matching exercise, make the premises and responses homogeneous.
2. Write directions that explain completely the intended basis for matching.
3. Check to see that all the responses function as plausible options to each premise.

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4. Keep the list of premises and responses within a single matching exercise relatively short.
5. Avoid creating “perfect matching” in which each response matches only one premise.
6. Place the longer phrases (sentences) in the premise list and the shorter phrases, words, or symbols in the response list.
7. If at all possible, arrange the responses in a logical, meaningful order.
8. Use numbers to identify the premises and letters to identify the responses.
9. Avoid using incomplete sentences for premises.
10. Keep all the premises and responses belonging to a single matching exercise on the same page.

Hints for constructing multiple-choice items (with emphasis on how to formulate the stem of the item)

TO DO	TO AVOID
If possible, write as a direction question.	Avoid extraneous, superfluous, and non-functioning words and phrases that are mere “window dressing.”
If an incomplete sentence is used, be sure it implies a direct question. The alternatives come at the end (rather than in the middle) of the sentence.	Avoid (or use sparingly) negatively worded items.
Control the wording so that vocabulary and sentence structure are at a relatively low and of non-technical level.	Avoid phrasing the item so that the personal opinion of the examinee is an option.
In items testing definitions, place the word or item in the stem and use definitions or descriptions as alternatives	Avoid textbook wording and “textbookish” or stereotyped phraseology.
	Avoid “clueing” and “linking” items (i.e., having the correct answer to one item be clued or linked to the correctness of the answer to a previous item)

Hints for improving the quality of the alternatives in multiple-choice items

TO DO

1. In general strive to create three to five functional Alternatives.
2. All alternatives should be homogeneous and appropriate to the stem
3. Put repeated words and phrases the stem.
4. Use consistent and correct punctuation in relation to the stem.
5. Arrange alternatives in a list format rather than in tandem.
6. Arrange alternatives in a logical or meaningful order.
7. All distractors should be grammatically correct with respect to the stem.
alternative.

TO AVOID

1. Avoid overlapping alternatives.
2. Avoid making the alternatives a collection of true-false items.
3. Avoid using “not given”, “none of the above”, etc, as an alternative in best-answer type of items (use only with correct-answer variety).
4. Avoid using “all of the above”; limit its use to the correct-answer variety.
5. Avoid using verbal clues in the Alternatives.
6. Avoid using technical terms, unknown words or names, and “silly” terms or as distractors.
7. Avoid making it harder to eliminate a Distractor than to choose the keyed

- (a) Prepare a test blueprint for your end-of-semester course examination
- (b) Construct five each of the following types of questions: essay, multi-choice, true/false and matching
- (c) Prepare a marking guide for the tests.



Activity 11.3



The requirements or criteria of evaluating tests

The ultimate goal of any evaluation should be **to collect relevant valid, reliable and economical information for decisions to be appropriately made.** Relevance,

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validity, reliability and the economical aspect are currently the most expected requirements or criteria for any evaluation test.

The relevance of data collected implies that the subject under evaluation precisely and specially corresponds to the objectives targeted by the evaluation. For example, the relevance of examination tests at the end of a given curriculum makes it necessary to differentiate between examinations meant to evaluate learners' qualification for promotion to an upper class or to move into the job market and active life.

The validity of data collected implies that the evaluation has actually been focused on the subject initially targeted for evaluation. For instance, for the sake of validity, learners' written and oral skills cannot be evaluated with the same tests.

The reliability of data collected implies that they are not determined by the free will and choice of the individual who collected them. For example, the double grading of examination papers is meant to consolidate and further ascertain reliability.

Data analysis and interpretation

Data analysis follows the administration or taking of tests. Data collected at the end of a quantitative evaluation or a qualitative evaluation may nearly always be amenable to statistical processing.

Distribution of scores: Scores of groups can be summarised and interpreted by tabulating a frequency distribution and/or plotting a histogram or polygon. Special terms describe the shapes of distributions including their symmetry, modality, peakedness, and skewness. These graphs can also be used to compare two or more distributions of scores.

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Measures of central tendency: Among the summary numbers or statistics used with test scores are those that reflect the average or typical score of the group. Among these are the mode, median, and mean. These indices may be used jointly as well as singly to describe a distribution of scores.

Score variability: Statistics describing the variability or spread of scores are important in understanding a group's score distribution. Of these, the standard deviation has been the most frequently used with educational and psychological tests. This index, a type of average of the deviations from the mean, measures the extent to which persons' scores differ from each other.

Relative location in a distribution of scores: Individuals' scores can be interpreted in terms of their relative location in a distribution. Scores which express this relative standing directly are called norm-referenced scores. Among those described are simple rank in the group; percentile rank, or percent of the group that person's score exceeded; and a linear standard score called the z-score.

The correlation coefficient: The degree of relationship between two sets of scores is quantitatively described by the correlation coefficient. The correlation quantifies the relationship between the z-score on two test. This relationship can be displayed in a scatter diagram, also.

A group of 19 students scored the following grades :



15 ; 13 ;7 ;8 ;9 ;12 ;11 ;10 ;8 ;17 ;18 ;19 ;10 ;12 ;13 ;16 ;5 ;12 ;13

Activity 11.4



1. Give the frequency table of the 19 grades
2. What is or what are the modes of the 19 grades
3. What is the median of the 19 grades
4. What is the mean or average of the 19 grades

5. Calculate the typical gap of the 19 grades
6. Calculate the standardised grade of each of the 19 grades.

Evaluation of Teaching and Learning in Higher Education



Reading 11.1

E. A. Yoloye

A decision-making definition of evaluation is very appropriate for higher education. Whatever definition of evaluation one uses however, the following three components of the evaluation process remain valid:

- The entity to be evaluated which could be a product, a process or a performance.
- Measurement of the entity to arrive at a score, grade or other quantitative representation.
- Evaluating the quantitative measure by putting a value on it. The value could take various forms such as pass/fail, first class/second class/third class/pass/fail.

THE FRAMEWORK FOR EVALUATION

Putting a value on a measure can be based on scores which are:

- Norm-referenced i.e in comparison with an identified reference group e.g. through the use of percentile rank.
- Criterion-referenced i.e in comparison with stated absolute achievement levels e.g. indicating level of mastery based on percentage score.

THE PURPOSE OF EVALUATION

Broadly speaking there are two purposes:

- **Evaluation for accountability**- usually at the end of a specified period for the purpose of passing judgement on the extent to which what is expected to be achieved has been achieved. This is sometimes referred to as summative evaluation. It is often followed by reward for success e.g. promotion or award of a certificate, or punishment for failure e.g. repetition of a course, expulsion from the institution or withholding of a certificate.

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- **Evaluation for improvement of services or performance** – usually at various stages in the process of learning or teaching for the purpose of identifying areas of weakness and strength which might influence success or failure at the end of the course. This is sometimes called Formative evaluation and is usually followed by feedback to the learner or performer and the initiation of corrective action to improve the chances of success at the end of the course. In this sense formative evaluation may be said to be diagnostic.

SCOPE OF EVALUATION

Broadly there are two levels as follows:

Micro level – which evaluates individual elements within a system eg.

- Learner achievement
- Teacher performance
- Instructional materials, within a particular institution.

Macro level – which evaluates the entire system to assess its performance e.g.

- Internal efficiency of the system using such indicators as transition rate, drop-out rate, proportion graduating.
- External efficiency using such indicators as percentage of graduate securing employment, performance of the graduates on the job, relevance of knowledge or skills acquired by the graduates to available jobs.

METHODS/TOOLS OF EVALUATING LEARNING

- Written tests
- Oral tests.
- Practical tests in laboratories.
- Projects.
- Term papers.
- Theses.

DESIRED QUALITIES IN THE TOOLS FOR EVALUATION

- Reliability, especially scorer reliability.
- Validity.

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- Manageability within available time, manpower and finance especially considering large classes.

DATA ANALYSIS FOR NORM-REFERENCED EVALUATION

Mainly descriptive statistics as follows:

- Measures of central tendency- Mode, Median, Mean.
- Measures of dispersion – Range, semi-interquartile range, variance, standard deviation.

STANDARDISATION OF SCORES

For the purpose of making scores from different tests and other measuring tools comparable, the raw scores need to be converted to standard scores using the mean and standard deviation, e.g. stanines, t-scores, z-scores. WAEC uses reversed stanines for reporting scores in SSCE while JAMB uses modified Z-scores for reporting UME scores.

EVALUATION OF TEACHING

Evaluation of teaching of individual teachers may be based on

- The extent to which he or she displays expected teacher behaviour
- The extent to which achievement of his or her pupils attain expected levels.
- Expected teacher behaviour includes such things as punctuality to class, regularity of attendance to give lectures, adequacy of preparation of lectures given, appropriateness of classroom interaction with students, efficiency; promptness and reliability in grading students' tests and examinations.
- Student achievement may be measured by the various tools listed in section 5.0.
- If we regard the raw scores as being criterion-referenced and plot the frequency curves for each course taken, three basic curves may be obtained.

i. Positively skewed ii. Normal iii. Negatively skewed

The most commonly obtained curve with traditional teaching especially with large classes is the normal curve.

Bloom (1971) in his exposition of Mastery learning says:

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“There is nothing sacred about the normal curve. It is the distribution most appropriate to chance and random activity. Education is a purposeful activity, and we seek to have the students learn what we have to teach. If we are effective in our instruction, the distribution of achievement should be very different from the normal curve. In fact, we may even insist that our educational efforts have been unsuccessful to the extent that the distribution of achievement approximates the normal distribution.”

If we accept this assertion, we may regard the three curve shapes in a hierarchical order indicating effectiveness of instruction. Thus, a positive skew would indicate the lowest level, the normal curve an average level and a negative skew the highest level.

Excerpted from

Yoloye, E.A. (1998, September). Evaluation in higher Education. Presented at the UNESCO Workshop on Teaching and Learning in Higher Education. University of Ibadan, Nigeria

EVALUATION OF TEACHING AND LEARNING IN HIGHER EDUCATION



Reading 11.2

Ezra Maritim

Introduction

The aim of this presentation is to introduce the basic guidelines and pertinent issues in evaluation practices in higher education, with special reference to Kenya. In the area of teaching and learning, the UNESCO regional workshop held in Dakar, Senegal, in March 1999 provided useful basic evaluation concepts, the various forms of evaluation and the qualities of good evaluation tools. The forms of evaluation identified by the Dakar workshop included: coursework, written examinations (essays, multiple choice, etc) oral and aural examinations, project work, laboratory reports, class tests, direct observations (clinical education, teaching practice, practicum), term papers and theses. The features and the qualities of a good evaluation tool are as follows: validity, reliability, fairness, practicability, relevance and economical.

Highlights of the Presentation

This paper approaches evaluation in four ways. First, what is evaluation? Although in the institutions of higher education, evaluation is a household work, it might be helpful to consider just what it is. I define an evaluation as a measure of getting to know the quality of learning and teaching in higher education. Second, what is the institutional mission and philosophy? In what philosophical context does evaluation take place? The mission of the institution guide the process of evaluation. In some ways, the mission statements specify the measurable and qualitative attributes the graduates should achieve in their course of their learning which make the institution unique. These attributes are reflected at the teaching/subject matter level in the form of course major and minor objectives. In this context, the mission statement should be known by all the teaching members of staff for operational translation and interpretation. Third of what internal use is evaluation? That is, what use is evaluation to the institution and the student? The rationale for evaluation is for the internal management of teaching and learning in the institution. In a teaching and learning situation, evaluation has accrued benefits to both the teacher and the learner in that it enables:

- the teacher to identify what the learners know or do not know in order to facilitate him/her to teach more effectively, and
- the learner to learn more effectively.

In addition to the above benefits, evaluation enables the institutions to make summative judgement about the adequacy of the learner's performance in the form of:

- grading
- classification
- certification

Fourth, what are the hurdles in evaluation in the institutions of higher learning? A major problem for approximately 95% of the Kenya universities and middle level college staff, other than those in the faculties of education, is that they have no pedagogical training and therefore lack skills in the development of evaluation items. These deficiencies lead to the following negative effects:

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- teachers' misconception of both the purpose of evaluation and the various forms of evaluation;
- teachers' setting of cognitively less demanding tasks that encourage students to reproduce subject matter;
- teachers' misuse of examinations to instil fear among students.

In addition, given the current large class sizes, lecturers have not been effective in:

- giving students feedback on their performance ,
- indicating to students what they could have done to improve their performance,
- providing adequate face -to-face interaction
- Some possible solutions to these deficiencies could be found for example through:
 - provision of in -service training on theories and practices in education;
 - In-building quality in evaluation the provision of in-service training on item writing , moderation and marking system;
 - Utilizing group evaluation facilitates acquisition on interpersonal skills, teamwork skills;
 - Using a mix of different tasks would give students the best opportunity to demonstrate the quality of their learning, and
 - Making students know what is expected of them.

Excerpted from:

Maritim, E. (1999). Evaluation in higher education. *Presentation at the Regional Workshop on Teaching and Learning in Higher Education, University of Witwatersrand, Johannesburg, South Africa, September.*

11.3

Evaluation of Teaching

After completing this Unit, you should be able to

- π use relatively simple indicators for evaluation teaching; and
- π prepare tools for evaluating teachers.



Evaluation of teaching

Evaluation in Higher Education in Francophone Africa

Ousseynou DIA

 **Reading 11.3**

EVALUATING TEACHING

As regards the evaluation of teaching, it can at least be done at two levels: that of content (development and evaluation of curricula and syllabi), and methods. Given the specific goals which the institutions should henceforth pursue, we have to ask ourselves certain questions before preparing curricula. What links should they (institutions) maintain with those of developed countries? In other words, is any development work done if one is contented with teaching in the former the same course contents as in the latter? The question of standards seems to us to be all the more relevant as the neutrality and universality of scientific and technical knowledge appear to be more and more pseudo-evident. Scientific and technical knowledge

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has, as a matter of fact, a cultural impact in the sense that they more or less explicitly internalize a global vision, a mode of analysis and perception of reality. This interrogation therefore leads to a reflection on the universal and specific aspects and on their complex relationships. If learning can more or less be considered universal, its linkages are enhanced by culture.

It is advisable to examine our students' basic scientific knowledge and consider the appropriate course content they need to make up for the inadequacies. If this preliminary survey is not carried out, the education we are providing could end up as a duplication of the knowledge already acquired by our student (formal knowledge, empirical personal and social knowledge); besides, one might wonder if the scientific and technical knowledge that we impart to them still address the issues that actually arise from their relationship with their environment.

ASSESSING ACADEMIC STAFF

The problem connected with evaluating teaching methods is less attributed to the lack or inadequacy of appropriate pedagogic techniques than to the negative attitudes of certain teachers in this respect. Such evaluation can inevitably be done by observing the performance of teachers because an objective assessment can be made only on the basis of their conduct. With regard to the objectives of training, qualification and assessment of lessons taught and their feed-back, the evaluation can induce the academic staff to improve their performance and thus enhance the quality of teaching; it also helps to ascertain whether the objectives of a course or a study programme have been attained or to discover the discrepancies between the students' expectations, the teacher's intentions and the demands of the discipline.

All the same, with what tools can one make an objective assessment of a teacher's performance? There is in the first place the video technique which not only allows for the observation of the teacher's performance by a third person, but also encourages self-observation. There is also the practice of course inspection by a high-ranking professor or expert, analysis of syllabi by an administrative body and course evaluation by students.

The assessment of teachers' performance has often been resisted by some teachers and this deserves attention. The refusal can be explained as a resistance to pedagogic innovation, a mean of averting the risks of upsetting the "master" image which the teacher enjoys and the established monopoly of learning power which the master arrogates to himself in the classroom. However, this lack of conformity to the pedagogic practice of evaluation seems to be linked to the cultural context,

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educational system, the manner in which institutions and their teachers have been made to consider the notions of learning, knowledge and teaching in terms of aptitude, competence and training, the last element being a measurable product of planning. It is also linked to the level of students' participation in managing their studies and in running their school, the quality of instructional information given to teachers which underscores the significance of evaluating their services and skills.

The inherited educational system actually allows for the assessment of teachers in tertiary institutions only on the basis of their research works. Such evaluation has the merit of trying to define certain objective criteria for assessment such as publications and theses, and forcing young graduate assistants or assistant lecturers to distinguish themselves in a discipline before occupying positions of responsibility. On the other hand, it accounts for the preference given to scientific research to the detriment of teaching. Most of the teacher who took part in the debate on scientific research and teaching reached a consensus on the need for training through and for research even though some of them wondered about the place of educational research in the training institutions.

This explains the fact that, in the countries where teachers' performance is assessed, the practice is attributed to the search for the institutions' internal efficiency on account of the economic crisis and/or the phenomenon of student unrest. The revival of educational practices as well as the evaluation of teachers and teaching derives from this situation. That is why students now indulge in making a quasi-systematic evaluation of their teachers. If it more or less provides information on the quality of the pedagogic relationship (criteria for teaching and research: characteristics of a course), it scarcely helps to evaluate the contents and their level of assimilation – at least because the assessments are based on human relations, the sole guarantee, in the eyes of the learners, for efficient teaching. This experience now reveals that students' assessments can measure the level of conviviality and human warmth!

However, the assessment that students make of the instruction received is a source of vital information for every lecturer who cares about improving his course. This practice is fruitful because it is rare to find instances where no deductions are made from the remarks given or from the analysis of their comments for improvement. A policy on this type of evaluation can only be incorporated into a comprehensive effort by an institution determined to provide quality education. This practice indeed goes beyond the questionnaires filled by students to take into account all the other pedagogic parameters. With all precautions taken (agreement on the validity of questionnaires, objectiveness in data gathering), it is possible to ask the teachers

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deserving promotion to submit an evaluation report on their performance in order to reinforce the pedagogic judgement or opinion of his peers, which cannot be ignored.

Excerpted from:

Dia, O (1998). Quality of Higher Education in Francophone Africa. In J. Shabani (Ed.). *Higher Education in Africa: Achievements, Challenges and Prospects*. Dakar: UNESCO BREDA.

Quality of Higher Education in South Africa: Conceptions, Contestations and Comments



Reading 11.4

Nico Cloete

In South Africa, quality assurance mechanisms have varied across the three higher education sectors. In the college sectors, the dominant form has been nationally, provincially or departmentally set examinations for the certificate and diploma programmes. In the technikon sector, the Certification Council for Technikon Education (SERTEC) has performed an important programme accreditation function that incorporates many of the international common features outlined earlier. (An important contextual factor is that technikon programmes are all offered in terms of broad curriculum guidelines agreed upon nationally by the technikon sector in conjunction with the relevant industry/professional/employer grouping).

In the university sector, quality has been assured via professional accreditation (where applicable) and through a peer-based system of external examination, although in the latter case not uniformly so. A recent development is the establishment by the Committee of University Principals (CUP) of a Quality Promotion Unit. Overall, in the previous system quality assurance was erratic, the use of external examiners inspired little confidence and quality was largely determined by reputation.

Drawing from international experience, the Commission on the Higher Education (NCHE Report, 1996) concluded that there are certain commonalities among more established systems. Firstly, most include an initial self-evaluation process followed by an external (typically peer) assessment of the results and process of self-evaluation. Secondly, through self-evaluation and the role of peers in the external evaluation, higher education largely “owns” the quality system. Thirdly, an

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independent body usually coordinates the external evaluation which is conducted in terms of more or less standardized criteria ranging from detailed norms to more flexible checklists. Fourthly, the results of evaluation are in most cases made public. Finally, in nearly all countries, negative sanctions can be a consequence of the assessment procedure.

The commission proposed that a developmentally based quality assurance system should include three functions: institutional auditing, programme accreditation and quality promotion. Firstly, a Higher Education Quality Committee should be established, as a committee of the Higher Education Council. The Higher Education Council should be recognized by the South African Qualifications Authority (SAQA) as the umbrella coordinating body for quality assurance in higher education programmes. The Higher Education Council should exercise this authority via the quality committee. The Higher Education Quality Committee should be responsible for institutional auditing and programme accreditation, and should be managed by a board made up of individuals drawn from inside and outside the higher education system. The Higher Education Quality Committee should encourage and monitor quality promotion activities within higher education, but not undertake such activities itself. The Commission has recommended that the Quality Promotion Unit of the Committee of University Principals, with an expanded mandate, be considered as a possible body to undertake this function on an agency basis.

It is integral to this quality assurance system that a single qualifications framework should be developed for all higher education qualifications, as part of the National Qualifications Framework. The framework should include intermediate exit qualification within multiple-year qualifications and should consist of a ladder set of qualifications at higher education certificate, diploma and degree levels. All higher education programmes should be registered on the NQF, at minimum at the exit level of whole qualifications, with National Standard Setting Bodies determining the appropriate form of registration in terms of the use of unit standards within qualifications. National Standard Setting Bodies should also be charged with ensuring that a coherent ladder set of qualifications is developed and registered in each field, and is responsible for developing effective articulation mechanisms between the different qualifications. It is vital that this be done in all professional fields where problems of articulation have often been most acute. The Higher Education Council should ensure that the decisions taken by SAQA and its National Standard Setting Bodies on how the registration of qualifications is to occur provide an effective basis for incorporating higher education programmes into the National Quality Framework. The fields and levels should be compatible with the subject categories and levels used in the higher education information and planning

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systems. Higher Education Programmes should be registered as either “national” programmes offered by a number of providers or “institutional” programmes that are relatively unique to the provide institution or partner institutions. (NCHE Report, 1996)

Programme accreditation will be pursued through a combination of self-evaluation and independent assessment. The purpose of the evaluation is to grant or maintain accreditation to programmes that have met the minimum acceptable standards as determined by the relevant National Standard Setting Bodies and ensure the enhancement of the quality of programmes.

The evaluation procedures for institutions and programmes will include: an institutional/programme self-evaluation process, and an evaluation by independent assessors including, where appropriate, professional bodies and visits by teams of experts. In addition, the Commission also proposed that a new national information system be established that will include a set of performance indicators that are sensitive to redress, quality and developmental indicators.

The Green Paper on higher education released by the government in December, 1996 broadly endorses the Commission’s position by stating that “the Ministry agrees that quality assurance of programmes has been a priority within higher education internationally in recent years as a way of ensuring accountability and value for money (p.32). The Ministry also agreed that the primary responsibility for quality assurance rests within higher education and proposes that a Higher Education Quality Committee be established as an independent umbrella body.

Excerpted from:

Cloete, N. (1998). Quality of Higher Education in South Africa: Conceptions, Contestations and Comments. In J. Shabani (Ed.). *Higher Education in Africa: Achievements, Challenges and Prospects*. Dakar: UNESCO BREDA.

Evaluation of teaching as we can glean from Readings 5.2. and 5.3, can be carried out at the internal level and at the external level.

The internal or external evaluation of studies may be implemented by :

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- each teacher concerned about giving information on the results of his or her own work
- each institution wishing to better control the quality of its performance
- the local or national authority organising and funding educational systems
- international agencies specially for comparison of the performances of educational systems in various countries

independent scholars and researchers.

Internal evaluation does not target the same objectives as external evaluation. Ordinarily, internal evaluation seeks to measure and assess the pedagogical quality and the costs of studies. Conversely, external evaluation focusses on the impact of studies outside educational systems in connection with social, cultural, religious and economic factors etc. Generally speaking, the internal evaluation of studies seeks to measure and assess :

- the number of students to be moved to the next higher level of the course
- the number of students repeating the classes
- the number of students who drop out
- the number of students who successfully complete their studies

The external evaluation of studies deals with issues relating to :

- the number of degree holders who find a job or create a business
- the adequacy of courses taken with the jobs and positions held
- the relevance of school and university curricula to needs in the community
- the impact of studies on the level and quality of economic production.

Some indicators for the evaluation of teaching

Studies may be evaluated based on their internal or external efficiency. Some relatively simple indicators for the evaluation of internal efficiency include:

- percentage of students promoted to a higher level at the end of the academic year
- percentage of students repeating the class
- percentage of students who drop out of school in the course of, or at the end of the year
- percentage of students who pass their school and university examinations.

These percentages may be calculated by taking into account the students who started classes in the same year. In this case, they are gross rates of internal efficiency. The percentages may be established by taking into account all the students attending the same classes but who did not start their studies at the same time. In this case, we have net rates of internal efficiency.

Example:

In 1998-99, there were 20 students in the first year of medical school. Among these 152 had enrolled for the first time in 1998-99 in the first year of medical studies. At the end of the same year, 167 students had passed their exams, including 134 of the 152 students enrolled for the first time in 1998-99 and 33 among the 53 repeaters.

The gross rate of internal efficiency for promotion to the second year of studies in 1999-2000 is, in this case, equal to $= (134/152) * 100 = 88.15 \%$

The net rate of internal efficiency for promotion to the second year in 1999-2000 is here equal to $= (167/205) * 100 = 81.46 \%$

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Some relatively simple indicators of the internal efficiency:

- the percentage of degree holders (or fully trained students) who secure jobs
- the percentage of degree holders (or fully trained students) who have secured jobs corresponding with their qualifications.

Examples :

At the end of the 1996-97 academic year, 37 students had completed their medical doctorate dissertations. Of these, 29 found jobs but only 15 of the 29 got jobs in the field of medicine in 1997-98.

The overall percentage of medical degree holders who secured jobs in 1997-98 is :
 $(29/37) * 100 = 78.37 \%$

The percentage of medical degree holders who found jobs in the health sector in 1997-98 is : $(15/37) * 100 = 40.05 \%$



In 1991-1992, there were 585 students in the second year of economics. Among these, 399 had enrolled for the first time in the second year of studies in 1991-92.

By the end of the year, 377 students among the 585 had qualified to enroll in the third-year of studies in 1992-93. They included 77 of the 339 students enrolled for the first time in 1991-92.

Activity 11.5



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1. Calculate the gross rate of internal efficiency for the second year of studies in economics
 2. Calculate the net rate of internal efficiency for the same second year of studies in economics.
-

Evaluation of teachers

The evaluation of teachers is becoming more and more popular as a practice. It is conducted in many anglophone universities with the participation of students. In francophone countries, the evaluation of teachers by their peers or by trainee teachers is not a common practice. However, some francophone universities are members of international cooperation agencies such as CAMES (Africa and Madagascar Council for Higher Education) whose rating is a determining factor in the professional promotion of academics and researchers in member universities.

There are several tools for the evaluation of teachers by learners. The tools involve several areas including :

- the academic background of teachers
- their professional skills

Many research studies have focussed on the evaluation of teachers by learners. People have always challenged the validity and reliability of the evaluation of teachers by their own students. It is believed that students are not able to make valid and relevant comments on course contents. In the same way, comments vary

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depending on students' ages or their contacts and connections which the teachers to be evaluated.

The most promising results of research in education may probably come from the different contents of the evaluation of teachers by their students based on the ultimate purpose of the results of such evaluation. An evaluation conducted for administrative purposes should not have the same content as a pedagogical evaluation. It is generally admitted that students' opinions are very useful to make teachers aware of the strengths and weaknesses of their teaching as well as of the methods and strategies used by the teachers etc.



Activity 11.4



Presented below is the summary of discussions of a group at the Regional Workshop on Teaching and Learning in Higher Education held in Eldoret, Kenya. Critically review the conclusions of the group and

discuss your views with a colleague in your department.

In discussing the place and the role of evaluation in teaching and learning in higher education, the discussion groups identified several issues and observations. These can be summarised as follows:

- Despite the cost implications, external examiners system be retained and their roles be expanded to include evaluation of the marking schemes, the type of questions set, the curriculum and the teaching facilities including laboratory and textbooks.
- Moderation of examinations be strengthened through the establishment of external moderation system and departmental moderation committee.
- The Commission for Higher Education (CHE) should strengthen quality control and quality assurance of the academic departments through frequent visitation.
- As part of the course assignment, students be required to carry out research projects.

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- At least two continuous Assessment Tests (CAT) be offered per semester.
- the final examination system be retained.
- Lecturers as internal examiners be trained on item construction; and the departments establish item banks.
- Pre-determined grading system be discouraged in favour of performance-based system. This will take into account the examination difficulty level.
- Periodic curriculum review be carried out.
- Students and departmental colleagues be involved in the evaluation of teaching.
- Evaluation of teaching be made easy, specific, anonymous and continuous.
- Large classes have led to heavy teaching workload and poor and erratic marking.
- The students rampant cheating in examinations reduces reliability and this act should be heavily punished.
- Examination system should be used to improve learning by identifying the strengths and weaknesses of the learner.
- The secrecy of examination results be reviewed. The policy of denying students to know their marks should be reviewed.

Recommendations

Expand external examiners' role to include evaluation of teaching/learning facilities, course textbooks, course syllabuses.

2. The Commission for Higher Education carries out visitation and academic audit of the academic departments for quality assurance.
3. Departments recommend external examiners.
4. Use a variety of assessment tools to evaluate students.
5. Train lecturers on evaluation skills.
6. In-service lecturers on educational theories and practices.
7. Minimise examination cheating.

Summary and Conclusion

Evaluation in schools and universities is geared towards decision making. The evaluation of students is useful to measure the level of understanding and mastery of pedagogical objectives. Evaluation of students is also important in making administrative decisions such as the promotion, and the awarding or denying of a

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degree. The evaluation of teachers involves an administrative aspect when it is used for appointments or promotion. The evaluation of teachers by their own students may serve as a warning and a signal on the pedagogical quality of the teacher's teaching strategies and his interactions with students.

References