Teaching and Learning in Higher Education in Africa

“Teaching and Learning in Higher Education in Africa” seeks to make sense of the many changes that are taking place in learning and teaching in higher education in the continent and offers insights into where teaching and learning might be moving in the future. Concerns about the quality of education are on the rise as the phenomenon of the educated unemployed becomes a permanent feature of most African economies. While employers complain that graduates are poorly prepared for the workplace, students on the other hand, point to their teachers as the defective link in the teaching-learning continuum. This can be attributed to the fact that most teachers in higher education institutions in Africa lack teaching skills, and those who have hardly updated their skills find it difficult to cope with the rapid changes in the education system. As a result, it has become necessary to seek ways of helping teachers of higher education to feel greater confidence working with the full diversity of students that they constantly have to handle in their classrooms.

This edition of our newsletter examines the quality of teaching and learning in higher education in Africa. The first article discusses Major Determinants of Higher Education Pedagogy. It underscores the fact that Africa is still lagging behind all the regions of the world in virtually all known development indicators. Consequently, there is a high demand for knowledge workers and teachers are at the centre of it. The article discusses how today’s African youths are living in a radically different world from the past and identifies three clusters of pedagogical implications. These are Youth Psychology Factors, New Focus Areas for Education and Knowledge and the World of Work. The article concludes with a note that higher education is one sure way of matching the competition that arises from globalization, and pedagogy is the instrument for effecting the desired transformation. The second article Key Guides to Effective Teaching in Higher Education examines the ways people learn. It suggests various strategies that aid students’ learning. The third article is Key Guides to Teaching Economics in Higher Education in Nigeria. The author attributes the supposed difficulty of some courses on their quantitative nature as opposed to the inappropriate teaching styles of the lecturers. The author suggests helpful teaching techniques that stimulate the development of teaching skills needed to make the delivery of the courses appealing to students.

The fourth article is Teaching and Learning in Higher Education: The Role of the Higher Diploma Programme in Addis Ababa University. The author attributes the falling standards and quality of higher education to the rapid growth in the sub-sector without a corresponding increase in the expenditure per student, weakening the proportion of senior academic staff and producing progressively less prepared students for higher education. The article highlights the measures taken by government to improve the pedagogical skills of the teachers in teacher education institutions in Ethiopia with remarkable results and recommends replication throughout the sub-sector. The fifth article is entitled Improving Quality of Education in Nigeria: A Review of Students’ Learning Experiences. It reiterates the reasons for the fall in quality of education. Key among these is the ownership structure and lack of facilities and equipment due to poor funding in spite of the phenomenal growth from 55,000 students in 1980 to 400,000 students in 2002 and suggests a way forward. The last article on the Need for Enhancing pedagogical skills among higher education science teachers examines the reasons why teachers of higher education should be interested in science pedagogy. It stresses the need to go beyond current teaching stereotypes to new trajectories that accommodates the use of simulations, models, video documentaries and modern science apparatus which are current challenges most teachers in higher education.

This issue also carries interesting news items to keep all readers posted on the activities of the Institute. These highlight key deliberations and decisions at workshops, conferences and consultative meetings where IICBA was represented.

Joseph Ngu (PhD) Director, UNESCO-IICBA
This paper is concerned with the changing world of the African tertiary education student and its implications for the promotion of teaching and learning at that level. The discussion highlights the major features of today’s evolving world, Africa’s place (actual and potential) in this emerging world, the development tasks of today’s African youth, new implications for emerging trends for education (and more particularly higher education). These are the main factors that should determine higher education pedagogy, and they are also the rationale behind the pedagogical hints suggested.

TODAY’S EVOLVING WORLD

Evolution has been a major constant in humanity’s experience. Today’s world, in terms of evolution, is however characterised by a phenomenon now popularly referred to as ‘the acceleration of history’. So many changes and transformations are happening so fast that change has become the number one constant of humanity’s experience. Up till the last century, evolution seemed to be happening rather slowly and to a large extent imperceptibly. Today, evolution is much faster and much more perceptible than in past ages.

Globalisation has itself been aided by dazzling development in information and communications technologies (ICT), leading to what is now popularly referred to as the Digital Revolution. This has aided the rapid collection, storage and retrieval of knowledge, techniques and information.

The sum total of the acceleration of history and the associated dazzling changes is that we are living in a completely new world, a world that is moving and changing at ‘break neck’ speed, and whose ‘express train’ would require us to sprint at an equally ‘break neck’ speed to catch up.

AFRICA IN TODAY’S WORLD

Africa is lagging behind the other regions of the world in virtually all known development indicators, and it has in fact come into the considerable development deficit. The challenge is to work hard to overcome the deficit and move fast (‘jump frog’, ‘fast track’) to join the rest of the world. This challenge is in three phases: Africa must survive, Africa must rise, and Africa must belong. The first implies that the region must get out of its current strangulating political and socio-economic problems, the second implies that Africa must accelerate the process of sustainable human development, and the third implies that Africa can function as a full fledged member of today’s global village.

DEVELOPMENT TASKS OF TODAY’S AFRICAN YOUTH

African youth is today confronted with opposing centrifugal forces: the pull to be culturally rooted in Africa and the pool to join the fast evolving New World. Caught somewhere between the two pulls, African youth has become entangled in a battle for self-assertion. What is perhaps the most important point here is that today’s African youth, is living in a radically different world from the immediate past generation. The radically different world of today’s youth is also a world of radical challenges, and even of radical opportunities.

NEW DEMANDS ON EDUCATION

The knowledge economy has created the demand for ‘knowledge workers’ and has consequently transformed the demands of the world of work. There has therefore been a reappraisal of ‘which knowledge is of the most worth’, which is in itself an old philosophical question in education. The general consensus today is as follows:

• Specific subject-matter is known to have a short shelf life: they therefore have to yield grounds to fundamental skills (language, mathematical reasoning, scientific and social enquiry), technical skills (analysis, communication, etc), and learning-to-learn skills
• Factual knowledge is also less important (i.e. more difficult to transfer to life and further learning situations) than over-arching knowledge
• Intra-personal skills (as typified in the age-old “Man, know thyself” maxim) is being brought to the fore
• Inter-personal skills, to enable the individual to function in socially and professionally heterogeneous work settings
• Specialization is likely to lead to a dead-end in a knowledge economy, hence more emphasis on broad-based knowledge that dwell more on processes, methodologies, and personal initiative
A shift from: Fixed curricular to more flexible curriculum frameworks
• A focus on teaching to focus on learning
• The transmission and acquisition of information to a constructivist approach to knowledge and to the acquisition of skills needed to continue learning throughout life
• Categorised subject content to a more interdisciplinary approach around integrated areas.

Major Determinants Of Higher Education Pedagogy

By Pai Obanya**
Professor of Education and Former Director
UNESCO/BREDA
Email: pobanya@skannet.com
Table I: Prevailing vs. Futuristic Views on Higher Education

<table>
<thead>
<tr>
<th>Domain</th>
<th>Discipline-Based (Prevailing Practice)</th>
<th>Life-Skills-Based (Futuristic View)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumptions</td>
<td>Higher education for in-depth studies and specialization, as well as preparation for a career</td>
<td>Broad-based, general knowledge and personality development, for adaptability</td>
</tr>
<tr>
<td>Student entry</td>
<td>Secondary level foundation knowledge in chosen subject area, with emphasis on high IQ (Mental Intelligence Quotient)</td>
<td>Lifelong learning skills, with greater emphasis on EQ (Emotional Intelligence Quotient)</td>
</tr>
<tr>
<td>Profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization of</td>
<td>Departments and colleges organized around related areas of study</td>
<td>Flexible organization, with enhanced possibilities for integration of disciplines along ‘issues’ lines</td>
</tr>
<tr>
<td>programmes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching -</td>
<td>Lecture (predominantly), laboratories and workshops (possibly some field experience)</td>
<td>Group and task-oriented, with a focus on team play, analysis, communication, field exposure, project work, etc.</td>
</tr>
<tr>
<td>Learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Teacher</td>
<td>Knowledgeable specialist/researcher</td>
<td>Knowledgeable, but also field-oriented, highly creative, and multi-disciplinary compliant</td>
</tr>
<tr>
<td>Graduate Profile</td>
<td>Subject or professional area specialist</td>
<td>A combination of Life Skills: Able learner with appropriate intra-personal and inter-personal capabilities</td>
</tr>
</tbody>
</table>

With particular reference to higher education, today’s world has been making a set of futuristic demands. This has led to a new view of the role and mission and functioning of higher education summarised in table one.

**PRACTICAL PEDAGOGICAL IMPLICATIONS**

**First Pedagogical Choice Cluster - Youth Psychology Factors**

The restlessness of today’s youth should be considered as a pedagogical resource. This same can be said of their inquisitive spirit, their questioning-the system posture, and their fear of the future. In practical terms, this means:

- Keeping students positively active, turning every field of learning into practical activities (in and out of the laboratory and lecture rooms), ensuring that activities are goal-oriented, and involving students in the choice of activities.
- Underplaying bare facts and figures, and giving more prominence to enquiry (finding out by ourselves), open-ended questions and discussion, and avoiding all manners of (this is the only way) dogmatic teaching.
- Using ‘the world out there’ as teaching-learning laboratory, thus enabling students to engage in practical social analysis, become better exposed to street sense, and learn to see the world for what it is, and more particularly to engage in social issues solution-seeking. This has the advantage of making students see that all hopes can never be lost, that commitment does facilitate achievement.
  - Allowing full vent to students’ self expression, especially the expression of dissent, accepting that they have a right to hold their own opinions.

**Second Pedagogical Choice Cluster – New Focus Areas for Education and Knowledge**

Not only must curriculum organisation at the tertiary level emphasize integration of subject areas, learning and teaching in specific disciplines must relate knowledge from one field of learning to other fields and other areas of human endeavour. One way of doing this would be to adopt a thematic approach that addresses issues rather than conventional subject topics. For example, pressing societal challenges like HIV/AIDS, violence, governance, women-in-development, youth unemployment, etc can be subject to analysis using analytical model and knowledge/information for both the natural and the social sciences. This has the advantage of exposing students to systems thinking (seeing an issue from an all-encompassing perspective), a highly valued skill in today’s knowledge society.

Inculcating the broad perspectives skill can also be reinforced through revised foundation year and general studies programmes that are issues-based, as opposed to the current practices of treating general/foundation level courses as in-depth, specialised courses. For example, if students of history are made to study mathematics as an enrichment subject (for ‘culture générale’) and mathematics is taught in the same manner as it is taught to future mathematicians, the student is likely to lose interest. On the other hand, if the mathematics taught as ‘culture générale’ is ‘humanised’ by emphasizing the social utility of the subject, student interest is more likely to be aroused and sustained.

Critical reasoning, problem-solving, and learning-to-learn skills are closely related. They cannot be promoted if tertiary level teachers regard teaching as mere ‘telling’. Instead, questions that require argumentation, activities that require evidence-gathering, reading and writing assignments that task the students’ reasoning prowess and the
marshalling of facts to support points of view, activities centering on systematic observation and reporting, critique games that try to see the other side of a given issue, exploration of knowledge sources and resources are all teaching-learning methods that have sustainable outcomes, in that they are transferable to a variety of situations, and (with intensive practice) they end up as part and parcel of the behaviour repertoire of the student).

ICT-fluency means a lot more than computer literacy. It involves full internalisation of the uses to which the computer and other ICTs can be put – knowledge of the computer and its possibilities and a capacity to harness the possibilities as a learning tool. ICT-fluency is now a requirement for participation in our evolving world. It is also a driving force of the world of work. For tertiary education to have a bearing on today’s world, ICT has to become one of its major tools. This implies that ICT education must come early in the life of the tertiary level student – as a subject, and as lifelong learning tool. ICT-fluency can also be enhanced with its full-scale use in all the activities of the student – Internet search for learning resources, presentations through power point, computations and quantitative reasoning exercises, graphic communications, submission of assignments in electronic forms, etc. The goal here is to ensure that harnessing the possibilities of ICT becomes working-learning nature for students in order to fit them into an ICT-driven world of work.

Third Pedagogical Choice Cluster – The World of Work

Team spirit can be cultivated pedagogically at the tertiary level by emphasizing team work (not mere group work) in all types of activities: reading and writing assignments, laboratory practice, workshop and field activities, class presentations, etc. Team activities can also easily cut across subject boundaries. Turning mere work groups into genuine teams requires close attention to the choice of members.

- At the very beginning, it would be advisable to allow free-group formation – each person choosing who to work with.
- It also pays to allow the same group to work together for some time before altering its membership.
- Mixed ability and mixed-interest groups should be encouraged, as they have the advantage of promoting peer learning.
- As much as possible, leaders should be allowed to emerge naturally from the groups, as imposed leadership might not command adequate followership.
- It is always useful to recognise the special talents of specific group members (talking, writing, drawing, knowledge of the local environment, etc) and to harness these to enhance the work of the group.

Coping with uncertainty – prominent feature of today’s work place and of life in general – requires flexibility, adaptability and creativity. How can tertiary education inculcate these skills through teaching-learning methods, and in a sustainable manner? One answer lies in the use of team activities, in which students get used to working with other persons – colleagues with different views and persuasions, persons different from me in so many other ways. A second answer lies in problem analysis and resolution exercises that task the student to seek novel solutions. A third answer is in the use of out-of-the-box thinking exercises in which students are tasked with finding ‘business unusual’ options. This is usually a prompt for creative thinking. Fourthly, students at all levels (and particularly at the tertiary level) should be encouraged to acquire new skills and explore new areas of knowing at all times. Students of medicine being exposed to sociological methods of enquiry, engineering student exploring the science of communication, students of languages being exposed to mathematical modelling, science majors improving on their writing skills, etc are some of the ways of opening up new vistas of knowledge and skills to the student. Learning to take on new ways of exploring reality and of analysing situations and problems is a skill that can transfer readily to life situations of uncertainty, when the individual would need novel skills to remain afloat in a fast moving world.

CONCLUSIONS

Tertiary-level pedagogy, to meet the needs of today’s rapidly evolving world, would need a paradigm shift from Teaching as Telling to Teaching as Guiding. As table two shows, the outcomes of such a shift would be more lasting, as they are easily transferable to the emerging conditions of the world of work and of the world at large.
However, the shift from a telling to a guiding pedagogy can succeed only if examinations and assessment procedures are able to shift from emphasis on memorisation and regurgitation to analysis and creativity. There is therefore a great need for radical reforms that would give prominence to the skills that are most sought after in the wider world, and in the workplace.

The shift also means that the learning of specific scientific and humanistic and professional subjects would be considered useful only in so far as they contribute to inculcating 21st-century, knowledge-society-compliant skills. Subject content in itself cannot achieve this goal. The goal can be achieved mainly through a new pedagogy.

It is possible to argue that African institutions have the more pressing problems of resources and facilities. This does not, however, mean that Africa must continue perpetuating ‘telling’ pedagogy. External influences and the direction of global socio-economic movements are already exerting a globalizing influence on Africa. The continent is beginning to talk of Renaissance and global competitiveness. Education (and particularly, higher education) is one sure way of promoting such dreams, and pedagogy is the instrument for effecting the desired transformation in the beneficiaries of higher education. Therefore, all reform efforts in higher education must include reforms in pedagogy.

References


The full version of the article is available at www.unesco-iicba.org
In considering improving teaching and student learning, one needs to understand the way(s) in which an individual learns. It is widely accepted that while it is possible to identify common constituent elements, the learning process varies at an individual level. Students develop a way or style of learning, and refine that style in response to three groups of factors: unconscious personal interventions by the individual, conscious interventions by the learners themselves, and interventions by some other external agent.

The term learning style only began to appear in the learning literature in the 1970s. One of the reasons put forward for the emergence of the term is that learning style has a practical application, particularly in education and training. Riding & Cheema (1991) suggest that it appeared as a replacement term for cognitive style and cognitive style is only part of an individual’s learning style. The term learning style indicates an interest in the totality of the processes undertaken during learning. Learning style therefore relates to the general tendency towards a particular learning approach displayed by an individual.

In theory, where there is lack of congruency between the preferred learning style(s) of individuals and the approach adopted by the educator, the student may mentally opt-out of the teaching session or program, although still physically attending. This possibility must be countered with the recognition that to continually direct learning activities to a single learning style may promote the adoption of a narrow learning focus within a particular individual.

In the past few decades, a number of educators have proposed that the teaching process would be more effective if teachers took account of differences in students’ learning styles. A number of different conceptions of learning styles have been proposed, each with some plausibility. In this short article, some learning approaches and learning strategies that could match the learning styles of students are presented.

Learning Styles

A review of research in psychology indicates that people exhibit significant individual differences in the cognitive processing styles that they adopt during learning activities, including problem solving and decision-making (Robertson, 1985). With regard to these individual differences, researchers have different definitions and conduct research from different perspectives accordingly. However, findings from both qualitative and quantitative research have indicated several consistent major dimensions of individual differences (Dunn, DeBello, Brennan, Krimsky, & Murrain, 1981; Riding & Cheema, 1991).

Of these dimensions, cognitive style is a major one. The construct of cognitive styles was originally proposed by Allport (1937), referring to an individual’s habitual or typical way of perceiving, remembering, thinking, and problem solving. Since then, especially in the last few decades, there has been additional considerable research in this area.

In this article, a learning style is viewed as:

“A complexus of related characteristics in which the whole is greater than its parts. Learning style is a gestalt combining internal and external operations derived from the individual’s neurobiology, personality and development, and reflected in learner behaviour” (Keefe & Ferrell 1990, p. 16).

In other words, learning styles are the information processing habits of an individual. Unlike individual differences in abilities, cognition describes a person’s typical mode of thinking, perceiving, remembering, or problem solving. Learning style is usually described as a personality dimension which influences attitudes, values, and social interaction.

A fundamental change in thinking about the nature of instruction and learning was initiated in 1963 when John B. Carroll argued for the idea of mastery learning. Mastery learning suggests that the focus of instruction should be the time required for different students to learn the same material. This contrasts with the classic model in which all students are given the same amount of time to learn and the focus is on differences in ability. The idea of mastery learning amounts to a radical shift in responsibility for teachers; the blame for a student’s failure rests with the instruction, not a lack of ability on the part of the student. In a mastery learning environment, the challenge becomes providing enough time and employing instructional strategies so that all students can achieve the same level of learning (Levine, 1985).

The key elements in mastery learning are:

- clearly specifying what is to be learned and how it will be evaluated,
- allowing students to learn at their own pace
- assessing student progress and providing appropriate feedback or remediation, and
- testing that final learning criterion has been achieved.

In sum, the mastery learning approach “is an optimistic theory about teaching and learning that asserts that any teacher can help virtually all students to learn excellently, swiftly, and self-confidently” (Block, 1984:68). Proponents of mastery learning strategies believe that all students can master a great deal of what they are taught if the teacher employs a management-of-learning approach, whereby the information to be taught is broken up into small manageable units sequenced hierarchically with increasing levels of complexity so that students can be easily monitored and helped over hurdles (Ibid., p.69).

Another approach is the active learning style, which has commonly been applied in a number of learning activities. Active learning areas are: learning by doing, learning by experience, learning through action, learning through talk, student-centred learning, peer collaboration and co-operative learning and Barnes (1989) in Kyriacou (1992) has suggested seven key principles of active learning:
a) purposive: the task is seen by the learner as relevant to his/her concerns;
b) reflective: the learner reflects on the meaning of what is being learnt;
c) negotiated: the teacher and learner negotiate the goals and methods of learning;
d) critical: the learner appreciates different ways of interpreting learning;
e) critical: the learner tasks reflect real life complexity;
f) situation-driven: the learning tasks arise out of the needs of the situation;
g) engaged: the learning activities reflect real life tasks (Kyriacou, 1992:310).

Active learning can be set up by the teacher, but the teacher has to bear in mind the mental experiences of the students in order to optimize development, understanding and learning capacities.

Another approach is motivational learning styles – (dependent, independent, and dependable), which can be useful in helping students to want to learn.

a) The dependent style pairs affective and moral domains, with the emphasis on the emotional component. Students appear eager to please, but anxious about doing badly and often showing lack of initiative.

b) The independent style has a dominant cognitive motive supported by the affective. Students show an enjoyment of competition and a desire to follow independent interests.

c) The dependable style pairs moral and cognitive motives. Students are concerned with maintaining their self-esteem, through fulfilling expectations and following rules which have been integrated into their own value system (Entwistle, 1987:131).

Learning Strategies

Some learning strategies that can aid students to learn are:

a) Deep Processing – appears to designate the ability of students to perform cognitive operations such as evaluation, organization, discrimination and extrapolation;
b) Elaborative Processing – is comprised of items which stress visualizing, summarizing, relating, encoding, and applying information;
c) Methodical Study – represents the use of systematic, traditional study techniques;
d) Fact Retention – is marked by items which stress a preference for factual information and retention of details (Cano-Garcia & Justicia-Justicia, 1994:240).

For academic tasks, students will employ different methods of the above methods as well as surface level or skimming methods to quickly find relevant information and once the information is found the student will switch to deep-level processing to fully comprehend the subject. Some students may use a strategic approach and try to determine what will be on the exam, then focus their efforts of learning on just that. Other students are not able to grasp what is being taught without understanding the macro and micro level of the subject and relating it to real life situations. Other students focus on logical steps to solve a problem and take a linear approach to knowledge building, comprehension and retention. It is up to the teacher to find out how the students in their class learn and then tailor their lessons to the learning styles of the subject to optimise understanding of the subject matter. The use of visuals and tactile material make a big difference in how fast students grasp the concept being taught.

Conclusion

In order to ensure that students are not falling behind in their studies, it is essential to continuously assess their progress throughout the duration of the subject matter and employ customized teaching strategies that are best suited to their learning styles. Besides, two-way communication is vital during the evaluation process to encourage students and to incorporate their views and address their needs into the learning process. Regular evaluation and feedback from the students can also help the teacher target what units need to be re-taught or processes the students did not grasp. Additional examples or additional explanations can be offered to help clarify vague unclear units. Development of instructional material to aid students in remembering the necessary techniques, strategy steps and self-regulation techniques is always useful.

General enthusiasm for the subject matter being taught, the use of visual aids, tactile material, instructional aids, the incorporation of learning and motivational styles, regular evaluation, two-way communication, extended feedback, and responsive adjustments can motivate students to pursue a higher level of understanding. It can also start them on a quest for knowledge, encouraging self-centred teaching and increasing their learning capacities.

References


Key Guides To Teaching Economics In Higher Education

by Prof. Sarah Anyanwu
Federal University of Technology P.M.B 2076 Adamawa State, Nigeria
Email:anyanwu2003@yahoo.com

Getting more effective teaching in HEIs is a major concern, such that many scholars and education professionals now call for pedagogy and teaching practice to be integral parts of all higher degree programmes. The fact is that teaching in HEIs, especially in most least developed countries (LDCs), is generally unsatisfactory\(^1\) with over reliance on lecture method. Effective teaching requires that students should be motivated and stimulated by the lecturers to learn. It also involves the use of appropriate course materials (standard and current textbooks, audio tapes, video tapes, CD-Rom and online materials, student study guide etc). Therefore, lecturers should see themselves as researchers, curriculum developers, lifelong learners, extension workers, administrators as well as guides, helpers, counselors, disciplinarians, custodians and evaluators\(^2\). The role they play at any point in time depends on the situation.

The common slogan in HEIs is, “You either publish or perish”. Promotion of lecturers depends more on the number of publications and research and less on teaching. Thus, most lecturers devote less time to teaching and transmitting knowledge to students. They rely on the lecture method to the exclusion of tutorial, assignment, role play, discussion, seminar, team teaching, field trip, among others. The use of such methods will help facilitate the production of world-class graduates, and HEIs will be globally competitive and can respond to sustainable development.

This paper examines the teaching of economics in HEIs. It also presents guides to effective teaching of economics in HEIs and highlights various methods of teaching.

The Teaching of Economics in Higher Education

Economics as a discipline makes use of diagrams, graphs, assumptions and theories. It involves the use of hypothesis, model specification, estimation of parameters of the equations, testing statistically the hypotheses and models, applying the models to practical problems in forecasting and policy analysis. Economics requires the use of mathematical tools (calculus, matrix algebra etc), testing of predictions, forecasting, and simulation. Therefore, students who have no background in mathematics and statistics may find it difficult to enjoy lectures in economics. Emphasis is usually on acquainting lecturers and students with the recent developments and latest information in four core courses in economics (Methodology and Philosophy, Micro Economics, Econometrics and Growth Literature)\(^3\). More importantly, there are some core courses that are very quantitative, such as micro economic theory, econometrics, probability and statistics, quantitative methods, applied statistics, mathematics in economics and game theory. These courses seem to scare students. Yet, they can be taught in such a way that they become very interesting. The following suggestions are helpful in this regard.

Guides to Effective Teaching of Economics in Higher Education.

- Adequate knowledge of the subject
- Simplification of economic theories and models
- Teaching economics as though students mattered
- Preparation of lecture notes
- Sufficient spacing and clear presentation
- Use of examples
- Use of appropriate teaching methods
- Use of questions in class
- Prompt feedback and monitoring of student learning progress
- Observing students in class
- Good rapport with students
- Justice and fairness in dealing with students
- Use of suitable audio-visual aids and new technologies in teaching
- Commitment and creativity of the lecturer
- Use of rewards
- Encourage effective learning
- Self and external assessment of teaching performance
- Getting down to the students’ level to eliminate fear and reduce anxiety

Description of each of the above items can be found at www.unesco-iicba.org

Conclusion

Generally, there is no single teaching technique that is suitable for all educational purposes or situations. The type of technique to be adopted, therefore, depends on a lecturer’s abilities and pedagogical skills, students’ abilities, class size, availability of resources and instructional aids. It is my sincere belief that effective utilization of these strategies by lecturers will go a long way to improve teaching learning process in higher education. Without doubt, guides to effective teaching and methods of teaching in higher education have become so dynamic and the issues involved are also wide ranging.

Bibliography

8. For details see Mohanty (1995) and White (1980).
The Ministry of Education of Ethiopia has long been trying to increase enrolment into the various higher education programmes. Currently, there are 21 universities in the country, most of which started very recently – as of the 2006/7 academic year. The intake capacity into the various higher learning institutions has increased dramatically in recent years. For instance, Addis Ababa University, which is the oldest institution of higher learning in the country, has increased its enrolment by more than 164% in the last five years. If we look at the increase in enrolment in the graduate programme it is more than 188%, again, in the last five years (Office of the Registrar, 2006).

While the issue of increasing enrolment has been well taken care of, there has been no proof of the increase in the quality of education delivered in the country in general. In fact, there has been a great deal of concern from different stakeholders in that HEIs in Ethiopia are declining in quality and are poorly connected with the intellectual currents of the international higher education community (World Bank, 2003:vi). According to Firdissa (2006:6), “the current upturn in Ethiopian HEIs’ enrolment is accompanied by concerns about threats to quality and standards”. According to a report by the World Bank (2003:57), there are three reasons to say that educational quality is at risk in Ethiopia: a) the declining expenditures per student, b) the weakening in the proportion of senior academic staff with doctoral degrees within the system, and c) the rapid enrolment expansion which is inevitably bringing with it progressively less prepared students into the system.

One mechanism put in place by the Ministry of Education to improve the quality of education in Ethiopia is introducing a Higher Diploma Programme (HDP), a licensing training programme that is aimed at developing the skills and professionalism of teacher educators. This programme was developed in 2003 to support the implementation of the Teacher Education System Overhaul (TESO). The MoE has now made it compulsory for all teacher educators to be qualified as teacher educators by taking the HDP. According to a letter written, in April 2006, to all Deans of Teacher Education Institutes, “All Teacher Educators must pass the HDP in order to be employed as teacher educators and to continue in their profession”. The training is practical and takes one academic year to complete. Trainees are also expected to carry out their teaching duty alongside the training.

The HDP has been standardized and it is run in almost all the teacher education institutions in the country. The main objectives of the HDP are, according to the HDP Team at the MoE, to enable teacher educators to:

- support the implementation of the TESO Programme,
- identify their own needs and become reflective teacher educators,
- develop teaching as a skill, based on sound theoretical knowledge and experience,
- use active learning and student centred methods,
- become role models of good practice,
- have high standards of professional ethics and clear values,
- provide a high quality experience for student teachers,
- help school teachers be more effective in their own teaching,
- be involved in action research,
- develop team working skills,
- address gender issues, etc.

The training manual, prepared by the HDP Team at the MoE, has four modules. The first module, The Reflective Teacher Educator, aims at developing teachers’ ability to reflect on their own experience, as both teachers and students. The second module, Developing Active Learning, aims at helping trainees look at the various ways of enabling their students to take responsibility for their own learning. The
third module, Improving Assessment, aims at enabling trainees to accurately record students’ abilities. This module is mainly about the practical application of continuous assessment methods. The last module, Action Research, aims at showing how action research is different from “conventional research” – it starts from the idea that there is a problem in the teaching learning process that needs a solution; specific action would then be taken to implement possible solutions. Trainees are required to do an action research project, in groups.

In addition to the presentations by HDP leaders and tutors, and individual and group presentations by trainees, the HDP is delivered through school placement and lesson observations. Each trainee is required to spend “a minimum of 20 hours in school while the school is in session and school students are present” (HDP Manual, 2006:15). The main aim of school placement is to help trainees understand some of the challenges that existing teachers and new teachers may face and thus be better equipped to train new teachers. Candidates are also observed while teaching for a minimum of four times during the entire programme. The aim here is to focus on different aspects of the active learning and student centred teaching, i.e., putting into practice what has been discussed in the HDP class.

The HDP has been evaluated as “successful” (HDP Manual, 2006:3), as a result of which “the quality of education in the TEIs is improving”. The evaluators of the programme have witnessed “many examples of very good teaching”. Some questions could be raised here. If the quality of education could be improved by introducing the HDP, why limit the training only to teacher education institutes, or teacher educators? As one of the trainees in the HDP at AAU, I witnessed that most of the instructors who had their training as teacher educators were quite familiar with most of the issues raised. On the contrary, those who did not have their training as teacher educators were quite unfamiliar to most of the issues (like active learning and reflective teaching).

Another question raised here is whether there is an improvement in the quality of learning on the part of the learners. Teaching is only one aspect in the teaching learning process. There are a number of factors that should be considered to bring about improvement in the teaching learning process. In broad terms, the input and the throughput should be seen. The input into the system are mainly students who join HLIs. Are students really well prepared to take responsibility as college or university students? Are they, for instance well equipped with the language of instruction? Language is the means through which students develop their thinking abilities. Instructors who have passed through the HDP are required to help students take responsibility for their own learning, mainly by applying active learning methods. These active learning methods require students to express opinions, solve problems, ask questions, participate in pair and group discussions, take part in micro teaching, do presentations, etc. All the methods indicated above depend heavily on students’ mastery of the medium of instruction. There have been complaints on the part of instructors about their students’ English language ability.

Most students may favour lectures as they lack independent learning skills and self confidence. The language problem students are facing may have its origin in the schools. The MoE has introduced an English Language Improvement Programme (ELIP) in a bid to alleviate the English language problem of teachers in the school system in the country in general. The Programme has to bring about tangible improvement; otherwise HLIs may continue to have students with English language ability which is below the required level. As a result, the HDP may not be as effective as it should be. Universities do not have the Freshman Programme, during which they would do all possible to equip their students with language and other skills necessary for university students.

When teachers favour lectures, it could be because they do not realise they are ineffective, or are not aware of alternatives. When one looks at students’ background (especially language), one might be forced to say that teachers want to lecture (spoon-feed their students thereby making them dependent learners) because they lose hope in what they would have liked to do – use active learning methods.

That is probably why the World Bank and others have dared to say quality is at risk. Increasing enrolment could be achieved by opening more universities, building more classrooms, hiring more teachers, etc. Maintaining quality is however different. As Levy (1993:9) said “Quality is not something you install like a new carpet or set of bookshelves …. Quality is something you work at. It is a learning process”.

References


In Nigeria, the system of education consists of basic and post basic education and within this system; institutions are divided into primary, junior secondary, senior secondary and tertiary levels. While the basic education level incorporates primary and junior secondary schools, the post basic incorporates senior secondary schools and tertiary institutions.

Schools are owned by either the government or private individuals/organisations. The responsibility for the management of government–owned schools is shared among the three tiers of government.

- Primary school – Local Government
- Secondary School – State & Federal Government

Though the Nigerian government maintains that education is said to be free at the primary school level, net primary school enrollment is about 60% for children of school age (UNICEF, 2000 - 2005).

The primary education sector is said to be the most troubled of the three levels of education in government-owned schools. The state of infrastructure and learning environment in the government-owned primary schools popularly called ‘public schools’ are very poor.

There are about 2,015 schools with no buildings of any type and in some communities, classes are held under trees. (Dike, 2002). One is left wondering how students are expected to learn under these conditions.

Many of the teachers in these schools are also unqualified. It is reported that about 23% of the over 400,000 teachers employed in the nation’s primary schools do not possess the Teachers’ Grade Two Certificate, even when the National Certificate of Education (NCE) is the minimum educational requirement for teaching in primary schools (Ogbeifun & Olisa, 2001).

This is the reason most parents have opted for private education and send their children to private primary schools which are nowadays available in varying standards with respect to the income level of the family. The fees charged in these schools are relative to the standard of education students get.

It is surprising to note that even children from poor backgrounds ignore the government’s free primary schools to enrol in these private schools. A study carried out in three poor areas of Lagos State showed that about 75% of children in the area attended private schools (Tooley & Dixon, 2005).

Students that are left to attend public primary schools are mostly children from very poor homes who are usually poorly fed. Such students cannot be expected to easily assimilate lessons that are being taught in schools. Nigeria is presently a beneficiary of the School Feeding Programme in Africa, a World Food Programme project run in collaboration with New Partnership for Africa’s Development (NEPAD), UNICEF, FAO and the United Nations Millennium Hunger Task Force (MHTF).

More often than not, students from both private and public primary schools, with exception of children whose parents can conveniently afford the more expensive private secondary education, proceed to public secondary schools.

There are 14,543 public secondary schools in Nigeria, according to the National Council on Education (NCE)’s “Operation Reach All Secondary Schools (ORASS) project which was conducted in November, 2006.

The schools are owned and managed by either the Federal or State Governments. Schools managed by the Federal Government are better funded than those managed by the State Governments. However, in all these schools, students are provided with limited infrastructure.

Through the ORASS project, it was discovered that less than 11% of secondary schools across the country have well-equipped science laboratories, less than 5% have well-equipped introductory workshops, less than 17% have science kits and less than 41% have school libraries.

The present state of public schools is a result of government’s limited commitment to the education sector with an allocation of N186 billion out of the 2007 budget of N2.3 trillion to the education sector. This is only 7% of the total budget and is disheartening when compared with the fact that Ghana spends 40% of its recurrent national budget on education (Biervliet, Dubbeldam & Adu: online).

Many students from the public school system graduate with poor academic backgrounds. This is always reflected in their poor performance in the external senior secondary school certificate examinations conducted by the West African Education Council (WAEC).

The Federal Ministry of Education recently took stock of the performance of secondary school students nationally over a period and found out that only 23.4% in the period reviewed passed the WAEC (Osawe, 2007).

Tertiary education in Nigeria is provided by both government and private individuals/organisations. The private universities are very expensive.
and their students are mostly from wealthy families.

A high percentage of the country’s student population looks forward to attending the government-owned tertiary institutions, particularly the universities.

In two decades, the number of university students increased eightfold, from about 55,000 in 1980 to more than 400,000 by 2002 (Bollag, Feb 1, 2002, A40). This was an explosive expansion the government did not foresee nor plan for.

Available infrastructures in these schools are over stretched and many of them are in dilapidated states. Students have to crowd themselves and scramble for seats in lecture halls designed and built to seat far less than the number of students enrolled for the classes. In order to receive lectures, some students have to sit on the floor, stand by the window or even carry their own chair to the lecture hall.

Studying in the country’s university is characterized by incessant disruptions, which prolong the length of time students spend in the tertiary education level and they experience extension of their graduation date beyond the stipulated period for their specific course of study.

Causes of these disruptions range from industrial strike actions by different employee unions to student protests. Many young professionals in Diaspora today are students who experienced a complete stall of their education as a result of the protracted industrial strike action of the Academic Staff Union of Universities (ASUU) in 1996 and relocated to other countries in pursuit of more stable and quality education.

In order to earn a degree, most students go through very stressing experience. The instructional method basically involves writing long notes dictated by lecturers with little or no access to reference materials and then one has to practically memorize these lecture notes in order to pass examinations. In schools that are fortunate to have libraries, the materials made available to the students are mostly outdated.

Students in science and technology-related courses rarely have opportunities to hold practical sessions and in cases where they do, the practical sessions are sometimes held with non-functional equipment.

The crucial need for learning support materials for students has been identified by the MTN1 Foundation and the foundation is now setting up digital libraries in higher institutions across the country.

Majority of children and youths of school age in Nigeria are from homes that cannot afford to send their children to schools abroad to get quality education. Young people are the future of the country and the level of development the country can achieve and sustain is highly dependent on the quality of education these young people are given.

The quality of education in Nigeria can only attain acceptable standards if the government can re-align its priorities to include education and dedicate efforts to the implementation of several policies already developed on education.

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1 MTN is one of the foremost telecommunication companies in Nigeria.
The majority of secondary school leavers aspire for higher education. But the reality of the situation makes it impossible for admission to be provided for all who need it. The National Universities Commission (NUC) of Nigeria insists on “carrying capacity” as a yardstick for admission into Nigerian Universities. Thus, to keep the required teacher-student ratio, many higher education seekers never get admitted. The option for all such becomes the labour market. But the truth of the situation is that even after the opportunity to acquire higher education, skills acquired in school do not match required labour market skills. The Nigerian Education Sector Analysis (ESA) brought this to the forefront when reports indicated that science graduates lacked skills required to function effectively in the labour market.

The recommendation was therefore a need for a critical look at the pedagogy of science in our tertiary institutions.

The Nature of Science

The components of science are data, theories (both phenomenological and explanatory) as well as shaping principles. Science deals with concepts, many of which require holistic and decompositional description of mental categories. Moreover, reasoning in science involves induction, analogies, syllogisms and deduction. Thus, the nature of science makes learners consider it as being difficult. Often therefore, learners hold various misconceptions about science concepts. The teacher of science therefore has an onerous task of countering the wrong notion about science as well as correcting various misconceptions.

What the Higher Education Teacher Needs to Know about Learning

One assumption about learning is that persons of all ages have the potential to learn. However, some learn faster than others. Adults in higher institutions are motivated to learn for professional advancement.

It is important to note that theories of learning are changing. We have moved from behaviourism, which hinged on the theoretical goal of the prediction and control of behaviour as a result of stimuli. Emphasis shifted to cognitivism, which deals with information processing view of learning. Cognitive science thus draws from cognitive psychology, psychobiology, anthropology, computer science, artificial intelligence, linguistics, and philosophy. The centre stage in learning theories is currently assumed by constructivism. The view here is that learners do not passively acquire what the teacher presents, but actively construct mental structures of what is presented based on their prior experience with the environment (Asim, 1998).

Teachers of science also need to know that science is self-correcting because when theories become irrational, they are discarded. Thus, if higher education science learners must plug in and benefit from the vast expanse of scientific knowledge, then the strategies and resources for science teaching must change.

Resources for Science Teaching

Why should one be interested in science pedagogy? The reason is that the resources for teaching and learning can influence the effectiveness of an instructional programme. The teacher is a unique and important resource that can make or mar the science learning process.

Research has shown that the lecture method is most popular among higher education teachers (Bourner & Flowers, 1999). However, Okebukola (2002) cautioned that if we must make any significant progress in science teaching in the future, we need to go beyond the stereotypes to “new trajectories” in science teaching.

It is known that apart from mental descriptions during lecture, the understanding of science concepts can be enhanced through visualization techniques. Such useful techniques include simulations, models, video, especially where class size and a dearth of science apparatus pose a problem. Computer simulations provide conceptual assistance that aids students’ understanding of the process of constructing explanatory model in science laboratory apparatus (Ogunsola – Bandele, 2002). For science teaching to be meaningful, a variety of learners’ senses must be affected. Information technology (IT) holds the hope for providing versatility in science teaching. Thus technologies need to be incorporated into the regular techniques for the pre-service science teacher programme. But research evidence points to the fact that many higher education teachers are yet to embrace IT in teaching (Asim, 2007). It is known that Computer Assisted Instruction (CAI) as well as Computer Assisted Assessment (CAA) has helped science teaching and learning. Thus apart from lectures, field and laboratory studies, CAI and CAA need to be used by higher education teachers.
Importance of a Shift in Pedagogical Skills of Higher Education Teachers

Higher education holds the hope for the individual and the wider society because it is expected to provide both generic and work-related skills. Obanya (2002) listed the following as expected generic skills: analytical power, communication (both oral and written), problem-solving skills, team spirit, creativity, versatility, life-long learning skills as well as IT skills. Work-related skills could be viewed as basic education skills, technical/vocational skills, basic life skills and personal psycho-social skills.

As part of the Millennium Development Goals (MDG), the Federal Government of Nigeria, through various parastatals of education, has mounted several teacher-retraining programmes. Also existing curricula are being updated through the infusion of relevant contents to reflect global trends. For instance, the Curriculum for nomadic pastoralists and migrant fisherfolk in Nigeria has recently been infused with family life and HIV/AIDS education.

To assist the teachers, a workshop was organized from 25 to 31 March, 2007 to prepare teachers’ guide and pupils’ text to take care of the infusion. Such a situation would necessarily require higher education teacher trainers to adjust their pedagogical skills to suit the demands of teaching such diverse contents.

Conclusion

Theories of learning are changing and thus pedagogical skills need to reflect such changes, especially in science where the frontier of learning is rapidly expanding. Apart from the popular lecture method, higher education science teachers need to incorporate IT-based skills in teaching if they must become relevant in this era of globalization.

References


Training Workshop on School Management and Pedagogic Leadership Conducted in Guinea

IICBA in collaboration with the Guinean Ministry of Education and Scientific Research conducted a training workshop on school management and pedagogic leadership for sixty-two professionals drawn from various educational institutions at national, regional, district, and school level from 25-30 June, 2007.

The chief objective of the workshop was to enhance the capacity of primary school directors and secondary school headmasters who never received training on school management. Furthermore, the workshop intended to familiarise participants with theoretical and conceptual tools as well as innovative practices in terms of pedagogic supervision and guidance, within the framework of component 4 of the CapEFA project being implemented in Guinea by the UNESCO Regional Bureau of Education for Africa (BREDA).

In addition, the workshop helped to bring clarifications to the reforms introduced in the Guinean education system and to determine the ways to facilitate their implementation through effective leadership.

At the end of the workshop, participants put forward the following recommendations: integrating the contents of the training workshop into in-service and pre-service training programmes, strengthening of the partnership between the school directors, headmasters and the APEAE offices, and networking of school directors and headmasters to ensure the personnel development for quality education.

The workshop themes included: team work, organisational structure, pupils’ management, financial management, personnel development, personnel evaluation and pedagogic leadership and culture, environment and school values.

Conference on Teacher Education through Open and Distance Learning in Africa

IICBA participated in a conference on Teacher Education through Open and Distance Learning in Africa organized by the University of South Africa from 2-3 April 2007.

The Department of Teacher Education in the School of Arts, Education, Languages and Communication, College of Human Sciences, UNISA hosted a conference on the theme, Teacher Education through Open and Distance Learning in Africa within the context of the Proposed Teacher Education Policy Framework in South Africa.

The purpose of the conference was to open up space for participants to reflect critically on existing open and distance learning (ODL) practices in teacher education in Africa.

Some of the key papers presented and discussed included: professional teacher development and the role of HEIs, teacher education curriculum for open and distance learning, higher education policy, the role of distance education in in-service and pre-service teacher education and partnerships among distance teacher education institutions and teacher unions.

During the conference, IICBA took the opportunity to present its vision and share its experiences in the use of distance education to train teacher educators in sub-Saharan Africa under the title, Teacher training through distance: IICBA’s experience to the conference participants. The presentation mainly dwelt on the mandate of IICBA and its strategic and programmatic focus and its future direction, emphasising the need to forge closer links with DE institutions in Africa.

Furthermore, IICBA explored possibilities of wide-ranging cooperation between IICBA and the University of Pretoria.

Consultative Meeting on TTISSA

IICBA took part in a two-day consultative meeting on TTISSA organised by the Teacher Education Section of the Division for Higher Education of UNESCO from 11-12 June 2007 in Paris.
The meeting, a follow-up from the January consultative meeting, aimed at discussing the progress made by the teacher education team and education programme staff in the respective TTISSA countries, creating synergy and strengthening working relationships between national, cluster, institute and HQ, developing a more coherent and logical set of criteria to guide the selection of participating countries for the second phase of TTISSA, and charting out future activities in relation to the major TTISSA goals.

The meeting created a common understanding among participants in view of intervening in TTISSA countries at the level of policy and targeted capacity building activities. IICBA, as a capacity building institute working in sub-Saharan Africa, is well placed to contribute its share in this. In line with this, IICBA mentioned that it has realigned its focus to TTISSA countries and briefed participants on what it is planning to carry out training programmes for teacher educators and education planners in the areas of School Management and Educational Leadership, Women Leadership in Education and ICT Integration in Education - all targeting TTISSA countries.

Representatives from IICBA, BREDAS education programme specialists from TTISSA countries, the director of the Harare Cluster Office, the director of the Division of Higher Education at HQ, and staff of the Section for Teacher Education attended the meeting.

**Conference on Distance Education and Teacher Training in Africa**

IICBA attended the Second Conference on Distance Education and Teacher Training in Africa (DETA) jointly organised by Makarere University and the University of Pretoria from 5 to 8 August 2007 in Kampala.

The objectives of the conference were to contribute to the debate on teacher training in Africa, build capacity for the delivery of teacher training programmes through open and distance learning in Africa, develop a research agenda for teacher training in Africa, and build new partnerships and network with individuals and institutions in Africa.

IICBA gave a presentation on the role of the Institute in the implementation of UNESCO’s Teacher Training Initiative for Sub-Saharan Africa (TTISSA), highlighting its role in spearheading policy dialogue, facilitating interactions between Ministries of Education and experts, and forging strategic partnerships. The presentation was a joint undertaking with Ms. Caroline Pontefract, Chief of Teacher Education Section at HQ.

At the end of the conference, participants reached at a consensus on the following key issues:

- The teacher is central to education and the preparation, training, recruitment, retention, and development of the teacher must be closely examined and planned for.
- Collaboration and networking in teacher education is vital and must be promoted.
- A lot more research is still required and the feedback loop into the TE curriculum and training of teachers must be established
- Agreed upon research agenda has to be formulated so that institutions and nations can pursue them.

The conference was attended by a total of 148 participants drawn from 28 African and European countries.

**Regional Workshop on Analyzing the Responses of Teacher Training Institutions to HIV and AIDS**


The main objective of this workshop was to discuss the findings of four case country studies (Ethiopia, Kenya, Uganda and Zambia) that examined the responses of Teacher Education Institutions (TEIs) to HIV and AIDS to promote policy dialogue and exchange of ideas on good practices relating to the management of HIV and AIDS in TEIs and facilitate the development of a regional strategy for dealing with HIV and AIDS in TEIs.

IICBA carried out the Ethiopian case study and presented the research findings on the impact of HIV/AIDS on teachers and TEIs, HIV/AIDS policies, strategies, programmes and activities, formal and non-formal HIV/AIDS education and their impact, existing treatment, care, support, and outreach services, partnership and networks. In addition, IICBA identified major obstacles to a better response and put forward policy and programmatic recommendations.

Participants of the workshop worked in country-specific groups to identify critical areas for policy formulation in HIV and AIDS in TEIs and developed draft plan of action (on the basis of the evidence from the case studies) for the consideration and subsequent implementation by the responsible bodies and stakeholders at all levels of the education sector (College, District, Federal).