EDUCATION STAFF TRAINING DEVELOPMENT PROGRAMME

IMPROVING THE QUALITY OF TEACHING AND LEARNING IN INSTITUTIONS OF HIGHER LEARNING IN AFRICA

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Introduction

Once upon a time, learning was measured by the volume of facts and knowledge assimilated by an individual and by the knowledge that individual displayed to the world around him/her. If that individual happened to be a teacher, he/she then listened to the recitation of facts he/she had imparted to learners and which they in turn could remember. If the recitation of facts was well done, the individual had therefore taught his/her learners something and they (the learners) had learnt something. But this is a very narrow view of teaching and learning, which is undoubtedly inadequate as a definition of teaching and learning in modern times to meet social and economic needs.

Yet not every one who has a voice and is audible, in spite of the volume of facts, can teach; because teaching is much more than presenting facts, ideas and information. To many people, teaching includes among other things, helping learners to learn facts and information by means of the probing, discovering, analyzing and internalizing facts to ensure the development of right attitudes, values and the more straightforward tasks of skills acquisition and knowledge development. These tasks cannot be performed by non-professionals uncommitted to teaching and to the cause of developing and guiding individuals in the pursuit of knowledge; and to the professional ethics of teaching and learning.

In to-day's world, learning is often recognized as the "process of finding out by and for oneself, whereas teaching is the process of stimulating and advising learners to learn". If this is accepted, then it may be said that teaching involves helping someone to learn something, or more formally to help someone to learn something, or to assist someone acquire or change some behaviour i.e. some skill, attitude, knowledge, ideas and appreciation. For all practical purposes therefore, teaching is an art and learning a science. We can therefore talk about the art of teaching and the science of learning.

If teaching is an art and learning a science, how are these two sides of a coin to be improved in institutions of higher learning? What elements of teaching and learning are to be improved; how can this be done and with what mechanisms, techniques and strategies. What

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are the forces standing in the way of effective teaching can learning? This paper will therefore examine some of these issues and attempt to propose measures for solution.

II. The Ethnology of Teaching

In the preceding section, it was pointed out that there was a time when learning was measured by the volume of facts and assimilated by an individual and by the knowledge that individual displayed to the world around him/her. Such behaviour was attributed to maturation, growth, development and learning. In terms of teaching, however, such a display of knowledge was appreciated if the individual had helped learners to learn something which they did not know before. Therefore, as a first principle of the ethnology of teaching, to teach is to nourish or cultivate the growing child or to give him/her intellectual exercise, or to train him/her in the horticultural sense of directing or guiding his growth.

In this regard, to be a teacher then entails and means being a creative artist in the medium of human lives so as to be able to quicken into action the intellectual life of the learner. The teacher should therefore be sensitive to the needs of the learner and should possess a body of knowledge which can be passed on to learners. Not many people who go under the name of a teacher possess this body of knowledge, nor are they equally sensitive to the political, social, moral and educational issues agonizing the world.

A display of knowledge by an individual is not teaching because teaching is noble only when the students learn about noble ideas and ideals and when what is learnt is relevant to the problems of the students' world. "Teaching of any other sort is only an exercise in futility"^^

For teaching to be noble, however, students must learn to think and do things for themselves. Thinking is the method of education resulting from the pupils' own unique experiences and not from neatly packed beliefs and memorized facts. For each individual, the content of education is always new and must be digested through the process

of thinking drawing enlightenment from what is based on past and present experiences to move into the future. This is more so when account is taken of the fact that the latest developments not just in education, but in other fields, have thrown into the world so much to learn, unlearn and relearn.

What is more important in education is to ensure that the substance of education must be arrived at through the process of thinking, because believing in ideas and truths without examining them is a parody on education. True education calls for intellectual involvement on the part of the learner. But learning must be accompanied by curiosity because an insatiable curiosity is the hallmark for educational development for both the learner and the teacher i.e. the kind of curiosity which creates a union between theory and experience thereby ensuring that learning takes place. Undoubtedly, this calls for interdisciplinarity in university teaching and research and for preparing future policy makers and planners with knowledge and skills for developing education as a system and not separate parts of a system. As was pointed out by the Vice-Chancellors in 1989, "university teaching should now begin to reflect the fact that there cannot be a divorce between the technological aspects of a problem and its socio-cultural and political origins."  

A second principle of the etymology of teaching is that of the acquisition of knowledge in which the teacher plays the role of a transmitter of knowledge to the learner. According to this principle, teaching is regarded as a form of alchemical wetting: i.e. the student is imbued with a lot of learning; ideas are infused into him, and wisdom is installed for his/her use. The teacher propagates a lot of knowledge; he engenders thoughts: he implants the germs and seeds of ideas and then the student conceives. What is transmitted to the learner by the teacher must be stored by that learner and in turn the learner must put to use the stored knowledge through practice because knowledge and ideas which are not utilized sooner or later go to waste.

A third principle of the etymology of teaching is that of construction by which a teacher informs the learner in the sense that his/her behaviour is given form or shape. According to this principle, to teach is to edify in the sense of building by which the teacher builds precursors such as knowledge, skills, habits, attitudes, interests etc.

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Whatever principle we choose to adopt, it should be emphasized that a student left to himself in a given environment will learn something, but he will not have been taught. A person left to himself will learn something from experience or from the environment, but again he/she will not have been taught. Teaching is the expediting of learning because a person who is taught learns more quickly than one who is not. Teaching should manifest itself into some form of behaviour which would not have otherwise arisen without it (teaching). It is this facilitating of learning which is central to teaching.

III. Teaching in Higher Institutions

In the earlier section, it was pointed out that teaching at whatever level involves helping someone to learn something, to change some behaviour or help someone acquire some skill, knowledge, attitude, ideas or appreciation. Even in institutions of higher learning teaching is much more than presenting information, or ideas, because it involves guiding someone to learn by means of the probing, discovering and analyzing and examining activities which help students to develop skills, attitudes and values.

While the technology of teaching is more concerned with the behaviour of the student there are other factors in the world of education which affect teaching in institutions of higher learning. It is not just enough to understand those who learn, but also:

(a) those who teach i.e. the lecturers professors and scholars;
(b) those who engage in research, development and academic scholarship;
(c) those who administer colleges and institutions of higher learning;
(d) those who make policy concerning higher education and the decision-makers in higher institutions; and
(e) those who support education particularly in terms of finance and educational development.

Lecturers, professors and academics are always blamed when university students show unruly behaviour; when they take to the streets to express their feelings about poor conditions in the universities and about hardships in their school life. Whenever educational policies fail to change students, lecturers and professors are blamed for their ineffectiveness in teaching. They are blamed because they are charged with the responsibility of shaping the future of the young.
Often university lecturers are accused of being incompetent in the delivery of lectures; or that they are not good enough for university teaching because they are not trained in the art of teaching at third level institutions, or that they lack the academic experience for operating at that level.

A major problem concerned with teaching in institutions of higher learning relates to the professionalization of teaching i.e. whether teaching is a profession; whether it can be professionalized; and whether lecturers and professors operate as professionals. Teaching in the universities is professionalized in as far as it is considered as a dynamic process whereby the art and technology of teaching can be observed to change certain important characteristics in the improvement of teaching in higher institutions as a profession.

Many people would argue that lecturers, professors and other academics are professionals because they adhere to certain rules, code of conduct, professional ethics and do pursue and maintain certain standards of the profession of teaching. If this is accepted, then we need to examine some characteristics of teaching as a profession and the effects of these characteristics on education, and in particular on the delivery capabilities of university teaching staff.

A. Characteristics of Teaching as a Profession

Some of these characteristics of teaching as a profession are:

(a) Knowledge based on scientific theory and scholasticism i.e. the knowledge and skills required for teaching research, academic work and excellence, and to provide academic guidance to students. For a person to be admitted to university teaching, he/she must possess a body of knowledge specific to the subject taught. Often this knowledge must be acquired over a period of time, through research, wide reading, scholarship, academic advancement and qualification and professional exchange of ideas through attendance and participation in academic activities - seminars, workshops conferences etc.

1/ For a detailed treatment of this, see UNECA - Trends and Issues in African Education, Monograph No. 5, ECA Addis Ababa, December 1987, pp 105 - 110.
(b) **Standards of Education and Training**

Often persons within a given profession do determine the standards of education and qualifications necessary to ensure the attainment of knowledge and skills in the field of the profession. For teaching in a higher education institution, a very good first degree plus a masters degree are essential and to this should be added a doctorate degree in the course of teaching. Most universities consider the possession of a masters degree as the minimum requirement for engaging any staff for a teaching function. Those with good first degrees can be recruited as research or teaching assistants or working under the tutorage or internship of seasoned professors, scholars or academics.

(c) **Function - No profession can become very professional unless it has a unique function to perform in society. In this regard, function concerns what the occupation seeks to accomplish for its clients and society. Teaching in higher institutions has a function and that function is preparing the young, equipping them with the right knowledge and skills for a productive role in society, and for self-fulfilment and actualization of those same individuals. It is this function that brings into focus the criticism labelled against teaching for ill-equipping the young for a productive role in society.**

(d) **Licensure and Long Socialization Period**

Primary and secondary school teachers undergo training at the end of which they receive a certificate as testimony of their competence to perform in the teaching profession. Whereas the certificate is not a guarantee of competence, it is issued with that intent. In higher education, no such teaching certificate is issued to those who teach or profess in such institutions. The license is replaced by one's good academic record, good academic certificates, an impressive curriculum vitae, coupled with a convincing performance at an interview!

"On-the-job training." One learns the technology of teaching while on the job, and as such teaching in institutions of higher learning calls for a long socialization period. The new entrants to the scene start as teaching or research assistants and learn the methods and techniques of the trade under the supervision of senior and established colleagues. As long as the young lecturers keep pace with their fields and exhibit
their abilities through the writing of scholarly papers and research work, the actual class performance may have little relevance to their career progress in the university. The old dictum of "publish or perish" still holds and has repercussions for teaching.

While university boards such as the appointments and promotion and academics boards ensure that standards are maintained, they are less concerned with actual classroom delivery capability. In any case, if students cannot follow what lecturers and professors say, they are referred to books, journals, papers, articles or any other works of scholars on the subject.

Long socialization period often leads to in-depth knowledge on the subject and in some cases, lecturers/professors acquire authority in the subject of specialization through research and scholasticism. Authority, however, does not mean effective delivery of the subject in front of students. The only consolation is that students can consult your works. We shall return to this point in the prescription for improving teaching in higher education.

(e) Income, Power and Prestige

Unlike primary or secondary school teachers, individuals taken for higher education teaching are generally considered to be of higher calibre than those going for secondary teaching. Because of the nature of university teaching, people who take a career in teaching at a higher institution are considered to have good intelligence and hence the prestige and status attached to the profession i.e. teaching in higher institution. Yet in spite of their status and prestige, lecturers and professors are generally ill-rewarded financially in comparison to other professions, or financial rewards commensurate to their qualifications. Teaching in higher institutions can become more attractive if the rewards of teaching can be made more lucrative than they are now.

B. What is Learning?

Psychologists cannot say exactly what happens when learning takes place. There are theories, of course, and much research is being done. One thing is certain: learning is change within the individual, not something that is "done to him". In a classroom, the instructor does not transmit learning. In a sense he actually does not teach the student, although the expression is all right when understood in context. Whatever happens, the student controls the results. The teacher provides the
classroom environment, the facts, the stimuli, perhaps even the motivation, but learning takes place within the student's mind.

The point of all this is that instructors sometimes feel that because they have provided an ideal learning situation, learning has taken place. Such may not be the case. The instructor who is amazed when an employee doesn't know something and blurts out "but don't you remember - I told you ....." demonstrates that he doesn't realise that telling is not teaching. For classroom definition, at least, learning takes place when the student gets involved enough to readjust what he already know and can do to include the new information, the new skill. Anything short of this is not satisfactory learning, hence not satisfactory teaching, especially if all or most of the students fall short of this objective.

Examination is a selection process designed to test the progress of learning. It is however used in many of our schools as a persecutor of learning, or a crucifying agent of learning.

(a) Some Aspects of Learning

Learning has been described as a relatively permanent change in behaviour that occurs as a result of insight, practice or experience. Learning may be simply an addition (new information); it may be a subtraction (unlearning a bad habit); or it may be a modification (adjusting new knowledge to old). Learning as change may be for the better or for the worse: we learn bad habits as well as good ones. Learning may be conscious or unconscious: we take courses in the English language but we unconsciously acquire styles of speech and gesture from family and friends.

Learning is such a complicated process that no one can really claim to know how it occurs. We do know that learning takes place more readily in some circumstances than in others, and that it can to a great extent be influenced. To facilitate learning, a teacher needs to understand the various factors which bear upon the learning process.

(1) Motivation

Perhaps the most important factor in learning is motivation to learn. Experimental evidence indicates that little learning takes place in the absence of motivation. What motivates one person to learn may, of course be quite different from what motivates another. For some people, it is interest or challenge of the task (intrinsic motivation); for others, it is the anticipated reward or punishment (extrinsic motivation, e.g. money, certification); for still others, it is the need for recognition or status. Up to a point, the stronger the motivation, the more learning takes place, but beyond a critical level learner becomes too anxious and tense to learn effectively (some of the energy that has been aroused is spilling over in tension, which disturbs learning).
Perhaps we should consider the human needs to be satisfied in order to have a better understanding of motivation. According to some psychologists, a theory of satisfaction of human needs extends in hierarchical form through five levels. At the first level are the basic physiological needs: food, shelter, sex. The next level has safety or security needs, the need to protect oneself from threatening factors. The third level, consists of the "belonging" needs, the need to have association with others rather than be isolated. The fourth level/status needs, is for the need to have self-respect and a feeling of importance. The top level need, according to this theory, is that of achievement of self-fulfilment.

Teachers and instructors should have an adequate understanding of the part that "needs satisfaction" can play in effective learning, from the basic problems of participant comfort (lighting, seating and ventilation) and fatigue (the timing of training) to an awareness of learners' need to feel accepted and respected by colleagues and by the instructor. If these needs are met in large measure, participants will be more likely to try to satisfy their needs for creativity and self-fulfilment in the learning experience.

(2) Stimulus, Response and Reinforcement

Motivation alone will not produce learning, however. Attention has to be given to the particular stimulus, to the checking of the accuracy of the response, in a rewarding situation. Rewarded behaviour is learned and tends to be repeated under similar conditions in the future, whereas non-rewarded behaviour tends not to be learned. Once we observe or discover the things that are reinforcing (rewarding) to a trainee, it become possible to shape his behaviour by reinforcing the desired responses.

Reinforcement and reward are always important aspects of the learning process. Evidence seems to indicate that the more frequent and prompt reinforcement is, the more effective learning will be. If the teacher has a genuine interest in the students he will seek active ways of rewarding successful responses. A kind remark is a reinforcer, or a personal compliment, or sometimes, simply personal attention. Success is also a great reinforcer, perhaps the best. As the old adage says, "Success breeds success". In self-discovery techniques and programmed learning, success is a built-in reinforcer and motivator for learning.

(3) Feedback, or Knowledge of Results

Of course, in order to learn effectively, the learner needs to know if he has been successful; this may be confirmed by the instructor, by the reactions of his colleagues, or by the learning situation itself. The more the learner knows about what he is doing, the
more rapidly is he able to make improvements in his performance. This is the important principle of feedback, or knowledge of results, and it is the most common and probably the single most important source of reinforcement for the human learner.

For feedback to be effective, it should be given as soon as possible. We shoot at a target and observe the result: there is immediate feedback to correct and reinforce the learning. If feedback is delayed, it is more difficult for a learner to determine which of his actions led to a successful outcome.

If the learning situation can be arranged so that the learner is given a series of intermediate goals, and is provided with constant, precise feedback as to his progress, this helps to maximize the effect of this principle and helps avoid boredom. The case study, role play and discussion methods are good illustrations of learning by early feedback; similarly with business simulations where the results of decisions are feedback to participants immediately, providing useful information for new decisions.

The best method for feedback is seen in programmed learning, where immediate reinforcement follows the participant's response to each new segment of information.

(4) Participation and Practice

Experiments prove that the more a learner participates in the learning situation, the more effective will be the learning, particularly where he is learning a skill. If the learner is not called upon to respond actively, there will be fewer opportunities to check the accuracy of the response and provide feedback for control. Participation also means practice or repetition of the behaviour to be learned, which is necessary for remembering and for transfer of the classroom learning to the real life situation.

Most learners need to repeat the behaviour several times before they remember it. Repetition needs to be carried well beyond the first perfect performance - the principle of "overlearning" - to consolidate learning and offset the effect of forgetting. This need not mean a great deal of repetition all at once, but may entail a certain amount at intervals. Follow-up exercises, review and refresher courses also aide memory and transfer.

(5) Transfer or Application of Knowledge

From experience, we know that learning is easier when we can see its relevance or applicability to our own situation. Wherever possible, there should be a close relationship between the training programme and the work to be actually performed. Obviously, if procedures for machine maintenance are being taught, they should
From experience, we know that learning is easier when we can see its relevance or applicability to our own situation. Wherever possible, there should be a close relationship between the training programme and the work to be actually performed. Obviously, if procedures for machine maintenance are being taught, they should be those currently used in the company. For management skills, business simulation, case studies and role-playing appear to be the best techniques for positive transfer, providing they are realistic and appropriate to the level of trainees.

The opposite effect is demonstrated when learners return from a course full of ideas only to find themselves prevented by top management from trying out the new procedures they have learned. Similarly, if human relations principles of the democratic variety are taught to students who will return to an autocratic situation their learning will have been in vain. If we cannot apply what we learn, we tend to forget it.

(6) Perception

Perception is what gives us our ability to observe the world, which is revealed to us through our five senses. We "perceive" when we:

- recognize (objects, sounds, tastes, smells, feel);
- discriminate (between colours, facts and fallacies);
- relate (parts to whole, like objects to each other, a principle with its practice);
- select (what interests us or what we should focus our attention on).

Most important of all, perhaps, perception is what helps us to use the knowledge we have in an entirely different situation from that in which we learned it. For instance, one may have learned to use a knife to cut with, but one might subsequently use it to remove a cork from a bottle, open the lid of a tin, to turn a screw, or to paint a picture. Perception is such an important thing that many modern toys for children are designed to develop these qualities.

Perception operates from the most concrete to the most abstract levels and very often perceiving a relationship at one level will help us to perceive new material at another level. Thus, audiovisual aids, simplified models, graphic symbols, the use of examples and analogies all help to engage our perceptions and transfer/apply them to new situations.

A teacher also relies on the perception of the learner when he arranges the material so that it makes sense to the learner and allows him to build up a coherent structure easily. Research shows that to a surprising extent, better results are achieved by tackling
a task as a whole rather than in a series of small sections that have little logical relation to each other. If the steps lead logically from one to another, and hand together in meaningful units, learning is facilitated. Instructional material may also be organized by:

- moving from the known to the unknown;
- progressing from the simple to the complex;
- relating the material presented to present tasks.

To influence the perceptions of other people, a teacher must attempt to understand their perceptions and relate the material to their understanding. Learning will be to no avail if the instructor is not realistic in discussing his subject in relation to the students' background and experience. Unless the learning is a meaningful experience in terms of their needs and aspirations, they will not learn as effectively and they will not make effort to apply the knowledge and skills to their various jobs. Subject matter should be related to their:

- background (aims, fears, problems, satisfaction, social and economic needs, health, age, experience);
- education (level of education, knowledge of the subject or related subjects);
- abilities (capacity to learn - for instance, rate and amount of learning; capacity to do certain things, e.g. mechanical ability).

Of course, there are also individual differences with respect to learners' skills, motivation, previous experience, intellectual capacity, attitudes and working habits, so that no two people will perceive information in exactly the same way. Self-instructional methods such as programmed learning, where the learner goes at his own pace, the discovery method, or individual assignments and projects are therefore very valuable in making individual learning more effective. However, it is frequently more expedient to give training to groups and in this situation, it is clear that learning will be more effective if the levels of previous skills, native intelligence, etc. are not too diverse. Proper selection of students for a course is necessary in this case.

As we grow older our perceptive processes become more and more complicated as we receive an ever-increasing amount of information.
and sufficient practice of the learning, its relevant and applicability to trainees' current jobs will all act to offset forgetting and thus these various factors in the learning process become doubly significant.

(7) Setting Learning Objectives

In formal procedures of instruction, experiences are organized to accomplish specific learning (changes) within a restricted period of time. In this situation it is essential that a teacher clarify precisely what learning and unlearning he wants to facilitate, and let these objectives service as a clear focus for his whole learning programme. Specifically enumerated objectives (in knowledge, skills and attitudes) should indicate what material must be taught and will also effect the choice of teaching method. The learner himself may learn more effectively when he has clearly defined goals towards which to work. A course or programme should set forth goals or objectives in terms of:

- the job to be performed;
- the conditions under which it is to be performed;
- the level of proficiency required.

(8) Summary

The more a teacher can arrange the learning situation so as to utilize these principles of learning, the more likely the learner is to learn. Thus, a programme, or a teaching technique, will be judged adequate to the degree that it appears likely to:

- provide for the learner's active participation
- provide the trainee with knowledge of results about his attempts to improve;
- promote by good organization a meaningful integration of learning experiences that the trainee can transfer from training to the job;
- provide some means for the trainee to reinforce appropriate behaviour;
- provide for practice and repetition when needed;
- motivate the trainee to improve his own performance;
- assist the trainee in his willingness to change.

Learning is a life-long activity; we are never too old to learn, but we are frequently resistant to change. People often talk about problems as if they safeguarded their position, e.g., "There are so many problems I cannot change". What they mean is, do not remove the problems or I might have to change.
Learning is change.

(b) Some objectives for the Learner

Absorb knowledge
Develop skills (numerical, verbal, perceptual, critical, physical, social, etc.)
Arouse interest, motivate

Make better decisions
Communicate more clearly
Understand self better
Obtain feedback on his progress

Modify attitudes
Breakdown prejudices
Become more independent from authority
Adopt framework or concepts
Develop own framework or concepts

Facilitate collaboration with others
Improve clear thinking and behaviour under pressure
Make concentrated attack on problems
Ability to plan ahead
Increased ability to conceptualize

Ability to analyse complex situations
Ability to sift and evaluate information

IV. The "Musts" and "Shoulds" of Teaching in Higher Education

There are certain things which are of great importance for any person in the teaching profession and one of these things is teacher competencies i.e., the knowledge, skills, values and attitudes a teacher should possess if he/she is to survive in the profession. The possession of teacher competencies are a "musts" in the teaching profession and any person intending to function as a teacher should have them.

A major problem, however, is how to identify those competencies and within the context of staff development improve upon them. Even if we identify teacher competencies, a question may still be asked as for what purpose such identification may serve in improving teaching in higher institutions. However an identification of competencies would serve the following purposes in higher institutions:

(a) ensure the development of a realistic data base for:

(i) criteria for selection and appointment of lecturers, and assistant lecturers for teaching careers in higher institutions;
(ii) criteria for selecting research assistants and technical staff whose contribution to the teaching profession is crucial;

(iii) criteria for developing in-service training programmes for university teaching staff;

(b) ensure the development of criteria for supervising, assessing and evaluating university teaching, or teaching in higher institutions.

(c) develop guidelines for use by practitioners for self-improvement of knowledge and skills, particularly for use by lecturing recruits and junior lecturers; and

(d) use data for informing the public and society at large about teaching in higher institutions. As the public is often critical of outputs from higher institutions the more the public is informed about activities in higher institutions, the better i.e. What is involved in teaching, the tasks involved, the qualities of lecturers etc., the better.

Most people would say that university lecturers, or professors work for only part of the day - one, two or three lectures a day, that is all there is to teaching in the university; and therefore anybody who has a sound knowledge of the subject at that high level should have no problem teaching undergraduates. And yet experience has shown that not everyone who knows the subject very well and has a voice, can teach. Teaching is much more than dishing out information; it is helping someone to learn something he/she did not know before the lesson. It is the passing of understandable information to someone which can be assimilated and made use of by that person. A person may stand in front of a class and talk for an hour, but if the listeners come out of the class declaring they understood nothing, he would have talked but not taught. This distinction ought to be known to the public.

It is therefore to be emphasized that enlightening the public about job requirements of teaching in higher institutions can help to bring more realistic policy decisions and to increase productive dialogue about needed improvements in teaching in higher institutions.

However, what constitutes *success in teaching* comes to those who in the public's view:

(a) have achieved higher education and even taken post-graduate studies and are therefore in possession of knowledge to be dispensed to learners;
(b) are sufficiently firm and dignified to be able to maintain discipline and hold the respect of their students;

(c) have sufficient administrative knowledge and skills to ensure good record keeping of students' work and for research, work and activities; and

(d) are exemplary adults, offering an attractive but conventional model of behaviour often appreciated by the community and society.

While this may appear less of a professional than a stereotype lecturer, it is a more realistic account of a lecturer in an African institution, where tradition and conservatism are more appreciated by society and the community than are radicalism and rapid change. Certainly, higher institutions in Africa have often been accused of stirring and fanning trouble and protests directed at the political establishment or government. It is therefore the conservative and stereotype lecturer who is more admired and respected than the radical and progressive. Whatever, type of lecturers they are, criticisms are levelled against higher institutions for the poor quality of outputs coming out of the system because of the kind of teaching taking place in those institutions. This brings us to two very important issues:

(i) the dimensions of the lecturers/tutors' work and

(ii) the need for developing a design for identifying lecturer's competencies.

(a) Dimensions of the Lecturer's/Tutor's Work

In an earlier section of the paper, attempts were made to define what teaching is from the professional point of view. In this section, efforts will be made to define the major dimensions of the teacher's role as they relate to higher education. These major roles are:

(i) the relationship of the lecturer to the learners

(ii) the relation of the lecturer to the content of the programming and

(iii) the depth in the understanding of how learning takes place and of the art of science of instruction i.e. pedagogy.

(i) The Lecturers Relationship to Learners

Unlike primary or secondary school teachers, lecturers are engaged in teaching young adults in their very late teens or early twenties. And because of the nature of teaching in higher institutions often dominated by lectures, the relationship between learners and lecturers
can range from the cordial to impersonal, distant and aloof. Yet lecturers who show a human approach to their students' problems tend to get a better hearing from students than those who show little signs of caring about their students. This relationship extends beyond the students to the community. In this regard therefore, universities should involve lecturers and students more intensively in working with and learning from the communities in which they live to ensure joining solutions to national problems, as stipulated by the Harare Statement.

In effect, lecturers must be capable of negotiating satisfactory relationships with learners, particularly in advising them about their courses or college work. Students learn better in an atmosphere of trust on the part of lecturers and lecturers also teach better when they feel that students have a positive attitude towards the lecturer's work.

(ii) The Lecturers Relationship to the Content of the Programme

A lecturer has certain knowledge, skills, insight, values and attitudes and it is his responsibility to pass these on to his students either indirectly or in a didactic manner. If we accept that facts, tools, concepts, ideas and other things to be taught constitute knowledge, how all these are passed on to the students is what may be termed as teaching. A lecturer however must have command of all this composite of knowledge (i.e. facts, tools, concepts ideas etc.) he is to teach, for without this command he cannot operate as an effective lecturer. But as changes in the world are taking place so fast, knowledge too changes and hence lecturers must constantly keep learning so that they can control the teaching process to enable students to acquire, interpret, evaluate and communicate knowledge i.e. acquire: tool skills; critical thinking; creative thinking; inquiry; self-instruction; self evaluation; interests and study habits.

In addition, the lecturer must have commitment to the knowledge he is to teach. i.e. a conviction that the subject matter he teaches is important to the learners for their possession. Thus command and commitment are the two important relationships that a lecturer seeks to have to the content of the programme for which he/she is responsible.

(iii) Pedagogy as a basis for Professional Status

This is the art and science of instruction by which the lecturer uses certain methods, techniques and strategies to bring about learning.

Pedagogy is the discipline that examines what the lecturer does to inform, stimulate and activate the learners in ways which build a bridge between the learner and what he is to learn.

In one sense, teaching is an art because it calls for inventiveness, ingenuity and originality in response to unexpected situation. It is also a science in as far as it derives from an increasingly precise understanding of the process of learning as it is enhanced by the use of technology. In effect them, the art-science of instruction adds to the pedagogical dimension of teaching.

With the advancement in the technology of teaching, teaching in institutions of higher learning calls for the use of a variety of methods, techniques, devices, strategies and approaches and a shift from the traditional methods and strategies of teaching, particularly the lecture method. At this level, teaching strategies should focus on enhancing the students' learning to think creatively, stimulate their ability to be imaginative and to have positive attitudes towards life's problems and situations. In this regard, lecturing i.e. teaching should use a variety of methods ranging from the traditional lecture method to inquiry, socratic, problem solving, discussion techniques, simulation and case-study methods.

In spite of their qualification, many lecturers have a limited and inadequate repertoire of teaching skills. They reveal their poor command of pedagogical principles and of technical and strategic resources in many ways:

- by the manner in which new knowledge, materials, facts and ideas are introduced;
- by the type of questions, techniques and feedback mechanism used;
- by the choice of methods regularly used by the lecturers more so by the tendency to lecture and inform rather than guide students in their activities;
- by their tendency to stick to traditional ways of teaching inspite of advancement in the technology of teaching; and
- by their reliance on their personality, reputation and published works in holding the attention of students rather than on innovative approaches to teaching.

It is therefore to be emphasized that lecturers should develop greater interest in examining their pedagogical behaviour and in analyzing their instructional problems to ensure that their teaching is effective.
The three dimensions of the lecturer's role are very much related to one another and can be represented in the form of a triangle whose relationship of the sides of the triangle constitute a Pythagoras equation. In simple terms this equation states that a command of pedagogy (i.e., artistry and proficiency in the instructional realm) is as important as the lecturer's success and satisfaction as is the sum of his relationship to the students and to knowledge. This relationship is demonstrated in Figure 1 in which great significance is accorded to pedagogy.

**FIGURE 1: The Relationship of Three Dimensions of the Lecturer's Role in Education**
More important in respect of pedagogy is the fact that as we learn more about the process of learning, teaching itself becomes more of an explicit technology which can itself be definitely taught i.e. the methods, skills, techniques and teaching strategies can be learned by those engaged in teaching or about to become teachers/lecturers. Thus, although teaching is an art and there are those who are gifted at it, the methods, techniques and procedures of teaching can be communicated and learned. This is not the same thing as saying that the talent of the superior teacher or lecturer can be replaced. On the contrary, it emphasizes the point that understanding performance in teaching is achieved by those who, in addition to a firm grounding in communicable technology, bring to their teaching a high degree of creativity and inspiration.

Indeed if teaching in higher institutions is to remain a respected profession producing quality products, it should be more pedagogically oriented. This would allow for constant re-examination of the alternative strategies, methods and techniques which may be applied in each teaching situation; and in which artistry and technology play an appropriate part in both teaching and learning process.

This then brings us to the problem of how we can identify competencies which are vital for the teaching profession in higher institutions. In examining this problem we shall develop a design for identifying competencies in the teaching profession and through this design how we can improve teacher competencies.

(b) Design for Identifying Lecturers' Competencies in Higher Institutions

In discussing about improving teaching in higher institutions it is important to develop a design for identifying the competencies needed of teachers, lecturers and tutors so as to know where we want to go - i.e. the goal; and how to get there i.e. the procedures; and to understand why a particular route to take us there is preferable, i.e. the rationale.

A design's goal is to develop an accurate taxonomy of the skills, knowledge, attitudes and values lecturers need to possess. Five steps are necessary as procedures for reaching the goal viz:

1. Identifying skills that are required by all teachers, tutors or lecturers;
2. Validating those required skills;
3. Identifying desired competencies;
4. Filtering the competencies and
5. Building support for change.
(1) **Identifying Required Skills**

A skill may be defined as:

- the ability to use one's knowledge effectively and readily in execution or performance;
- dexterity or co-ordination in the execution of learned physical tasks;
- a learned power of doing something competently;
- a developed aptitude or ability\(^1\)

A skill therefore, reflects the underlying knowledge and attitudes; it can be learned and by inference be taught. It can also be executed with varying degrees of proficiency and as such it can be validated by direct observation.

Skills which are required by all teachers, are the "musts" of teaching and it is necessary to identify these skills. In fact, the musts of teaching are referred to as "generic" because they constitute a core of performance requirements needed by all those engaged in teaching irrespective of the level of education. Generic skills are the foundation of teacher education and teaching, and once these generic skills have been identified, it is necessary to validate them. Identified skills must be nurtured and to these should be added new ideas, knowledge and techniques. In other words, in teaching, it is not only necessary to possess the what of teaching - the "musts" but to supplement them with what should be i.e. the "shoulds" of teaching so that direction for innovation and improvement of teacher education become evident and can be pursued by those embarking on a teaching career in higher institutions.

In essence then identifying required skills would need to:

(a) acquire job descriptions to determine what teachers, tutors or lecturers are required or needed to do;

(b) record each competency mentioned;

(c) on an index card, record each phrase or statement representing a separate task;

\(^1\) Webster's New Collegiate Dictionary 1977.
(d) establish major categories of tasks;
(e) subdivide the major categories into topical headings;
(f) obtain teacher evaluation forms;
(g) record skills noted on evaluation forms;
(h) revise topical headings if necessary;
(i) review related literature
(j) revise skills list and topical headings if necessary.

In validating the required skills, it will be necessary to:

(i) develop checklist of skills;
(ii) Using the checklist to maintain a record, observe teachers in performance of their jobs;
(iii) Interview each teacher observed.

Alternatively, it may be necessary to:

(a) develop checklist of skills;
(b) Identify master or exemplary teachers;
(c) Using the checklist, survey master teachers to determine whether they perform the listed skills when teaching.

Skills required of teachers can be collected from the job descriptions and from this, major categories can be established. If one wants to design a teacher education curriculum, the major categories can be of:

(a) Skills directly pertaining to instruction; and
(b) Skills supportive of instruction.

On the other hand, if one wants to develop an evaluation instrument, the major categories of skills might be to have:

(i) skills directly observable in the classroom; and
(ii) Skills not amenable to classroom observation.
In a job-related curriculum skills required of a teacher can be categorised into eight groups:

(i) Skills of teaching as a profession;
(ii) Skills of Instructional Planning;
(iii) Skills of implementing instructional plans;
(iv) Interpersonal skills for teachers;
(v) Skills for using instructional aids;
(vi) Skills for diagnosing readiness for learning;
(vii) Achievement test skills for construction and instructional evaluation;
(viii) Skills for supportive services.

Skills in these categories can be examined in relation to the means of validation.

(2) Validating the Required Skills

In the foregoing section, eight categories have been identified for skills considered necessary in teaching in higher institutions. The question may be asked whether the listed skills are merely superfluous competencies, touted on paper but disregarded in practice by lecturers. It is therefore important to subject each competency statement to confirmation and test in the field.

Validation can be done through direct observation i.e. watching a lecturer perform his duties in a classroom or lecture theatre. Secondly a list of skills expected of lecturers can be sent experts for confirmation. It is in this regard that the role of the external examiner becomes important. Let us examine these competencies and see how they can be validated.

(a) Skills of Teaching as a Profession

Any person who wants to teach must possess the following skills required for teaching as a profession: He/she must be able to:

- behave ethically, provide a proper model in appearance and in the use of language;
- be punctual and dependable and be able to hold classes as scheduled;
- display a commitment to student growth, protect their interests and report on their progress to both the authorities and parents/guardians
undertake professional growth through further training, research, in-service programmes; and perform professional services such as attendance of faculty, board or committee meetings;

- perform public services such as taking part in civic functions/activities; undertaking consultancy services; and supervising extra-curricular activities of students.

Competencies related to these functions can be directly observed by seeing or checking what a lecturer does on any given day.

(b) Instructional Planning Skills

A second category relates to instructional planning skills which must be possessed by the lecturers in higher institutions. In this regard, a lecturer must be:

- conversant and familiar with curricular objectives;
- able to fit his teaching plans to the goals of education in the country;
- prepare schemes and records of work as well as lesson plans
- prepare and organize class work and home work;
- prepare and mark assignments and return them when needed by the students;
- use student feedback, both verbal and non-verbal to modify and improve upon his/her teaching; and
- should keep as far as possible to the schedules of the College or faculty.

These skills can be observed directly, but at the same time, they are subject to approval or verification by those in authority or experts in the field. supervisors, heads of departments, deans, professors and senior academics can always observe these skills in members of a given faculty.

(c) Teaching Skills

Teaching, i.e. implementing instructional plans calls for very specific skills required of every person with teaching as a career. In this regard every lecturer must be able to:
- use innovative methods, techniques and strategies to enhance the transmittal of new knowledge;

- use a variety of methods and techniques and not the familiar talk and chalk by way of lecturing only;

- make content relevant to current and future needs of students;

- focus the attention of the class on what is being taught, demonstrate flexibility and guide learners in their work;

- show a good grounding of the subject being taught, correct student mistakes and provide remedial help and teach the subject without undue worry for lack of understanding of the subject being taught;

- able to teach the subject logically and in sequence, finish lessons on time and finish the schemes of work as scheduled;

- demonstrate mastery of the subject being taught; the methods and techniques used and a clear understanding of how students learn.

These skills are subject to direct observation for their observation. Supervisors or senior staff can observe a lecturer in action; but above all, students themselves, (the recipient) are often the best verifiers of the lecturers ability to deliver the subject matter being taught. No one knows better than the learner himself/herself, that the message delivered by the teacher or lecturer has been well received and that that message can be translated into practical action or put into immediate use by the learner.

(d) Inter-personal Skills for Lecturers

Knowledge or skills of how to deliver subject matter in a most logical way is not enough unless someone also possesses interpersonal skills to ensure that effective teaching takes place. In this regard, a lecturer must:

- use positive reinforcement techniques in his/her teaching; i.e. encourage students rather than discourage them in the courses they are taking;

- accept criticism constructively, show tolerance, and exhibit stable social and emotional adjustment;

- display genuine interest in both students and their work; promote self-respect and encourage them to take decisions on matters that concern them;
establish a healthy but competitive relationship among students, as well as a collaborative and co-operative spirit for their academic growth.

encourage students to keep accepted classroom behaviour; enforce class discipline and uphold democratic principles while teaching, and

develop a rapport between the lecturer and the students and trust which is conducive to effective learning.

These skills are directly observable, as it is easy to verify whether the students and lecturers have a working relationship. On the other hand where these inter-personal skills are lacking, students, the community and those in authority soon come to know and this is often exhibited in unruly/rude behaviour of students, truancy, poor class attendance, and lack of motivation.

(e) Skills for Using Instructional Aids

A technology of teaching calls for the use of instructional aids, media, computer, and a whole range of informatics. Modern teaching requires that teachers and lecturers should possess knowledge and skills in the use instructional media and teaching aids; in the use of computer and retrieval of data, video and close circuit television. In other words, lecturers must possess knowledge and skills so as to be able to:

- use instructional aids, charts audio and video equipment easily in their teaching;
- gather and retrieve teaching materials electronically stored or to be stored;
- use computer for teaching purposes, and
- use other electronic teaching aids and devices.

Again these skills are subject to observation and direct verification.

(f) Skills for Diagnosing Readiness for Learning

In education, a number of conditions for promoting learning ought to be met or taken into consideration. Amongst these conditions are that:

(i). the learner must be adequately motivated if he is to change his/her behaviour i.e. to learn something.
(ii) the learner must be aware of inadequacy of his/her present knowledge, skill, attitude or behaviour so that he/she can add or build new skills, knowledge and attitudes to what is already possessed.

(iii) the learner must have a clear picture or objective of what gains in knowledge or skill or what changes in behaviour he/she will achieve through the learning process.

(iv) the learner must have an opportunity to put into practice his/her new knowledge, skill or behaviour because learning must manifest itself in the practical use of the knowledge or skill gained;

(v) the learner must have reinforcement of the newly learned behaviour to ensure progress and continued interest; and that

(vi) the learner needs the support of a sequence of relevant and appropriate study materials to maintain interest.

Given these conditions for learning, a lecturer in an institution of higher learning should possess skills or competencies which will enable him to:

- become familiar with the students' background to be able to assist them in their studies;
- diagnose student characteristics both cognitive and affective as well as psychomotor ones, to be able to guide them properly;
- assist and help students set appropriate goals for themselves;
- use records and evaluation results for assisting students to improve on their learning;
- recognize and treat individual student behaviour from an education point of view requiring his attention and concern, and not none of his concern;
- provide for individual differences in his teaching.

All these competencies can be directly observed and also subject to validation by others competent in the field.
(g) Skills for Administering Achievement Tests, Construction of Instruments and Instructional Evaluation

A learner wants to know whether she/he is making progress in what is being taught and for this reason, it is important for a lecturer to assess student progress. In this regard, the lecturer should have skills in administering achievement tasks, marking scripts and grading them. He must therefore possess knowledge and skills so that he/she is able to:

- assess the readiness level of his students;
- assess or evaluate student progress;
- use adequate samples of work in assessing or evaluating students;
- use both formal and informal evaluation techniques and provide necessary follow-up for students;
- construct cognitive tests of adequate validity and reliability;
- correct, mark and grade papers according to acceptable standards of the system or institution; and certify student accomplishment;
- analyse student progress on a regular basis; and
- use evaluation to improve upon his teaching and to determine whether the objectives set have been achieved.

This last point is of particular importance to the improvement of teaching in higher institution because to improve upon one's teaching, one must know where the problems lie. Therefore knowing how to use evaluation for improved teaching is a competency which all lecturers must possess.

(h) Skills for Supportive Services

A lecturer's competency is incomplete if he does not possess skills for supportive services. In this regard, he/she must be able to:

- maintain records on all students under his care to be able to provide information when required by whoever wants it;
- prepare accurate and punctual reports reflecting on the worth of a student;
- supervise students in or out of class; and
monitor students activities as the occasion may demand.

The foregoing categories of skills, constitute the "must" of teaching which are required by all those engaged in teaching. They are competencies to strive for by anyone engaged in teaching at institutions of higher learning. But this is not all that teachers must possess. They need other things as well which constitute the "shoulds" of teaching i.e. the desired as opposed to the required competencies of teaching.

(3) Required and Desired Skills of Teaching

These desired competencies represent the skills, knowledge and attitudes which are supportive of the required skills described above in (a) to (h). In (b) for instance, a number of skills were identified for instructional planning constituting the required competencies. Skills which are supportive of these can be listed as follows:

(i) Desired Skills/Activities

A lecturer should:

- set instructional priorities for his teaching;
- develop a sequence of objectives and activities to provide continuity in learning;
- use tables of specifications for planning;
- write behavioural objectives in measurable terms;
- determine and select appropriate instructional strategies and activities;
- select activities that will motivate student learning;
- plan a variety of activities;
- plan follow-up activities to reinforce learning of students.

(ii) Desired Knowledge

A lecturer should have a knowledge of:

- the relationship between instructional strategies and learning principles;
behavioural objectives i.e., their formation and use;
- sequencing skills;
- Individual needs;
- how to engage students in useful activities.

(iii) Desired Attitudes

A lecturer should:
- believe that good planning is prerequisite to good teaching;
- believe in flexible planning;
- commit himself/herself to the belief that learning should be made relevant to student needs; and
- be sensitive to the needs of different students with varied cultural background.

The required and desired skills of teaching can be combined in diagramatic form according to the categories described in the preceding pages as shown in Table 1\(^1\). And this table provides a summary of the design so far analysed.

\(^1\) Extract from: Improving Teacher Education by Myles Fioreno, Patricia B. Dennis Hayes, Longman Inc. New York. 1980 pp 50-54.
### Table I: The Required and Desired Skills of Teaching

<table>
<thead>
<tr>
<th>Required Skills/Activities (from Job Description)</th>
<th>Desired Skills/Activities (from opinion sources)</th>
<th>Desired Knowledge: (from opinion sources)</th>
<th>Desired Attitudes: (from opinion sources)</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE TEACHER MUST ...</td>
<td>THE TEACHER SHOULD ...</td>
<td>A KNOWLEDGE OF ...</td>
<td>THE TEACHER SHOULD ...</td>
</tr>
<tr>
<td>behave ethically</td>
<td>Provide a model of integrity</td>
<td>professional organization</td>
<td>process moral integrity</td>
</tr>
<tr>
<td>be punctual and dependable</td>
<td>Project a proper professional image</td>
<td>professional ethics</td>
<td>be intellectually honest</td>
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<td>display a commitment to student growth</td>
<td>exhibit pride in the profession</td>
<td>certification and re-certification require-ments</td>
<td>have a love for learning</td>
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<td>provide a proper model in appearance</td>
<td>strive for professional improvement</td>
<td>teacher contracts and benefits</td>
<td>be humble about his/her knowledge</td>
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<tr>
<td>provide a proper model in verbal usage</td>
<td>provide a proper model for written and verbal communication</td>
<td>teacher retirement systems</td>
<td>respect authority</td>
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<td>hold classes as scheduled</td>
<td>take initiative</td>
<td>professional negotiation practices</td>
<td>be dedicated to work and students</td>
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<td>enforce rules and regulations</td>
<td>go through prescribed channels of command</td>
<td>the changing role of professional organ-</td>
<td>believe that students and teachers are</td>
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<tr>
<td>protect students, materials, and facilities</td>
<td>avoid criticism of other teachers or administrators</td>
<td>izations</td>
<td>equal before the law</td>
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<td>report student progress to parents</td>
<td>share materials and ideas with co-workers</td>
<td>policy-making</td>
<td>be prudent and uphold confidentiality</td>
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<td>interpret school rules for parents</td>
<td>accept extra duties when necessary</td>
<td>fiscal realities in education school</td>
<td>respect the rights of others</td>
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<td>the available to students and parents</td>
<td>demonstrate knowledge of subject matter</td>
<td>finance</td>
<td>be concerned about all students even</td>
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<td>supervise extracurricular student activities</td>
<td></td>
<td>the school's function in society</td>
<td>those with whom he/she has no contact</td>
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<td>distribute materials (such as Parent-Teacher</td>
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<td>School organization</td>
<td>take pride in his/her profession</td>
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<td>Organization notices)</td>
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<td>goals of the State</td>
<td>have a liking for the teaching profession</td>
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<td>perform professional services (such as</td>
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<td>Department of Education</td>
<td>see his/her job as</td>
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<td>attending faculty meetings</td>
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<td>district and school rules and regulations</td>
<td>important demonstrate a</td>
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<td>the &quot;chain of command&quot;</td>
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<td>community expectations</td>
<td>purpose of public education</td>
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<td>possess a feeling of</td>
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<td>undertake continued professional growth (such as in-service education, visits to other schools).</td>
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<td>believe that a vocation can be an organizing thread for one's life be openminded toward continued professional education (such as in-service) believe that asking for help is often the correct response believe that one can—and must—stand alone for one's beliefs be receptive to constructive criticism have determination to be thorough and accomplish all tasks be demanding of the best in other professionals, and administrators identify him/herself with the school and its purposes support school policies be willing to work on committees take interest in school-related activities be willing to put in more time and effort than the &quot;bare minimum&quot; be willing to undertake public projects be loyal to the community</td>
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## (b) Instructional Planning Skills

**CATEGORY:** INSTRUCTIONAL PLANNING

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</tr>
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<td>familiarize him/herself with curricular objectives</td>
<td>conduct a needs assessment to determine the needs of community, school, and student in order to design a curriculum to meet these needs</td>
<td>level of thinking the relationship between instructional strategies and learning styles</td>
<td>believe that good planning is prerequisite to good teaching</td>
</tr>
<tr>
<td>fit plans to school goals clearly</td>
<td>plan curricula to help plan curricula</td>
<td>curriculum structure: the requirements and development behavioral objectives: their formation and use sequencing skills programmed instruction design of learning modules individual needs games and activities for fighting boredom activities of interest to students</td>
<td>believe in flexible planning</td>
</tr>
<tr>
<td>state specific long- and short-term goals</td>
<td>engage in cooperative planning with other teachers</td>
<td>base goals and objective on a theory of learning and on a theory of development develop a sequence of objectives and activities to provide continuity in learning use Tables of Specifications for planning use teachers' editions in planning write behavioral objectives in measurable terms</td>
<td>believe that learning should be made relevant</td>
</tr>
<tr>
<td>write lesson plans</td>
<td>set instructional priorities</td>
<td>sequencing skills programmed instruction design of learning modules individual needs games and activities for fighting boredom activities of interest to students</td>
<td>have a realistic view of goals</td>
</tr>
<tr>
<td>prepare him/herself for class</td>
<td>schedule days so that all subjects get maximum coverage</td>
<td>the Defined Minimum Program (State curriculum)</td>
<td>believe that students should have input into some decisions affecting them</td>
</tr>
<tr>
<td>make thorough plans</td>
<td>organize classwork and homework so that they support each other</td>
<td>mainstreaming the affective domain alternative methods for designing a curriculum career opportunities community resources for teachers</td>
<td>be sensitive to the needs of students of different cultural backgrounds</td>
</tr>
<tr>
<td>involve students in organization and planning</td>
<td>individualize plans when necessary</td>
<td>desire to individualize instruction</td>
<td>desire to individualize instruction</td>
</tr>
<tr>
<td>use student feedback - verbal and nonverbal -- to modify teaching practices</td>
<td>use student feedback - verbal and nonverbal -- to modify teaching practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required Skills/Activities (from Job Description)</td>
<td>Desired Skills/Activities: (from opinion sources)</td>
<td>Desired Knowledge: (from opinion sources)</td>
<td>Desired Attitudes: (from opinion sources)</td>
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<tr>
<td>THE TEACHER MUST ...</td>
<td>THE TEACHER SHOULD ...</td>
<td>A KNOWLEDGE OF ...</td>
<td>THE TEACHER SHOULD...</td>
</tr>
<tr>
<td>determine and select appropriate instructional strategies and activities</td>
<td>write study guides for chapters in texts</td>
<td>formulate units on materials not in texts</td>
<td>synthesize methodology and content</td>
</tr>
<tr>
<td>select activities that will motivate for learning</td>
<td>plan a variety of activities</td>
<td>select appropriate reinforcement activities</td>
<td>plan follow-up activities to reinforce learning</td>
</tr>
<tr>
<td>modify plans on the basis of results</td>
<td></td>
<td>ease flexible in changing lesson plans</td>
<td>design activities for different 'levels of learning' (Bloom, Cagne', Taba)</td>
</tr>
<tr>
<td>use mastery learning models</td>
<td>prepare alternative plans</td>
<td>adapt plans to match varying student background</td>
<td>adapt plans for different learning styles</td>
</tr>
<tr>
<td>prepare plans for the non-college bound student</td>
<td>plan for the extremely heterogeneous classes</td>
<td>plan for the non-reader</td>
<td>plan for metric conversion</td>
</tr>
<tr>
<td>prepare plans for substitutes</td>
<td>prepare plans for substitutes</td>
<td>prepare students for career choices</td>
<td>plan for metric conversion</td>
</tr>
</tbody>
</table>
### Required Skills/Activities (from Job Description)

- Use innovative teaching techniques
- Make content relevant to current and future needs of students
- Adjust instruction to the level needs of students
- Use a variety of instructional techniques, such as tutoring, lecturing, group discussion, learning centers, field trips, interest centers, experience charts, question-and-answer format, drill, audiovisual materials, small group sessions, team teaching, probing questions, inquiry methods, resource centers, programmed materials, instructional games, peer teaching, and role playing
- Be able to use more than one instructional activity simultaneously
- Attend efficiently to classroom routine
- Develop and maintain a classroom routine

### Desired Skills/Activities: (from opinion sources)

- **THE TEACHES MUST ...**
- **THE TEACHER SHOULD ...**

#### Desired Knowledge: (from opinion sources)

- **A KNOWLEDGE OF ...**

#### Desired Attitudes: (from opinion sources)

- **THE TEACHER SHOULD ...**

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<table>
<thead>
<tr>
<th>Required Skills/Activities</th>
<th>Desired Skills/Activities: (from Job Description)</th>
<th>Desired Knowledge: (from opinion sources)</th>
<th>Desired Attitudes: (from opinion sources)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THE TEACHES MUST ...</strong></td>
<td><strong>THE TEACHER SHOULD ...</strong></td>
<td><strong>A KNOWLEDGE OF ...</strong></td>
<td><strong>THE TEACHER SHOULD ...</strong></td>
</tr>
<tr>
<td>Use innovative teaching techniques</td>
<td>Guide students to speak proper English without criticism</td>
<td>Instructional techniques and materials</td>
<td>Believe that teaching is an important job</td>
</tr>
<tr>
<td>Make content relevant to current and future needs of students</td>
<td>Manage time and schedules</td>
<td>A variety of teaching methods</td>
<td>Believe that one can make a difference in another's life</td>
</tr>
<tr>
<td>Adjust instruction to the level needs of students</td>
<td>Implement lessons</td>
<td>The strengths and weaknesses of methodologies</td>
<td>Believe that one learns as one teaches</td>
</tr>
<tr>
<td>Use a variety of instructional techniques, such as tutoring, lecturing, group discussion, learning centers, field trips, interest centers, experience charts, question-and-answer format, drill, audiovisual materials, small group sessions, team teaching, probing questions, inquiry methods, resource centers, programmed materials, instructional games, peer teaching, and role playing</td>
<td>Be actively involved in classroom activities</td>
<td>Study skills</td>
<td>Believe that one's values are reflected by one's approach to teaching</td>
</tr>
<tr>
<td>Be able to adapt teaching to sudden changes</td>
<td>Give directions</td>
<td>Inquiry teaching models</td>
<td>Believe that students should be exposed to the consequences of their decisions</td>
</tr>
<tr>
<td>Stress creativity among students</td>
<td>Use questions at a variety of cognitive levels</td>
<td>The decision-making process</td>
<td>Be willing to admit when he/she doesn't know</td>
</tr>
<tr>
<td>Use creative activities</td>
<td>Write cursive letters correctly</td>
<td>The open classroom concept</td>
<td>Be willing to apologize when he/she has made a mistake</td>
</tr>
<tr>
<td>Teach for concept attainment</td>
<td>Be able to adapt teaching to sudden changes</td>
<td>Values clarification</td>
<td>Be resilient in the face of frustration</td>
</tr>
<tr>
<td>Make students responsible for their own learning</td>
<td>Resist premature closure</td>
<td>Team teaching</td>
<td>Accept the inevitability of some failure</td>
</tr>
<tr>
<td>Use dramatic skills to create and hold interest in lessons</td>
<td>Provide experiences in which the learners apply what they have learned</td>
<td>Departmentalized teaching methods and detection of cheating</td>
<td>Be willing to act as a model for students in terms of proper dress, speech, and habits</td>
</tr>
<tr>
<td>Resist premature closure</td>
<td>Provide experiences in which the learners apply what they have learned</td>
<td></td>
<td>Believe that the teacher should be &quot;boss&quot;</td>
</tr>
<tr>
<td>Be willing to act as a model for students in terms of proper dress, speech, and habits</td>
<td>Believe that students should be exposed to the consequences of their decisions</td>
<td>Be willing to take on clerical duties as a &quot;necessary evil&quot;</td>
<td>Be friendly to other teachers</td>
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<tr>
<td>Be willing to undertake clerical duties as a &quot;necessary evil&quot;</td>
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<tr>
<td>develop and maintain a classroom environment conducive to effective learning</td>
<td>involve parents in remediation</td>
<td>have a love for students</td>
<td>be trusting toward students</td>
</tr>
<tr>
<td>organize the classroom</td>
<td>teach library skills</td>
<td>be always expect the best from students</td>
<td>believe in the importance of students</td>
</tr>
<tr>
<td>focus the attention of the class</td>
<td>teaching language and communication skills</td>
<td>believe that students are inherently good</td>
<td>desire to help students learn</td>
</tr>
<tr>
<td>give directions clearly</td>
<td>work with learning disabled or exceptional children</td>
<td>have confidence in students</td>
<td>empathize with the slow or deprived student</td>
</tr>
<tr>
<td>explain things in a logical orderly way</td>
<td>provide multi-cultural activities in the classroom</td>
<td>believe in the ability of all to learn</td>
<td>In general the teacher is expected to be:</td>
</tr>
<tr>
<td>acknowledge student statements and paraphrases</td>
<td>use programmed materials</td>
<td>empathetic, cheerful, unselfish, impartial, humanistic, truthful, emotionally mature, sensitive, straightforward, affectionate, unflappable poised, self-confident, energetic, persistent, independent, courageous, optimistic, loyal</td>
<td>conscientious, responsible, dependable, cooperative</td>
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<tr>
<td>demonstrate proper listening skills and provide feedback to the student</td>
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<tr>
<td>demonstrate flexibility</td>
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<tr>
<td>encourage student participation</td>
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<td>be open to student input and class discussion</td>
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<tr>
<td>correct student errors</td>
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<tr>
<td>use motivational techniques and encouragement strategies, such as praise, encouragement, incentives for learning, competition, the students' own interests and the best possible environmental conditions (seating, lighting, etc),</td>
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<tr>
<td>contact students when they are off-task</td>
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<tr>
<td>provide for orderly transition between lessons</td>
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<tr>
<td>group students for effective instruction</td>
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</tr>
<tr>
<td>close lessons in a logical way</td>
<td>THE TEACHER SHOULD ...</td>
<td>A KNOWLEDGE OF ...</td>
<td>THE TEACHER SHOULD...</td>
</tr>
<tr>
<td>work with individual students to learn materials</td>
<td></td>
<td></td>
<td>wholesome, forgiving, caring, compassionate, sympathetic, genuine, tolerant, sincere, understanding, patient, polite, patriotic, possessed of goodwill, possessed of endurance, possessed of initiative</td>
</tr>
<tr>
<td>provide remedial help</td>
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<tr>
<td>use community resources</td>
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<tr>
<td>in providing</td>
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<tr>
<td>instruction</td>
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### Interpersonal Skills

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<tr>
<th>CATEGORY: INTERPERSONAL SKILLS</th>
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<tbody>
<tr>
<td><strong>Required Skills/Activities</strong>&lt;br&gt;(from Job Description)</td>
</tr>
<tr>
<td>THE TEACHER MUST ...</td>
</tr>
</tbody>
</table>
| exhibit stable emotional and social adjustment; possess, patience, and tact. | provide leadership | interpersonal needs  
(Classer and Adler) | be committed to the betterment of mankind |
| be tolerant of ideas differing from his/her own | assert him/herself with peers and superiors without alienating them | human relationship concepts,  
principles of communication  
dynamics of peer relationships | believe in firmness and consistency |
| accept criticism constructively | display emotions in a healthy, constructive manner | group processes (group  
dynamics) | be willing to touch all students |
| utilize nonverbal communication skills | display a sense of humor | motivational techniques  
guidance techniques | be willing to share with others |
| show enthusiasm | use voice modulation for controlling purposes | value clarification  
sociology | be accepting |
| display consistency (enforce limits) | accept emotional expression from students | public relations  
multicultural values | have self-control |
| display genuine interest in and respect for students | deal with underlying reasons behind students' actions | drug abuse prevention  
the philosophy of  
encouragement | be supportive |
| be considerate and fair with students | make students feel wanted | the Kohlberg model  
the principles of variety  
of psychologically-based classroom management models such as  
Adlerian, transactional analysis, behaviour modification, and reality therapy | be encouraging |
| help students develop a desirable set of values | operate a democratic classroom | referral services which may be needed to supplement classroom management skills | have a sense of humor |
| encourage students to set and keep standards of classroom behaviour | confront and deal with interpersonal problems and conflict directly and constructively | feel positively toward the handicapped |
| promote positive self-image in students | listen carefully to and facilitate responses from others | be assertive in controlling the class and in working with others |
| show an awareness of the students with whom he/she is not working at present | use questioning without causing defensiveness | mind his/her own business and not gossip | be non-discriminatory |
| be accepting of students even when not accepting their behavior | use class discussion as a disciplinary technique | be receptive to all students |

Interpersonal needs
- Classer and Adler
- Human relationship concepts
- Principles of communication dynamics of peer relationships
- Group processes (group dynamics)
- Motivational techniques
- Guidance techniques
- Value clarification
- Sociology
- Public relations
- Multicultural values
- Drug abuse prevention
- Philosophy of encouragement
- Kohlberg model
- Principles of variety
- Psychologically-based classroom management models (Adlerian, transactional analysis, behaviour modification, and reality therapy)
- Referral services which may be needed to supplement classroom management skills
<table>
<thead>
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<th>Required Skills/Activities</th>
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<td>A KNOWLEDGE OF ...</td>
<td>THE TEACHER SHOULD...</td>
</tr>
<tr>
<td>provide feedback to students regarding misuse positive reinforcement techniques</td>
<td>get help before a class</td>
<td>be willing to compromise with students and other professionals</td>
<td></td>
</tr>
<tr>
<td>enforce discipline</td>
<td>get &quot;out of hand&quot;</td>
<td>respect the talents of other teachers</td>
<td></td>
</tr>
<tr>
<td>(possibly by using a class room management model)</td>
<td>maintain a correct classroom noise level</td>
<td>be non-competitive toward other faculty members</td>
<td></td>
</tr>
<tr>
<td>maintain effective control without allowing the control to become more important than the instruction</td>
<td>promote socialization among students</td>
<td>respect the values and the rights of parents</td>
<td></td>
</tr>
<tr>
<td>help students to improve manners</td>
<td>be able to deal with large groups</td>
<td>believe that parents are important influence on learning</td>
<td></td>
</tr>
<tr>
<td>teach students to work together</td>
<td>teach students how to work together</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>work with small groups</td>
<td>use sign language and other communication skills for handicapped</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>maintain open lines of communication (rapport) with parents and students</td>
<td>deal with controversial topics in class</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>counsel (consult with)</td>
<td>deal with controversial topics in class</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>students, parents and colleagues</td>
<td>deal effectively with emergency situations</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>establish a cooperative relationship with other professionals</td>
<td>conduct student elections</td>
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<tr>
<td></td>
<td>help students from a variety of cultures</td>
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<tr>
<td></td>
<td>function in a pluralistic society</td>
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<tr>
<td></td>
<td>provide all students with some opportunity</td>
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<td></td>
<td>be skillful with parent-teacher conferences</td>
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<td></td>
<td>make effective home visits</td>
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<tr>
<td></td>
<td>be able to function in an organization</td>
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<td></td>
<td>use proper interview techniques</td>
<td>-</td>
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<tr>
<td></td>
<td>conduct him/herself properly at job interviews</td>
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</table>
(e) Skills for Using Instructional Aids

### CATEGORY: USING INSTRUCTIONAL AIDS

<table>
<thead>
<tr>
<th>Required Skills/Activities (from Job Description)</th>
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<th>Desired Attitudes: (from opinion sources)</th>
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<tr>
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<td>THE TEACHER SHOULD ...</td>
<td>A KNOWLEDGE OF ...</td>
<td>THE TEACHER SHOULD...</td>
</tr>
<tr>
<td>use instructional aids, such as workbooks, text and audiovisual aids</td>
<td>organize materials and facilities for optimal learning</td>
<td>resource available for the classroom</td>
<td>believe that the teacher is only part of the delivery system</td>
</tr>
<tr>
<td>use chalkboards effectively help to evaluate and select texts and materials</td>
<td>use a variety of media techniques</td>
<td>criteria for selecting resources</td>
<td>be willing to use materials and aids</td>
</tr>
<tr>
<td>secure logistical support</td>
<td>use materials compatible with learner abilities</td>
<td>instructional materials audiovisual aids and equipment</td>
<td></td>
</tr>
<tr>
<td>construct materials</td>
<td>use games in teaching</td>
<td>uses of the library</td>
<td></td>
</tr>
<tr>
<td>prepare, organize and use materials wisely</td>
<td>assemble and operate lab apparatus</td>
<td>information sources in education</td>
<td></td>
</tr>
<tr>
<td>supervise teachers' aides and assistants</td>
<td>make charts</td>
<td>materials and aids used in the subject area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>prepare bulletin boards</td>
<td></td>
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<tr>
<td></td>
<td>use simple office machines</td>
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<tr>
<td></td>
<td>use logistical support (such as ditto) machines</td>
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<tr>
<td></td>
<td>use computers</td>
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<tr>
<td></td>
<td>use the library</td>
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<td></td>
<td>use community resources</td>
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<tr>
<td></td>
<td>make the classroom as attractive as possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required Skills/Activities (from Job Description)</td>
<td>Desired Skills/Activities: Desired Knowledge: Desired Attitudes:</td>
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<td>THE TEACHER SHOULD ... A KNOWLEDGE OF ... THE TEACHER SHOULD ...</td>
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<td></td>
</tr>
<tr>
<td>observe student behavior</td>
<td>describe the physical, intellectual, social, and emotional characteristics of the student</td>
<td>the methods of studying students, tests and measurement</td>
<td>be realistic</td>
</tr>
<tr>
<td>familiarize him/herself with students' background</td>
<td>gather data from cumulative records</td>
<td>diagnosis and testing</td>
<td>be objective in viewing facts</td>
</tr>
<tr>
<td>utilize diagnostic and standardized instruments and specialized personnel</td>
<td>develop observational skills</td>
<td>student characteristics</td>
<td>be creative in reaching conclusions before all the facts are in</td>
</tr>
<tr>
<td>diagnose student characteristics with cognitive and affective form groups for effective teaching</td>
<td>write anecdotal reports of observed behavior</td>
<td>individual differences</td>
<td>be sensitive to cultural differences</td>
</tr>
<tr>
<td>help students set appropriate goals for themselves</td>
<td>select appropriate diagnostic tools</td>
<td>behavior norms</td>
<td>be willing to recognize individual differences</td>
</tr>
<tr>
<td>use evaluation diagnostically</td>
<td>gather information systematically</td>
<td>learning styles</td>
<td>accept students today as different from what they once were</td>
</tr>
<tr>
<td>recognize and treat individual student behaviors</td>
<td>use data for making appropriate educational decisions</td>
<td>sociological differences</td>
<td></td>
</tr>
<tr>
<td>provide for individual differences</td>
<td>be systematic in comparing observed behavior with norms</td>
<td>cultural and ethnic differences</td>
<td></td>
</tr>
<tr>
<td>make valid inferences from data collected regarding student conceptual and language development</td>
<td>diagnose student difficulties</td>
<td>rural lifestyles</td>
<td></td>
</tr>
<tr>
<td>diagnose different learning styles</td>
<td>write descriptive analyses and summaries of diagnoses</td>
<td>exceptionality and its needs</td>
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<td></td>
<td></td>
<td>emotionally disturbed students and their problems</td>
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<td>visual motor difficulties and remediation techniques</td>
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<td>&quot;mainstreaming&quot; child abuse and its prevention</td>
<td></td>
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</tr>
<tr>
<td>Interpret diagnoses into appropriate objectives</td>
<td>recognize characteristics of learning handicaps</td>
<td>identify students in need of special services</td>
<td>be able to conduct referral</td>
</tr>
</tbody>
</table>
## (g) Skills for Achievement Test Construction and Instructional Evaluation

<table>
<thead>
<tr>
<th>Required Skills/Activities (from Job Description)</th>
<th>Desired Skills/Activities (from opinion sources)</th>
<th>Desired Knowledge (from opinion sources)</th>
<th>Desired Attitudes (from opinion sources)</th>
</tr>
</thead>
<tbody>
<tr>
<td>assess the readiness level of student</td>
<td>design or interpret an evaluation policy</td>
<td>the philosophy and theory of measurement</td>
<td>believe that the teacher is responsible</td>
</tr>
<tr>
<td>assess or evaluate student progress</td>
<td>plan and implement evaluation strategies</td>
<td>the measurement process and its limitations</td>
<td>for learning no matter what the entry</td>
</tr>
<tr>
<td>use adequate samples of work in evaluation</td>
<td>design or select activities to measure the</td>
<td>test construction</td>
<td>conditions of the student</td>
</tr>
<tr>
<td>use informal evaluation techniques</td>
<td>attainment of objectives and criteria</td>
<td>objectivity</td>
<td>accept valid evaluation results</td>
</tr>
<tr>
<td>provide follow-up for students</td>
<td>develop tests and feedback mechanisms</td>
<td>validity</td>
<td>use evaluation results for decision</td>
</tr>
<tr>
<td>administer and/or grade standardized tests</td>
<td>grade creatively</td>
<td>reliability</td>
<td>making</td>
</tr>
<tr>
<td>construct cognitive tests of adequate validity</td>
<td>record and report grades</td>
<td>interpretation of test results</td>
<td></td>
</tr>
<tr>
<td>and reliability</td>
<td>construct effective evaluation instruments</td>
<td>grading systems</td>
<td></td>
</tr>
<tr>
<td>correct papers</td>
<td>report evaluation conclusions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>certify student accomplishment</td>
<td>employ formative and summative evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>analyze student progress on a regular basis</td>
<td>assist the learner in interpreting evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>use evaluation to improve his/her teaching and to determine whether objectives have been met</td>
<td>assist the learner in interpreting evaluation results</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>interpret data from a variety of evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strategies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(h) Skills for Supportive Services

<table>
<thead>
<tr>
<th>Required Skills/Activities (from Job Description)</th>
<th>Desired Skills/Activities: (from opinion sources)</th>
<th>Desired Knowledge: (from opinion sources)</th>
<th>Desired Attitudes: (from opinion sources)</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE TEACHER MUST ...</td>
<td>THE TEACHER SHOULD ...</td>
<td>A KNOWLEDGE OF ...</td>
<td>THE TEACHER SHOULD...</td>
</tr>
<tr>
<td>maintain records required by law (such as South Carolina attendance register)</td>
<td>work on committees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prepare accurate and punctual reports</td>
<td>use a management systems to control record keeping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>supervise</td>
<td>have a systematic approach to records</td>
<td></td>
<td></td>
</tr>
<tr>
<td>collect funds</td>
<td>have filing skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attend to &quot;housekeeping&quot;</td>
<td>monitor student health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>monitor (study hall, playground etc.)</td>
<td>be able to administer first aid</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>lock and unlock doors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>assist during fire drills</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>conduct field trips</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Required Skills/Activities (from Job Description)

- The Teacher Must Know...
  - the application of theory to educational practice
  - developmental theory
  - explanations of human behavior
  - theories of intelligence
  - Bruner's models of presentation
  - theories of transfer of knowledge and information
  - learning theory
  - models of how and why people learn
  - taxonomic organization: proposed for learning and instruction
  - curriculum theory
  - theories of instruction
  - curriculum theory
  - theories of counseling
  - personality theory
  - attitude theory
  - self-concept theory
  - motivation models
  - theories of classroom management

### Desired Skills/Activities: (from opinion sources)

- The Teacher Should Know...
  - research methods
  - objective observation and reporting
  - research techniques
  - educational research and innovation
  - data management skills
  - empirical research into learning
  - research in teaching classroom data-analysis techniques

### Desired Knowledge: (from opinion sources)

- A Knowledge of...
  - physical development
  - mental development
  - social development
  - physical norms for different age groups
  - characteristics of different age groups
  - mental norms for different age groups
  - social norms for different age groups
  - life-stage psychology

### Desired Attitudes: (from opinion sources)

- The history of educational practices
- The history of public education
- Modern trends in education
### ADDITIONAL CATEGORIES

<table>
<thead>
<tr>
<th>Required Skills/Activities (from Job Description)</th>
<th>Desired Skills/Activities: (from opinion sources)</th>
<th>Desired Knowledge: (from opinion sources)</th>
<th>Desired Attitudes: (from opinion sources)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethical and moral notions about the way we live</td>
<td>cultural rituals and arts</td>
<td>principles of communication</td>
<td>teach thinking skills</td>
</tr>
<tr>
<td>the philosophy of learning</td>
<td>multicultural values</td>
<td>language acquisition</td>
<td>teach how to follow directions</td>
</tr>
<tr>
<td>the philosophy of education</td>
<td>the culture of students</td>
<td>the structure of the English language</td>
<td>teach students how to learn</td>
</tr>
<tr>
<td></td>
<td>dealing with students</td>
<td>speaking</td>
<td>teach methods of promoting language and</td>
</tr>
<tr>
<td></td>
<td>of various backgrounds</td>
<td>spelling</td>
<td>conceptual development</td>
</tr>
<tr>
<td></td>
<td>sociology</td>
<td>grammar</td>
<td>teach the scientific method</td>
</tr>
<tr>
<td></td>
<td>value systems</td>
<td>composition</td>
<td>stimulate inquiry techniques</td>
</tr>
<tr>
<td></td>
<td>moral development</td>
<td>pronunciation and vocabulary</td>
<td>teach analytical skills</td>
</tr>
<tr>
<td></td>
<td>human values</td>
<td>language skills</td>
<td>teach problem-solving techniques</td>
</tr>
<tr>
<td></td>
<td>family and community relations</td>
<td>written and oral</td>
<td>teach decision-making</td>
</tr>
<tr>
<td></td>
<td></td>
<td>communication skills</td>
<td>present decision making</td>
</tr>
<tr>
<td></td>
<td></td>
<td>penmanship skills</td>
<td>models to students</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>help students extract</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>meaning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>teach study skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>teach reading</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>comprehension</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>tie together all activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>to develop cognitive skills</td>
</tr>
</tbody>
</table>

- Tie together all activities to develop cognitive skills.
V. What to Improve in Teaching in Higher Institutions

It is possible to argue that the functions of teaching and learning in higher institutions touch upon the fundamental problems affecting undergraduates education in the domains of student body, the faculty and curriculum. In this regard, learning should be conceived as process that entails action by students as well as their active participation. Therefore, a primary task in teaching in higher institutions should be to improve the production process of education so that the products of the system live up to the expectation of its clientele.

Perhaps central to the need for improving the delivery capability of higher institutions is that questions about the processes of teaching and the nature of the learning environment are matters about the methods used in producing education rather than the goals of higher education. More important is the fact that recent discontent in the quality of higher education in many African countries constitute a symptom of nationwide academic failure to meet human needs both relevantly and meaningfully. These symptoms are a manifestation that higher education systems are malfunctioning and not produce the needed goods. Briefly then, one may summarize the situation by saying that education is filling to equip the products of higher education with the necessary knowledge, skills and attitudes for productive life in society. In view of this failure, where should improvement be made for teaching in higher institutions? One can list a range of items - from the quality of staff, teaching methods, the way students learn; instructional technology; facilities, research and teaching, financing, education to management of education. The paper examines three critical areas requiring attention:

- staff development professionalism and professionalization of teaching in higher education;
- research and teaching; and
- curriculum and the methods of teaching generally used in higher institutions.

(a) Staff Development, Professionalism and Professionalization of Teaching in Higher Education

Perhaps a common error is to regard university teaching as the only profession which requires no formal preparation or training. It is often assumed that those who show greater promise of scholarship at or after graduation are the same promise capable of teaching in higher institutions without formal training. Yet experience has showed that not every scholar can teach, because teaching is much more than simply presenting ideas or dishing out information.
Machines can and do teach, but they have never succeeded in replacing teachers.

Teaching covers a variety of tasks such as helping students to learn things by means of the probing, discovering, analyzing and maximizing activities to ensure the development of the right attitudes, values, knowledge and skills spiced with a human touch and element - often lacking in teaching machines. These tasks cannot be performed very effectively by machines and non-professionals uncommitted to the rigorous and ethics of education and to the cause of guiding individuals to become productive citizens. Therefore to improve teaching and learning in higher institutions, there is need to professionalize teaching and to reinforce professionalism in higher education.

To improve learning in higher institutions, professional staff development must include aspects of teacher education which should proceed toward incremental reform through strong disciplinary training and professional preparation in methods and techniques of university teaching and in research methods and techniques and in the continual retraining in teaching methods and techniques. There is also the need for comprehensive reforms through staff development programmes to instil in academics scholars and lecturers that teaching in universities like any other profession requires some basic foundations in lecturing methods and research activities i.e. to have some basic training in research activities and to have some knowledge and skills in lecturing and assessment of students.

Needless to point out that training in this case should not be a mere apprenticeship in specialized forms of behaviour i.e. training in the form of teaching skills as categorized in an earlier section because this may not be the best way of achieving the objectives of education which have been set. In professional life such as teaching, intelligent training assumes intellectual preparation the value of which cannot be underestimated. Since education is more of a means rather than an end so development professional preparation through staff development should avoid producing unthinking and stereotyped lecturers who become prone to the most commonly used method of teaching in the universities, i.e. lecturing.

On the contrary, staff development programmes should aim at producing lecturers who are capable of guiding students towards adulthood and productive life by equipping them with knowledge, skills, values and attitudes which shape them into independent thinkers and as products of the education system capable of producing solutions to problems encountered by society. In Africa, it must be emphasized, education
still remains a labour intensive investment in a continent
requiring labour intensive industries. It is therefore very
important that the knowledge, skills and managerial talents
of lecturers, teachers, scholars and academics should
constitute a vital element in preparing the outputs of the
education system for a productive role as workers in a labour
intensive continent.

In this regard, teaching in higher institutions should
not rest on apprenticeship and experience i.e. that one
starts as a teaching or research assistant and then proceeds
to become a lecturer, senior lecturer, reader or associate
professor to full professor or emeritus fellow. One would
wish that university teaching should be accompanied by some
form of training or properly planned staff development training
programmes in teaching and research methods and techniques.
It has to be emphasized that teaching in universities cannot
claim its professionalism without professional training.
There is no reason why university teaching should be the
only profession without formalized professional training
other than on the job-training. No wonder, critics argue
that teaching in a university is a semi-profession resting
on experience, apprenticeship, scholastic and research skills
of its members. This criticism is offset by an argument
that as an ideology professionalism induces members of an
occupation to strive for excellence so as to become
professionals by adhering to certain rules, code of conduct,
professional ethics and pursuing and maintaining certain
standards of the profession. In this regard, university
teaching is a profession, but in need of reform through
improved training of its personnel.

(b) Research Methods and Activities

Both the Monbasa Programme of Action (1985) and the
Harare Statement (1987) as well as the recommendations of
the Fourth Conference (1989) of the same Vice-Chancellors,
Presidents and Rectors of Higher Institutions in Africa,
the importance of R and D and the role played by research
in improving the quality of teaching and learning are greatly
emphasized. In all these, it can be discerned that generally,
research provides a basis for:

- originating the knowledge, inventions and technological use
  of things;

- that research procedures and processes become the focal point
  of subsequent functions of teaching and learning and of public
  service function; and
Given this provision, how far is research compatible with the other functions of institutions of higher learning i.e. those of teaching and learning and providing public service. Also of significance is to ask who defines what research is more appropriate to national needs or for publication in learned journals. In Africa, higher institutions are not really independent in the western sense of the word. They are very much controlled by government and are subject to closure at the whims of government authorities. Since most African Universities are almost wholly financed by public funds or get their financial resources with government backing, the research undertaken in universities is often subject to government scrutiny and more often than not, should be one which is not critical of government.

Therefore improving the research delivery capability of higher institutions entails focusing attention on problem-oriented research whose definition must be to a great extent by the academic or the public sensitive to societal demands. Since governments often finance research, they tend to control the kind of research to be undertaken. Experience has shown that public control and academic freedom often tend to conflict each other, and in turn governments tend to restrict and control research activities either through issue of permits or defining broadly areas of research, and ensuring sensitive issues or those that would be critical to government are not researched upon.

Unless universities are given some academic freedom within national development needs and priorities, research may simply continue to operate as an academic exercise for publication in learned journals in developed countries; rather than a measure for improving for the delivery capabilities of higher institutions and for effective teaching. Certainly because of the sensitive nature of African politics, research has not been given the leadership role it should play in the basic functions of academic life.

In essence therefore, if research activities are to be made an effective tool for teaching in Africa, national governments will need to make political concessions to ensure that research is not only responsive to national needs, but an effective instrument for teaching and learning. At the same time, more concessions should be made to nationals to undertake research sponsored or financed by national governments rather than recruit expatriates whose knowledge of local situations and problems is often lacking but are recruited at the expense of nationals. With hands tied by governments research delivery capability cannot be expected to improve and this has serious implications for teaching and learning.

(c) Curricula, Teaching Methods and Techniques

African universities continue to be accused of producing more graduates in the arts and social sciences than in science, mathematics, technological and practical subjects. It may therefore be argued that if teaching and learning in higher institutions
are to be effective, issues of subject bias conflict, cultural content and curriculum orientation ought to be resolved and dealt with as a matter of priority. For without a solution to these issues, efforts in curriculum reforms and orientation to national development needs and thus curriculum implementation would be an exercise in a little more than futility. To this effect therefore, African institutions of higher learning have committed themselves to reviewing curricula, course offerings and research emphasis to ensure that they reflect the urgency needed to solve African problems and to train the required human resources needed for national development.

Reform in curriculum entails reforms in teaching methods as well and the retraining of education staff to implement the reformed curriculum. Yet experience has shown that while many universities have reformed their curricula and made efforts to reorient them to national as well as individual needs, little efforts have been made to reform teaching methods and techniques. An explanation for this lag in reforming teaching methods has been that African higher institutions lack funds to buy instructional materials, equipment, textbooks and softwares for teaching and in some cases, instructional facilities, libraries, laboratories and residential as well as recreational facilities are lacking, or in urgent need of repair. One cannot be an effective teacher in the absence of these. Can one teach without equipment and facilities? While the answer may be no, there is room for improving teaching even when facilities are lacking.

It is the intention of this section to examine some of the commonly used methods in higher institutions and show how they can be made more effective ways of teaching to effect learning. No claim is being made that the list of methods is exhaustive, and neither are the suggestions, although they are an attempt at a solution.

A. General Methods and Techniques

There are a number of methods and techniques which may be considered suitable for teaching adults; and some of them are also good for teaching in formal schools. Generally, the following methods and techniques are good for adult teaching:

1. Inquiry Methods

Teaching by inquiry method involves finding answers to a problem by adults themselves and drawing their own conclusions. It is the opposite of expository teaching in which the teacher tells them what they are supposed to know.

The main objective of inquiry teaching is to ensure that the learner thinks carefully about the ideas, problems, or issues under consideration. Its main advantages are:

(a) to establish deep understanding of concepts, ideas and relationships so that one can develop taste, values and attitudes.

(b) to develop intellectual skills, including the ability to think rationally.

(c) It has high motivating power.

The general characteristics of inquiry teaching are:

(i) the lecturer attempts to stimulate the learner to think for themselves by asking them though questions: for interpretation, explanations: for implication of data and information: for contradictions, implications and value conflicts;

(ii) the lecturer tries to keep the climate permissive and to encourage the learners try their own thoughts by exchanging ideas, being creative and independent in what they are doing;

(iii) that inquiry teaching involves some variation of problem solving either by individual or group-solving methods; and

(iv) inquiry methods are open-ended allowing the learner to draw correct generalization from the evidence available.

2. The Socratic Method

This is one of the oldest discovery methods in which a tutor/teacher asks questions designed to bring forth from a learner certain concepts or generalizations; or to force a learner to think
hard about some belief, problem or issue. Some of the main characteristics of this method in modern teaching are:

(i) the discussion consists of a series of leading questions designed to bring out certain answers;

(ii) the ideas are developed by asking the questions in logical fashion;

(iii) motivation is enhanced by the necessity to answer challenging questions;

(iv) the questions asked develop the idea to be learned as logically as possible. They must be well planned;

(v) the learner develops his/her own idea as a result of the questioning;

(vi) the questioning takes the learner to a predetermined goal or learning, but sometimes the dialogue is open ended.

The procedures for conducting a Socratic lesson are:

(a) Elicit from the learner a statement of belief or opinion which is controversial or questionable;

(b) Ask probing questions which will cause the learner to re-examine his belief or statement.

3. Problem solving

This is a kind of discovery learning in which learners attempt to solve real problems. Most problem solving activities are long term assignment of a few or so many days to complete. In using this method a teacher must:

(i) select the topic;

(ii) frame the problem;

(iii) plan the attack - the information needed and where it can be found;

(iv) prepare a study guide for the learners with questions to be answered and facts to be gathered;

(v) learners should investigate the problem to find out the facts, different points of view etc.
(vi) provide as much information, materials and facts as possible;

(vii) learners should draw the conclusion on the basis of information gathered;

(viii) learners should discuss their findings, and the points of view raised;

(ix) the lesson can end on an open-ended note provided the issues have been objectively discussed.

4. Oral Questions and Answers

Questioning is one of the oldest and most tried technique. It is one of the many techniques teachers use. In itself, it does not constitute a strategy. There are tips one can follow to develop his/her expertise in questioning learners:

(i) prepare carefully; making sure that you understand the goals of the lesson; and be sure of the subject content;

(ii) plan your key questions and have them clearly worded and be sure that the questioning technique is what you want to use;

(iii) speak clearly and audibly so that everyone can hear you;

(iv) ask the question, wait a little and name the person to answer. Do not name a person to answer the question before asking the question, as many learners tend to ignore such a question as it is not for them to answer. When the person named fails to answer the question, most learners will want the question repeated as they did not pay attention when the question was first asked;

(v) be natural and informal when using oral questioning. Direct questions to the whole class and not to one section of the group;

(vi) ask only a few key questions, and also ensure that there are a series of questions that build up from one question to another;

(vii) when answers are given ensures that complete responses are given and not "yes" or "no" type of answers;

(viii) use a variety of questions; convergent, divergent, evaluative, fact or memory type questions, or questions that go beyond classroom reading;
(ix) ask questions that will encourage learners to participate. Avoid cross examining, haranguing, or embarrassing learners with questions. On the other hand, make sure that wrong answers are corrected by other learners or yourself;

(x) to ensure that there is an open atmosphere, insist on courtesy from everyone in the group;

(xi) lecturer should encourage learners to ask their own questions, and they do so, treat them courteously. Use the learners' questions as lead-ins, and let others try to answer them before you do;

(xii) counsel learners who want to use their questions to attract attention or simply to test the teacher because they already know the answer. In this latter case ask them to answer the question first.

5. Oral-text Recitation

The open-text method is a technique in which the learners are allowed to refer to their books and notes during class discussions. In this way, learners can back-up their assignments with information and facts:

(a) It frees learners from note memorization and recitation of facts;
(b) helps learners to realize that facts are only a means to an end;
(c) it brings out important facts by using them;
(d) learners learn the importance of checking and documenting;
(e) it uses time efficiently.

6. Lecture Method

Although the lecture method is used for many purposes, it is greatly overused, and is not very effective for most instructional purposes. The Lecture Method has a number of disadvantages viz:

(1) learners get less and retain less from lectures. According to some research studies, people generally remember:

10 per cent of what they READ
20 per cent of what they HEAR
30 per cent of what they SEE
50 per cent of what they HEAR AND SEE
70 per cent of what they SAY
90 per cent of what they SAY as they DO a thing

(ii) lectures can be a waste of time. Better give a handout and use the time for discussion;

(iii) lectures are seldom useful for changing attitudes or attaining the higher cognitive goals;

(iv) lectures, when boring lead to classroom indiscipline;

(v) there is little room for exploring or interaction amongst learners.

The Lecture Method can be very useful for a number of purposes:

(a) to establish a general point of view or a state of mind rather than to teach specific facts, concepts or ideas;

(b) for giving out information very quickly;

(c) to introduce new units and assignments especially long term assignments;

(d) for informal talks or lectures to motivate learners and arouse their interests;

(e) for use in large groups or in team teaching.

In order to arouse and maintain interest in lectures a lecturer must:

(i) open the lecture with a challenging question, problem or fact;

(ii) tell them what he intends to do;

(iii) puzzle them a little;

(iv) relate the content to things they know or like;

(v) use questions both real and rhetorical;

(vi) use plenty of examples; demonstrations etc.

---

(vii) keep up the pace of the lecture;
(viii) make use of dramatic effects. Pause, ask questions, change tempo, avoid monotony and where necessary spice it with a joke;
(ix) utilize humour.

7. Repetition, practice, drill and review

(a) Repetition

This is important in skill and concept development as it gives the learner a chance to renew and vary experiences. It gives opportunities to reinforce and refine skills and to amplify concepts.

Repetition can be very useful to polish and refine something already learned; to fix something in memory such as formulae; to increase an understanding of a concept of idea; to make something a habit; or to consolidate what has already been learned.

(b) Drill and practice

In conducting drill and practice, a lecturer must give clear instructions to learners so as to reduce the chance of learning incorrect procedures and forms. Instructions can be oral or by way of demonstration before learners embark on an assignment.

Always ensure that learners have the proper tools, materials and right information. The practice must be as lifelike as possible and be meaningful. Practice should be individualized and structured, and should form part of regular work. Ensure that a variety of materials are used in the learners' activities.

8. Discussion techniques

True discussion is one of the most effective, yet the most difficult of all teaching techniques.

Use the discussion technique to solve problems; develop and change attitudes; to present and make learners aware of contrary views; develop leadership skills, develop self-confidence, and to encourage constructive and logical thinking.

In conducting the discussion, make sure that you are prepared for the discussion. Make an opening statement to point out the purpose of the discussion and then outline the rules for such a discussion; adjusting them as the group sees fit or as necessary without changing your intended goal. To start the discussion, open with a specific case or problem, and then concoct a series of challenging open-ended questions. Create an environment conducive to face-to-face expression,
and making sure that the discussion is informal, and everyone in
the group is encouraged to contribute. Try to control those who
want to dominate the discussion.

9. Panels, forums, symposia, round tables and debates

Formal discussions range from the quite informal round table
to the extremely formal debate. They all have in common the factor
of being audience activities and are therefore useful in large classes
where small group discussions would not be effective.

Panels, symposia and forums can be useful in the following
situations:

(i) as culminating activities;
(ii) to present points of view concerning controversial issues;
(iii) to present reports of the learners committees;
(iv) to present findings of the learners' research;
(v) as a means of involving learners and utilizing their various
talents;
(vi) to give variety and change of pace to the class.

In such formal discussions, give the learners a chance to ask
questions; take notes of the points being discussed and summarize
main points of the discussion. Let them evaluate the arguments and
the logic of panel members but not their manner or skill of
presentation.

10. Case-study method

This consists of a fairly intense study of one individual,
situation, institution decision or issue as a basis for making
generalizations on a given subject or issue. It is very useful because
it gives a chance to infer from a concentrated and deep study rather
from a cursory study of a number of cases.

A case study may concern a contemporary or historical problem
to be investigated. To ensure that it is done properly provide
materials to the learners or tell them where they can get such material
or information. Discuss the material and draw conclusions from it.

11. Role-playing

This can be defined as an attempt to make the situation clear
or to solve a problem by unrehearsed dramatization. Role-playing
activities are useful for:
(a) motivating or launching units;
(b) making clear contemporary on historical situations in which there may be conflicting views, biases and different opinions;
(c) teaching attitudes, values and for developing more vivid concepts;
(d) teaching content having to do with human relationships;
(e) developing citizenship skills by showing both the successful and unsuccessful method of solving interpersonal problems; and providing practice in taking real life roles.

In using this method, ensure that players have been properly selected, and have been properly prepared for their roles. This should be done after a significant issue for role playing has been selected. Ensure also that the audience has been prepared for role-playing, by briefing them on how they are to behave during the presentation. Let there be no exaggeration on the part of players about their roles; the players and audience should act naturally.

12. Simulation exercises

Simulation combines role playing and problem solving. It consists of the learner performing in a simulated or contrived situation which duplicates a real situation as closely as is feasible so that the learners will (i) understand the real situation and/or (ii) learn how to perform in the rural situation.

What is required in a simulation exercise is to assign roles to the learners in a fairly well defined situation. Confront learners with simulated real life situations which make it necessary to take action. Learners must stay within the limits prescribed by the realities of the situation. The teacher/tutor must act as a referee or umpire and score keeper, or let one of the learners play this role. A mock examination given to learners is one example of a simulation exercise of real life situation.

Learners should be free to discuss the situation, make generalizations and draw conclusions from the exercise. In the case of a mock examination, discuss the results with the learners; what they make out of them, and how they should have approached the question.

B. Methods and Techniques for Teaching Skills

The principles for teaching all skills—motor skills and others are much the same:

1. A learner must first learn the procedures involved in the skill either through instruction or by trial and error;
2. A learner must practice until he/she becomes skillful;

3. He/she must continue to use the skill in order to maintain it.

1. Teaching Understanding: How Concepts are Learned

Although they are abstractions, concepts seldom exist in the abstract. Rather each concept exists in the mind of someone where it is that person's understanding of something, that is to say, the sum total of all the ideas or notions a person has about a particular topic. Thus, a person's concept or understanding of green is the totality of one's ideas about "green" or "blue" etc. That concept may be imperfect or incorrect, but it is his alone.

Concepts can be developed by combining or separating common features a class or which are not common to a class, until one arrives at what he considers to be the case. In short, one takes the following steps in concept development:

(a) Locating the common property of feature
(b) Isolating the common property of features by:
   (i) varying the concomitants;
   (ii) contrast.
(c) Labeling or sorting the categories.

2. Suggestions for Teaching Concepts

The following are suggested for teaching concepts:

(i) provide for a variety of experiences through doing or through a variety of approaches to a problem;

(ii) avoid overdependence on verbal activities since concepts are not learned by words alone. Try to use all sorts of learning activities - role-playing audio-visual aids/materials, construction activities, discussions etc. - to ensure a build up of the desired concept.

(iii) explain the official meaning of the concept clearly and then allow learners to explain their understanding of the concept being developed;

(iv) use clarifying operations, for instance, ask a learner to define in his own words the term at issue; or let him demonstrate his meaning, or explain in logical terms what he means by a given concept;
(v) use discovery techniques through questions, inferences from pertinent data, or examples;

(vi) provide opportunities for learners to form concepts and generalizations by means of both inductive and deductive inferences. For instance by deduction:

(a) give the learners a definition of generalization as a proposition;

(b) give the learner a list of specific cases, some of which exemplify the generalization and others do not;

(c) let the learners test the specific cases to see whether they fit the definition or not.

(vii) point out the essential elements which are pointers to the understanding of the concept;

(viii) use advance organizers i.e., a summary of say 500 words or an overview what is to be learnt. Provide the principles on which to hang the facts and concepts to be learned. An advance organizer should:

(a) give an overview of what is to be learned;

(b) relate past learning with the new subject matter to be learned;

(c) provide organizing elements;

(d) be more abstract and general than the subject to be learned.

(ix) foster divergent original thinking;

(x) cultivate critical attitudes toward one's own concepts;

(xi) emphasize generalizing rather than the generalization.

3. General Discovery Strategy for Teaching Generalizations

A discovery strategy for teaching a generalization or concept is to:

(i) select the generalization or generalizations;

(ii) pick sub-generalizations, if necessary;
(iii) diagnose the learners' present understanding and need;
(iv) set up a problem situation;
(v) set up experiences that will bring out the essential elements during the problem solving;
(vi) set up experiences that will bring out contrasting experiences;
(vii) draw generalization or concept;
(viii) apply the generalization or concept.

4. Teaching Attitudes, Interests and Values

It is harder to teach attitudes ideals, interests, values and ethical moral character than concepts and skills. Yet teachers bear some of the responsibility of teaching these.

(a) Development of attitudes

Attitudes can be developed in a number of ways by:

(i) invite other people consciously or unconsciously by association with other people;

(ii) identifying with a model and attempting to copy the behaviour of that model. It is harder for adults to model themselves on others; whereas youths tend to model themselves after older people they admire;

(iii) we develop attitudes from emotional experiences. Good emotional experiences result in favourable attitudes and unhappy ones in unfavourable attitudes;

(iv) attitudes can be developed as a result of information one receives e.g. on race relations, or attitude towards sports;

(v) through deliberate cultivation one usually sets out an ideal and tries to follow it until it becomes habitual.

(b) Development of ideals

Ideals are purposeful goals towards which we strive. Repetition and reinforcement tend to make them automatic and thus change them into attitudes.
For a person to adopt goals as ideals several conditions must be satisfied:

(i) the learner must understand what the goal is;

(ii) the goal must be presented in such a way that the learner sees it as desirable. It is therefore of little value to give direct instruction; better appeal to personal concern and give models that can be followed;

(iii) the learner's awareness of the desirability of the goal must be reinforced time and time again.

(c) Development of values

If one wants to develop values in a learner it would be well to:

(i) encourage the learners to make choices and to make them freely;

(ii) help them discover and examine available alternatives when faced with choices;

(iii) encourage them to consider what is that they prize and cherish;

(v) give them opportunities to make public affirmations of their choices;

(vi) help them to examine repeated behaviours or patterns in their life. 1/3

5. Sample Tactics and Strategies for Teaching Attitudes and Ideals to Students

It is never too late to learn. After all, education is a lifelong process. So there is always room to change and develop attitudes and ideals. Therefore some of the strategies and tactics that can be used to teach attitudes are as follows:

(i) use informal activities in which there is plenty of give and take and casual incidental remarks and questions. Lectures and recitations are no good for teaching attitudes.

(ii) let the learners meet the phenomena to which the attitude relates time and time again in circumstances favourable to the attitudes.

(iii) avoid preaching and dictating.

(iv) provide models by means of literature, history, current events etc. Models must be realistic, consistent and one that the learner would like to follow.

(v) the teachers' own example could be a model to follow.

(vi) let learners find facts for themselves. Encourage them to check for facts as opposed to opinion.

(vii) use group procedures such as role playing and discussion groups to mould attitudes.

(viii) use inductive methods, problem solving, case studies and other approaches in which learners find their own answers.

(ix) use open-ended questions.

(x) play the devil's advocate. Present the arguments for the other side and let the learners argue you down if they can.

(xi) contrive incidents for learners to discuss and draw conclusions from.

6. Teaching How to Think

Critical or reflective thinking can be defined as the process of rearranging or reorganizing information and knowledge to make new knowledge. Reflective thinking may be convergent, divergent or evaluative. Convergent thinking involves finding predictable answers e.g. mathematical solutions. Divergent thinking involves a free-ranging search for answers and is therefore not predictable. Evaluative thinking puts a value on things. Each of these had a place in a classroom. We should not emphasize on convergent thinking.

In critical or reflective thinking, a person goes through the following processes.

(a) A person becomes aware of a problem; he/she then isolates it, and decides to do something about it;
(b) The person looks for clues or a solution of the problem. In so doing he/she thinks up of possible solutions (hypotheses) or approaches to take in solving the problem; and then he tests the tentative solution or approaches against criteria that will help him/her evaluate them adequately.

(c) The person rejects the tentative solutions or approaches which do not meet the requirements until a suitable one is found. When all hypotheses have been tested, a conclusion is reached when one solution appears adequate answer to the problem under review.

Thinking is something we learn to do; it is not spontaneously generated. Our thinking styles today are the culmination of skills, attitudes and ideals we have acquired over the years. Although it is claimed that no one can teach another person to think well, it is possible to help adults develop the skills and attitudes necessary for efficient, effective thinking. Among the skills needed for successful reflective thinking are:

(i) finding, recognizing and defining problems;
(ii) finding evidence;
(iii) observing accurately;
(iv) interpreting and reporting correctly;
(v) judging evidence;
(vi) detecting faulty arguments, bias, poor logic, and other evidences of faulty reasoning;
(vii) analysing and evaluating data and alternatives;
(viii) detecting relationships, seeing parts in relationship to the whole, tying elements together, recognizing similarities and differences;
(ix) choosing between alternatives;
(x) making inferences and drawing conclusions;
(xi) analysing.

It should be emphasized that attitudes and ideals needed for good thinking include:

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Based on Leonard Clark's list of Jersey City State College on General Methods of Teaching, 1973.
(a) ideal of suspended judgement
(b) ideal of getting all the facts
(c) objectivity
(d) honesty
(e) open mindedness
(f) critical mindedness
(g) curiosity
(h) humility
(i) thoroughness
(j) self-respect

Thinking is largely a skill. Therefore, learning to think is largely a matter of practice. Learners must practice all types of thinking skills because "one learns to thinking by thinking".

7. How to Check Learners' Thinking

To check the efficiency of learners' thinking, one may consider the following things:

(a) Is the learner interested in finding things out?
(b) Does he/she stick with problems or does he/she give up?
(c) How rational is the person? Is he the type of person who thinks things through to logical conclusion or does he job to conclusion?
(d) Does he have the patience to test ideas?
(e) Is he logical in his thinking?
(f) Is he original and creative in his thinking?
(g) How well can he recognize and define problems?
(h) Can the person hypothesize and select pertinent evidence?
(i) Can the person distinguish fuel from opinon, detect bias in a given problem and judge worth of courses and evidence?
Can he draw valid conclusions and test them?

These are some of the questions a teacher ought to ask to try and help learners develop their thinking. Answers to these questions about a learner will greatly help facilitate the teacher's handling of reflective thinking activities of the learners.

8. Useful Teaching Strategies on How to Think

In teaching learners to think the following strategies may prove useful:

(a) Inquiry; (b) Discovery; (c) Problem solving; (d) Socratic Method; (e) Critical reading; (f) Debate; (g) Interviews; (h) Simulation-mock sessions; (i) Dramatization; (j) Research assignments; and (k) Discussions.

These strategies are not mutually exclusive as it is possible to combine one or two in an activity.

9. Specific Teaching Strategies which Enhance Learning to Think by Learners

The following strategies are suggested for teachers to help learners learn to think better:

(a) Emphasize understanding processes and reasons for correctness rather than correctness itself. Thinking is a process not an event or thing.

(b) Encourage adults to gather information as a means by which to think rather than an end in itself. Information alone will not aid one's thinking. It is what one does with the information that counts.

(c) Utilize real problems that concern adults; especially personal problems.

(d) Encourage adults to evaluate or make comments on proposals put forward by a teacher or other learners.

(e) Let adults check their reading for accuracy, logical thinking or bias.

(f) Create problems to be solved, or adapt their own problems and point out contradictions.

(g) Use lectures, textbooks, or visual aids as spring boards to raise probing questions and avoid presenting learners with predigested answers.
(h) prerequisite for effective thinking. The teacher of adults is a facilitator and so he should let the learners free to think and act as they see fit. If mistakes are made ask them to find out what went wrong. Challenge them where their thinking is ill considered.

(i) Let them make as many decisions as possible in what they are doing or learning to do. But help them to develop criteria for making decisions. Where possible let them live with their mistakes. After all, to err is human;

(j) Allow divergent views and disagreements. Keep set solutions to a minimum, and do not insist on a single answer to a problem, unless it is in mathematics;

(k) Use problem solving, and let them enter into the problem solving process;

(l) Provide room for criticism and evaluation, but ensure that such criticism can be logically justified;

(m) Encourage hypothesizing and imagining, and so how they can provide an answer to a problem;

(n) Let adult learners have a chance to classify and categorize their evidence by type, and encourage the attitude of proving whatever they do or say;

10. **Creative Thinking in Learners**

Creative thinking is very much like critical and reflective thinking and problem solving. The following are possible steps in creative thinking:

(a) **Preparation:** The period in which one becomes familiar with the topic gains necessary background experience, and gets motivated and starts to work;

(b) **Incubation:** The period during which the idea lies follow. and the creator relates and mulls over it.

(c) **Insight:** The period during which the creator has his inspirations and produces his work; and

(d) **Revision:** The period during which the creator refines his creation

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11. How to Stimulate Creative Thinking in Learners

1. Respect their ideas and show that you think their ideas are valuable. Always encourage their ideas even if they are crude at first.

2. Encourage spontaneous expressions, discussions and experimentation.

3. Avoid discouraging learners, and using negative comments. Too high a standard can discourage adult learners easily.

4. Take your time with learners. You need not rush them over a subject under consideration. Let them relax and ponder over the issues.

5. Do no sacrifice creativity on the altar of discipline, because once one has started, orderliness and system help to foster creativity.

12. Teaching Controversial Issues

Any topic about which people hold strong, differing opinions can be considered controversial. People may hold very strong and emotional views about an issue about which a teacher may have to teach it. Controversial issues should be open-ended and a teacher should avoid pat, dogmatic answers.

Controversial issues are important in the real life a community, they constitute a vital element in the life of a community. As such they should not be left out in our courses - religion, politics and polygamy can be very controversial among certain communities.

13. A Teacher's Responsibilities in Teaching Controversial Issues to Learners

In teaching controversial issues, a teacher should have extensive knowledge of the topic, teaching skill, tact and sensitivity; courage tempered with caution, discretion and above all, common sense and wit. His responsibility will therefore be to ensure that:

1. The topic is suitable for learners and for the course.

2. All necessary clearances are obtained, particularly if there seems to be any possibility of the issues causing embarrassment, anger irritation to some members of the group or community.

3. That the group of adults are ready to discuss the controversial issue; that both the learners and the teacher have the necessary background.
4. All essential points of view are fairly considered, and that errors in fact or reasoning are pointed out.

5. Learners should be allowed to formulate their own opinions and conclusions without undue influence or imposition to views by a teacher or other adults.

6. Many learners have deep feelings on certain issues. So do not attempt to overturn these deep-seated beliefs as this can lead to very heated debate and more entrenchment of earlier beliefs. Take your time to convince someone with opposite views through logical and convincing arguments.

7. Stimulate and guide adults in their study of controversial issues, but do not overpersuade them to change their views. After all, belief and views held by the teacher may turn out to be wrong. Tell them your opinion, but let them be free to think rationally.

14. Strategies for Teaching Controversial Issues to Learners

The following strategies and tactics are suggested for teaching students:

(i) use indirect approach to study or discuss a hot or controversial issues, e.g. instead of discussing about dictatorship in your country, talk about how democracy operates in USA or Britain; instead of talking about civil service corruption in your town talk about corruption in Africa in general;

(ii) use problem solving approaches featuring open-ended problems and research type investigation;

(iii) Let learners discover and evaluate their own values through value clarifying responses, and value discussions;

(iv) utilize direct approach techniques such as debate, panel discussions, dramatics, role playing; simulation research techniques etc.;

(v) establish rules for the discussion of controversial topics e.g. no names to be mentioned, no specific country etc.;

(vi) separate fact from opinion and keep a list on the board of what is fact and what is opinion;

(vii) to ensure that all facts of topics are considered, present some aspects of the topic yourself. Let them see all sides of the coin;
Strategy 3

Like his Strategy 1 and 2 colleagues, the lecturer whose strategy is defined in the lower left-hand corner of the diagram also believes in the conflict of student and system needs and in student's natural resistance to learning. But, unlike his colleagues, he feels helpless to deal with the situation.

Students will learn what they want to learn, when they want to learn it. A lecturer simply cannot change this fact. Thus, his primary responsibility is to present the information and to do what his job description requires. If a lecturer gets a "good class," he is lucky; if he gets a "bad class," there is nothing he can do about it. Those students with initiative will learn. For this lecturer, his philosophy justifies his dull, mechanical presentations. At the university level he may prefer to teach "advance seminars" and shun the basic core courses.

Strategy 4

At the middle of the diagram is the strategy of another teacher who believes in the basic incompatibility of student and system needs. But he aims for a compromise, or balance, by fully emphasizing neither the student orientation nor the content orientation.

Both system needs and students need matter, but this teacher cannot see how to put them together. He ends up with a moderate level of concern for each. Thus, the system requires the lecturer to give examinations, but he may specify the exact pages in the text from which questions will be drawn. Similarly since he is required to give grades, he may "grade on a curve." Allow students to omit one or more test scores in computing final grades, give extra points for class attendance, or allow students to write an "extra paper or book review to improve their grades.

Strategy 5

All the upper right-hand corner of the diagram is the strategy of a lecturer who believes that students are always learning. In his mind, student and system needs are not inevitably in conflict. He aims to integrate both sets of needs by placing maximum emphasis on both student and content orientations.

This teacher feels that a teacher's primary responsibility is not to see that something is taught, but rather to see that something is learned. Thus, it is important to create climate in which learning is involving, meaningful, and relevant. Learning activities are structured to bring maximum benefit to the student, the teacher, and the school system.
determines the emphasis he places on each orientation. Other teachers while also feeling that a conflict between incompatible needs is inevitable, work toward some compromise or balance in which neither orientation is fully emphasized. Still other teachers see the student orientation and content orientation as functionally related. They aim to integrate student and system needs by emphasizing both.

2. Five Teaching Strategies

Five “pure” teaching strategies (or styles) result from (1) the interaction of the student and content orientations, and (2) the differing degrees of emphasis which teachers place on each orientation. The five styles are discussed below and are visually depicted in Figure 2 "Models of Teaching Strategies”.

Strategy 1

The strategy lecturer at the lower right-hand corner of the diagram defines the style of whose basic philosophy dictates that student and system needs are mutually exclusive. Thus this lecturer resolves the conflict by placing maximum emphasis on content orientation, and minimum emphasis on student orientation.

For this lecturer, the syllabus defines what should be taught; the length of the term governs the time available. Since students naturally resist school and learning, a lecturer’s primary responsibility is to make sure the materials get thought. It is important to set definite standards of classroom performance and to check continually to see that students are meeting the standards. This is accomplished by giving frequent “pop” quizzes, taking attendance at all classes, constructing some test questions from minute points contained in footnotes in the text, and so on.

Strategy 2

This lecturer, whose strategy appears at the upper left-hand corner of the diagram, also feels that student and system needs are incompatible and in conflict. Like his Strategy I colleague, he feels that students really do resist school and learning. But he disagrees that the basic need conflict can be overcome by tight classroom control. Instead, this lecturer places maximum emphasis on student orientation, and minimum emphasis on content orientation.

Students will be taught by lecturers they like so being liked is both practical and personally gratifying for this lecturer. He feels that a teacher’s primary responsibility is to be supportive and to win the friendship of his students. This is accomplished by putting on a “good show” in the classroom, ignoring attendance, allowing students to set their own course grades, inviting students to his house, and so on.
The preceding descriptions are clearly caricatures of lecturer behaviour; they are not intended to be descriptions of real people. Certainly there are as many different classroom strategies as there are teachers. The strategy descriptions exaggerate behaviour that differentiate types of lecturers not to simplify behaviour, but to make it more understandable.

**Figure 2: Models of Teaching Strategies**

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<th>Strategy 1</th>
<th>Strategy 2</th>
<th>Strategy 3</th>
<th>Strategy 4</th>
<th>Strategy 5</th>
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<tr>
<td>Students do not really want to learn, but they will respond to teachers they like. The teacher's primary responsibility is to win student's friendship so that they can be taught.</td>
<td>Students do not really want to learn, but they will respond to teachers they like. The teacher's primary responsibility is to win student's friendship so that they can be taught.</td>
<td>Students are lazy and indifferent to learning. Since a teacher is helpless to change the situation, his primary responsibility is to present the information the system requires.</td>
<td>Student and system needs are incompatible. It is of primary importance what something be taught, but student needs cannot be ignored. The teacher's first responsibility is to push students enough to get the work done, but also to do something for them to maintain classroom morale.</td>
<td>Students like all people learn and explore. A teacher's primary responsibility is to integrate student and system needs by creating a learning climate and making learning meaningful and relevant.</td>
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