

Fostering Quality Education in Nigerian Universities: The Role of Effective Instructions

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Abstract: *The fundamental changes in employment imply a rise in the demand for non-routine cognitive and interpersonal skills, university graduates are entering a world of employment that is characterised by greater uncertainty, speed, risk, complexity and interdisciplinary working. University education, and the mode of learning while at university, will need to prepare students for entry to such an environment and equip them with appropriate skills, knowledge, values and attributes to thrive in it. This paper explore the effective instruction in university for attaining quality education, specifically, it discusses quality education and what it means in university, the urgent challenges of university education in Nigeria as well as effective classroom instruction. Finally, the paper discusses some validated good teaching techniques/Strategies to achieve effective instructions for quality education considered to be effective and which were recommended through research studies that includes; Designing good instructional objectives, Active learning in class and Cooperative learning strategy. If teaching staff of universities in Nigeria can be persuaded to utilize these validated teaching strategies in their classroom interactions by providing them with the training and support they will need to implement the methods successfully. The implementation of these strategies would lead to effective instruction in Nigerian universities, guarantee fostering quality education and by extension lead to production of quality graduates at middle and higher level manpower to contribute to national development through high level relevant manpower training.*

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I. Introduction

Quality teaching in higher education matters for student learning outcomes. But fostering quality teaching presents higher education institutions with a range of challenges at a time when the higher education sector is coming under pressure from many different directions. Institutions need to ensure that the education they offer meets the expectations of students and the requirements of employers, both today and for the future. Yet higher education institutions are complex organisations where the institution-wide vision and strategy needs to be well-aligned with bottom-up practices and innovations in teaching and learning. Developing institutions as effective learning communities where excellent pedagogical practices are developed and shared also requires leadership, collaboration and ways to address tensions between innovators and those reluctant to change.

Quality Education: What it is?

Quality Education is one that is pedagogically and developmentally sound, it educates the students in becoming active and productive members of society. It is not one that is measured purely by a test score. VVOB's Defined Quality Education as:

"A good quality education is one that provides all learners with capabilities they require to become economically productive, develop sustainable livelihoods, contribute to peaceful and democratic societies and enhance individual well-being. The learning outcomes that are required vary according to context but at the end of the basic education cycle must include threshold levels of literacy and numeracy, basic scientific knowledge and life skills including awareness and prevention of disease. Capacity development to improve the quality of teachers and other education stakeholders is crucial throughout this process."

Quality education provides the outcomes needed for individuals, communities, and societies to prosper. It allows schools to align and integrate fully with their communities and access a range of services across sectors designed to support the educational development of their students.

According to Slade(2016) in the statement by ASCD and Education International "A quality education is one that focuses on the whole child the social, emotional, mental, physical, and cognitive development of each student regardless of gender, race, ethnicity, socioeconomic status, or geographic location. It prepares the child for life, not just for testing"

Quality education is supported by three key pillars: ensuring access to quality teachers; providing use of quality learning tools and professional development; and the establishment of safe and supportive quality learning environments (Slade, 2016). Quality education requires 'human and financial resources which should be available to the maximum extent possible.

Challenges of University Education

The fundamental changes in employment over the past 50 years imply a rise in the demand for non-routine cognitive and interpersonal skills and a decline in the demand for routine cognitive and craft skills, physical labour and repetitive physical tasks (OECD, 2012). Graduates are entering a world of employment that is characterised by greater uncertainty, speed, risk, complexity and interdisciplinary working.

University education, and the mode of learning whilst at university, will need to prepare students for entry to such an environment and equip them with appropriate skills, knowledge, values and attributes to thrive in it. There is a strong drive to build and create knowledge together with an understanding of working life and reformulate the concept of knowledge in learning situations. Tighter connections with working life through different academic projects provide authentic opportunities to learn both generic and professional competencies as well as to build networks and pathways for employment after graduation.

Universities across the globe are increasingly pressed to find ways of proving their worth not only in the preparation of students, but also how they are linked to business and industry. Learning rooted in working life could help institutions to interpret and respond pedagogically to the challenges of this environment, using other forms of teaching and learning patterns, like project-based learning.

Higher education can no longer be owned by a community of disciplinary connoisseurs who transmit knowledge to students. Both the complexity and uncertainty of society and the economy will require institutions to continuously adapt while upholding quality standards. In practice, institutions will have to learn how to best serve the student community. Students have become the focal point of the learning approach in many areas of the world.

At the same time, students appear to have become more sensitive to equality of treatment and demand to be provided with equal teaching and learning opportunities, to be assessed fairly and get the education they deserve for job and social inclusion. The expansion of higher education providers along with the diversification of student types put the issue of equity at the very centre of quality issues.

Effective Classroom Instructions

Effective Classroom instruction is the use of pedagogical techniques to produce learning outcomes for students. It involves several dimensions, including the effective design of curriculum and course content, a variety of learning contexts (including guided independent study, project-based learning, collaborative learning, experimentation, etc.), soliciting and using feedback, and effective assessment of learning outcomes. It also involves well-adapted learning environments and student support services. It provides maximum opportunities for all students to learn and provide the necessary learning environment and learning experiences that enable all students to learn through making meaning from experience (Westwood, 1998).

Hook (2006) reported that, recent researches reveal that, effective instruction;

- Create a supportive climate in which students feel comfortable asking questions and contributing to lessons, without embarrassment or fear of ridicule.
- Design lessons that students are actively involved in and provide frequent opportunity to provide instruction on targeted concepts and knowledge.
- Provide instruction to ensure student achievement—adjusting the difficulty of their presentation, learning tasks and assessment tasks to match level and needs.,,
- Systematically present new knowledge, concepts by linking new information, focusing on background knowledge and reviewing previously mastered skills and knowledge.,,
- Ensure that learning is significant and relevant to the needs of students.
- Provide immediate, specific and constructive feedback to students.

Effective instruction help to engage students in learning, develop critical thinking skills, and keep students on task. Traditionally, teachers were the 'holders of information' and their role was to impart this knowledge and skill to students. Due to recent development of ICT, the role of teachers has changed to developing the skills and tools to assist students in critically analysing the plethora of information available.

Effective instruction is more than just the successful transference of knowledge and skill or application around a particular topic. Effective instruction ensures that this surface approach to learning is replaced by deeper, student driven approaches to learning that analyse, develop, create and demonstrate understanding. Students need to initiate learning and maintain engagement during learning in their development as independent lifelong learners (Ramsden, 1992).

Strategies to Achieve Effective Instructions for Quality Education

A variety of validated teaching techniques/Strategies are presented in the literature, these good teaching strategies were recommended through research studies and findings (McKeachie 1999; Johnson et al. 1998; Campbell and Smith 1997). These strategies considered to be effective are using (1) Good instructional objectives (2)Active learning in class and (3) Cooperative learning strategy.

1) Write Good Instructional Objectives

Instructional objectives are statements of specific observable behaviour or actions that students should be able to perform if they have mastered the content and skills the teacher has attempted to impart (Gronlund 1991; Brent and Felder 1997). An instructional objective has one of the following stems:

- *At the end of this [course or lecture], the student should be able to.....*
- *To be successful in this course, the student should be able to.....*

Where (.....) is a phrase that begins with an action verb (e.g., *define, list, describe, calculate, draw, itemize, estimate, explain, interpret, predict.....*). The outcome of the specified action must be directly observable by the instructor: words like "know," "understand," and "learn," should be avoided. Instructional objectives are designed according to the level of thinking expected of student to acquire at the end of the lesson. These levels of thinking are group into six categories of cognitive domain levels of *Bloom's Taxonomy of Educational Objectives* (Bloom 1984). Thus:

- I. **Knowledge** (repeating verbatim): *list; state*
- II. **Comprehension** (demonstrating understanding of terms and concepts): *explain; paraphrase.*
- III. **Application** (solving problems): *calculate; solve*
- IV. **Analysis** (breaking things down into their elements, formulating theoretical explanations or mathematical or logical models for observed phenomena): *derive; simulate*
- V. **Synthesis** (creating something, combining elements in novel ways): *design; make up.*
- VI. **Evaluation** (choosing from among alternatives): *determine; select.*

The first three categories – *Knowledge, Comprehension, and Application* are lower level thinking skills, while the last three categories--*Analysis, Synthesis and Evaluation*--are often referred to as the "higher level thinking skills."

Well-designed and implemented instructional objectives can help instructors to prepare lecture and assignment schedules and facilitate construction of in-class activities, out-of-class assignments, and tests. Perhaps the greatest benefit comes when the objectives cover all of the content and skills expected to learn. The more explicitly students know what is expected of them; the more likely they will be to meet the expectations (Felder& Brent, 1999).

2) Active Learning Strategy

According to Felder and Brent (1999) "most students cannot stay focused throughout a lecture. After about 10 minutes their attention begins to drift, first for brief moments and then for longer intervals, and by the end of the lecture they are taking in very little and retaining less". A classroom research study showed that immediately after lecture students recalled 70% of the information presented in the first ten minutes and only 20% of that from the last ten minutes (McKeachie 1999).

The attention of students can be maintained throughout a class session by periodically giving them something to do. Many different activities can serve this purpose (Bonwell and Eison 1991; Brent and Felder 1992; Felder 1994a; Johnson et al. 1998; Meyers and Jones 1993), of which the most common is the small-group exercise. At some point during a class period, the instructor tells the students to get into groups of two or three and arbitrarily designates a recorder. When the groups are in place, the instructor asks a question or poses a short problem and instructs the groups to come up with a response, telling them that only the recorder is allowed to write but any team member may be called on to give the response. After a suitable period has elapsed, the instructor randomly calls on one or more students or teams to present their solutions. Calling on students rather than asking for volunteers is essential. If the students know that someone else will eventually supply the answer, many will not even bother to think about the question.

Active learning exercises may address a variety of objectives. The following are some of the example highlighted by Felder and Brent (1999):

- a) *Recalling prior material.* The students may be given one minute to list as many points as they can recall about the previous lecture or about a specific topic covered in an assigned reading.
- b) *Responding to questions.* Any questions an instructor would normally ask in class can be directed to groups. In most classes especially large ones very few students are willing to volunteer answers to questions, even if they know the answers. When the questions are directed to small groups, most students will attempt to come up with answers and the instructor will get as many responses as he or she wants.

- c) *Problem solving*. A large problem can always be broken into a series of steps, such as paraphrasing the problem statement, sketching a schematic or flow chart, predicting a solution, writing the relevant equations, solving them or outlining a solution procedure, and checking and/or interpreting the solution. When working through a problem in class, the instructor may complete some steps and ask the student groups to attempt others.
- d) *Analytical, critical, and creative thinking*. The students may be asked to list assumptions, problems, errors, or ethical dilemmas in a case study or design; explain a technical concept in jargon-free terms; find the logical flaw in an argument; predict the outcome of an experiment or explain an observed outcome in terms of course concepts; or choose from among alternative answers or designs or models or strategies and justify the choice made. The more practice and feedback the students get in the types of thinking the instructor wants them to master, the more likely they are to develop the requisite skills.

3) Cooperative Learning Strategy

Cooperative learning(CL) is instruction that involves students working in teams to accomplish an assigned task and produce a final product (e.g., a problem solution, critical analysis, laboratory report, or process or product design), under conditions that include the following elements (Johnson et al. 1998):

- i. *Positive Interdependence*. Team members are obliged to rely on one another to achieve the goal. If any team members fail to do their part, everyone on the team suffers consequences.
- ii. *Individual Accountability*. All team members are held accountable both for doing their share of the work and for understanding everything in the final product (not just the parts for which they were primarily responsible).
- iii. *Face-To-Face Promotive Interaction*. Although some of the group work may be done individually, some must be done interactively, with team members providing mutual feedback and guidance, challenging one another, and working toward consensus.
- iv. *Appropriate Use of Teamwork Skills*. Students are encouraged and helped to develop and exercise leadership, communication, conflict management, and decision-making skills.
- v. *Regular Self-Assessment of Team Functioning*: Team members set goals, periodically assess how well they are working together, and identify changes they will make to function more effectively in the future.

An extensive body of research confirms the effectiveness of cooperative learning in higher education. Relative to students taught conventionally, cooperatively-taught students tend to exhibit better grades on common tests, greater persistence through graduation, better analytical, creative, and critical thinking skills, deeper understanding of learned material, greater intrinsic motivation to learn and achieve, better relationships with peers, more positive attitudes toward subject areas, lower levels of anxiety and stress, and higher self-esteem (Johnson et al. 1998; McKeachie 1999).

II. Conclusions

The proper use of any of the instructional methods described in the preceding section improves the quality of learning that occurs in the classroom. If several of the methods are used in concert, the potential for improvement is all the greater. The quality of an institutional teaching program may therefore be improved by persuading as many faculty members as possible to use those methods in their classes and providing them with the training and support they will need to implement the methods successfully.

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