FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION

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Conference Proceedings

ON

ENHANCING QUALITY EDUCATION THROUGH INNOVATIVE PEDAGOGY

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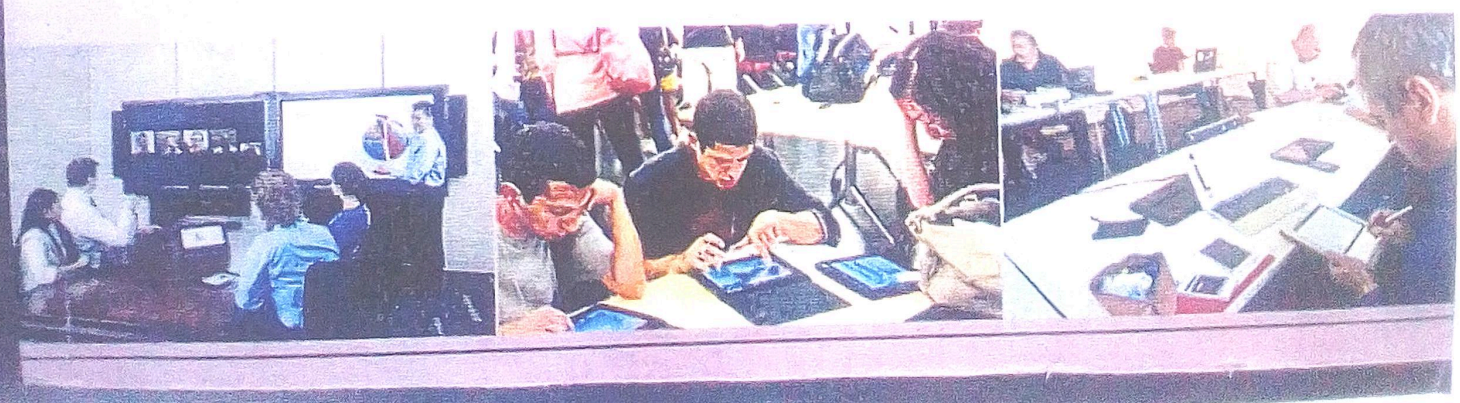

International Conference

Conference PROCEEDINGS

THEME

ENHANCING QUALITY EDUCATION THROUGH
INNOVATIVE PEDAGOGY

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION (SSTE)

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ACKNOWLEDGEMENTS

The Local Organizing Committee of the 6th International Conference of School of Science and Technology Education (SSTE), Federal University of Technology, Minna, appreciates the Management of the University for the Unalloyed Support given to the team which led to the success of this Conference. We also wish to express our profound gratitude for the assistance rendered by the University Management especially in disseminating information relating to this Conference using the University website, Campus News, and FUT Search FM.

We thank the Dean, School of Science and Technology Education (SSTE) for hosting this Conference despite the economy situation in the country. His encouragement, advice, and moral asupport gave the Local Organizing Committee the strength to complete this task and make sure the Conference is successful.

We sincerely thank the academic staff of the School and University Community for their essential roles played towards the success of the Conference. We thank the non-teaching staff for the role played which contributed to the success of this Conference.

The efforts of the Editorial Board is commendable for making sure that the Book of Proceedings was ready before the arrival of the participants. We appreciate the efforts of the Keynote presenter, Lead Paper presenter, and Workshop facilitator for attending this Conference despite their tight schedule.

Finally, we also commend the undergraduate and postgradiuate students of the School for sparing their time for participating in all the events. We thank God Almighty for the strength given to the LOC members to discharge their enormous tasks.

PREFACE

Poor quality education have serious implications on national development, security, economy and manpower of any nation. In recent years, there has been a number of significant changes in the field of education. Integration of innovative pedagogy should be seen as a means of enhancing quality education globally. Presently, students across the world are becoming digitally inclined and therefore, there is the need to become conversant with these emerging trends as it affects the teaching and learning process.

Hence, there is the need for a conference of this nature, where experts can brainstorm so that international communities can benefit from one another and also respond to contemporary innovative pedagogy in education. Innovative pedagy of this nature can enhance quality teaching and learning process. It is worthy to note that application of innovative teaching and learning techniques have a greater influence on the quality of manpower injected into the labour market which may determine the economy growth of a nation.

The theme and sub-theme of this conference "Enhancing Quality Education through Innovative Pedagogy" is based on the prevailing situation of poor quality education in developing nations. I am sure this conference has provided avenue for researchers and educators to share ideas on using innovative teaching and learning techniques that can enhance quality education in under developed and developing nations across the world. I hope the theme and sub-themes meet the needs of the stakeholders in education.
The sub-themes are:

- Social Media for Effective Teaching and Learning
- Team Teaching & Collaborative Learning Strategies for Quality Education
- Assistive Technologies for Special Education
- Project-Based Learning Strategies for Quality Education
- E-learning Platforms for Effective Teaching and Learning
- Mobile Assisted Learning for Quality Education
- Service Learning Strategy for Quality Education
- Innovative Assessment Techniques for Quality Education
- Instructional Strategies for Inclusive Education
- Instructional Techniques for Gifted Learners
- Innovative Classroom Management Practices

The Local Organizing Committee thanks the participants for their contributions to the above sub-themes.

Prof. Gambari, Amosa Isiaka
LOC Chairman/Editor

AN ADDRESS DELIVERED BY PROFESSOR ATSUMBE BERNARD NUMGWO, DEAN, SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION ON THE OCCASION OF THE SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION-6TH INTERNATIONAL CONFERENCE ON ENHANCING QUALITY EDUCATION THROUGH INNOVATIVE PEDAGOGY.

Holding from 2nd -5th Of October 2018 at the Centre for Preliminary and Extra Mural Studies (CPES) Federal University of Technology, Minna, Niger State Nigeria

The Vice-Chancellor Federal University of Technology Minna
Deputy Vice- Chancellor (Academics and Administration)
Registrar
Bursar
University Librarian
Keynote Speaker
Lead Paper Presenter
Deans and Directors
Professors
Heads of Departments
Distinguished Participants
Ladies and Gentlemen

It is with deep sense of appreciation to the Almighty God that I welcome you all, on behalf of staff and students of the School of Science and Technology Education to the sixth international conference with the Theme: Enhancing the Quality of Education through Innovative Pedagogy.

The chairman of this occasion, chief host and my hard working Vice-Chancellor and his management team, I want to specially thank you for your unalloyed support for our school. Each time I present our ideas to you as a school, your solemn quiet words **well done just continue** have constantly propelled me to do more and to believe in you. Your support and good will to our school have given us the confidence in organizing this conference annually for the 6th consecutive time at a stretch.

Mr. Chairman distinguished ladies and gentleman join me to welcome our erudite scholar an academic juggernaut and mathematician of great repute. He is our workshop facilitator and the key note speaker of this conference.

He is Professor Marc Shafer professor of Mathematics Education from Rhodes University, South Africa. We are also happy to have in our midst to do justice to the conference theme, (Lead Paper Presenter) Professor Isaac Olakanmi Abimbola, Founder and CEO, Excellent learning Technology limited.

We appreciate your interest in our conference.

The school deeply appreciate and thank our distinguished guests who have always honoured our invitation to be part of this great occasion every year.To our conference participants who have come from various Universities, Polytechnic and Colleges of Education in Nigeria and overseas we say you are welcome.

I congratulate the conference organizing committee members for a beautiful and robust planning that have brought about this large gathering of international, national and local experts in the area ICT application in teaching and learning.

Education is considered the only veritable tool for national and human development as it promote among other things economic, technology and social development. Infact it brings about peace and unity. It is clear and obvious that no human, physical and technological development can take place without quality education. This is because knowledge, skills, wealth, good health and happier relationship are all products of education.

In the words of sultan Sa'ad Abubakar III, education is light and aims at restoring the dignity of man, while ignorance is darkness and leads to poverty.

Despite the good attributes of education and what it can achieve and do for a nation, you will agree with me that the Nigerian educational system is bedeviled with uncountable number of factors that have impeded its growth. Factors such as (i) Poor infrastructural development (ii) Under funding (iii) Poor teaching personnel's (iv) Poor curriculum, poor instructional strategies among others.

As a result of the problems above, graduates of our institutions at whatever level are described as unemployable and unable to express themselves highly deficient in both theoretical knowledge and practical skills.

Mr. Chairman Sir, rather than bemoaning our problems and lamenting over factors that have brought out educational system to its present state, as educational practitioners, we have chosen one of the problems as the main theme of this conference. This is with the aim of proffering solutions:

The theme of this year's conference is " **Enhancing Quality Education Through Innovative Pedagogy**". What then is pedagogy? Pedagogy is the method and practice of teaching, especially as an academic subject or theoretical concept. Pedagogy refers more broadly to the theory and practice of education and how it influences the growth of learners. Pedagogy, taken as an academic discipline is the study of how knowledge and skills are exchanged in educational context and it considers the interactions that take place during learning.

If we agree totally with the definition above then we can safely conclude that an effective teacher must have a range of different teaching and learning tools that can be drawn upon and used in the classroom. For effective learning to take place, the teacher must not only have good subject knowledge but also effective pedagogical skills if they are to get the ideas across to the students. According to Barber and Murshed (2007), collaborated in the National Policy of Education FGN (2013), there is a strong consensus that high performance in education system is dependent on the quality of teaching (no nation can rise above the quality of her teachers)

Mr. Chairman Sir, it is against this back drop that the theme of this year's conference was drawn. "Enhancing Quality Education Through Innovative Pedagogy. Therefore, conference participants must of necessity proffer solutions to problem such mass failure in national examinations (WAEC and NECO examinations), half-baked graduates; graduates that lack knowledge and skills etc. They must also answer the following questions.

- What are the standards in pedagogy
- Effective pedagogy
- Types of pedagogy
- Pedagogical components
- Adaptively in pedagogy
- Pedagogical components
- Criteria for appropriate pedagogy
- Principles of correct pedagogy

How can we overcome these challenges that have almost overwhelmed our educational system. I believe that this conference is a suitable platform for academics, industrialist, ICT guru's, researchers and all stake holders to meet, discuss and come up with strong communiqué that will surmount the problems bedeviling our educational system.

Once more let me express my profound gratitude to the Vice-chancellor and his Management team, our invited guest, the key note speaker and lead paper presenter for finding time amidst their tight schedules to honour our invitation.

To all our participants, I wish you fruitful deliberations at the plenary and syndicate groups. Please avail your selves of the natural beauty of our two campuses and feel at home. Minna the capital of Niger State is a quiet, accommodating and a pleasant city you will love. Please explore it to the maximum. May God grant you journey mercies back home after the conference. Thank you for your attention and God bless you.

AN ADDRESS PRESENTED BY THE VICE-CHANCELLOR, PROF. ABDULLAHI BALA PhD, FSSN AT THE OPENING CEREMONY OF THE 6TH INTERNATIONAL CONFERENCE OF THE SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA ON OCTOBER, 2018.

Deputy Vice- Chancellor (Academics and Administration)
Registrar
Bursar
University Librarian
Keynote Speaker
Lead Paper Presenter
Deans and Directors
Professors
Heads of Departments
Distinguished Participants
Ladies and Gentlemen

I want to sincerely welcome everyone present here with gladness of heart on behalf of the Governing Council, Management, Staff and Students of this great institution to the 6th International Conference of the School of Science and Technology Education, Federal University of Technology, Minna. It is no doubt that this yearly organized conference has become a platform for robust academic discourse based on well researched, properly articulated and documented research efforts of individuals, groups and corporate bodies.

This annualconference has created a platform and an opportunity for both local and international community in education and research institutions to share their learning, teaching, research findings and best practices. With various academics coming together to bring their knowledge to bear on ways to enhance science and technology education, there is no doubt about the future of science and technology in Africa and in the world at large. This years' theme "Enhancing Quality Education through Innovative Pedagogy" will better enhance teaching and learning process in science and technology. Thus, this conference provides opportunities for both local and international innovative presentations to bring in thoroughly researched information that will enhance quality education to the benefit to the entire world.

It is no longer news that the educational system especially in Africa is in a state that needs urgent and serious attention. The quality of education is not what it used to be. From different quarters it has being observed that method of teaching has contributed in no small way to the problem of teaching and learning in our various institutions from the primary schools up to the higher institutions. Various stakeholders in education have long for how the situation can be better enhanced. Hence, the topic of this conference is not only timely but wisely.

To give brief background information on the theme of this conference, what is innovative pedagogy? Pedagogy to start with is the study of being a teacher or the process of education. Pedagogy as a science explores the processes by which society deliberately transmits its accumulated knowledge, skills, and values from one generation to another. The

major pedagogical question on the mind of educational stakeholders then is, how to better educate students in our various tertiary institutions? How to enhance students learning and meet the needs of various types of students? To answer the above stated questions, the followings are needed which include among others educational goals set by the student and teacher, strategies or styles of instruction, the educator's own philosophical beliefs, the student's background knowledge and experience, the curriculum, modern technological devices, monitoring and test system.

Innovative Pedagogy is therefore the study of being an innovative educator or the processes of innovative education/teaching. The key question of Innovative Pedagogy is - What are the educational, psychological, organizational factors/conditions that have a formative utmost effect on the mind, character, or physical ability of a student? I believe these questions will be answered in this conference. This is because Innovative Pedagogy as a science and practice has the responsibility to produce students that will be creative and eventually become game changers in the society.

We must understand that majority of our students in todays' world are technologically inclined. They have access to any information possible. They do not require us to "spoon-feed" them. Instead what may be more helpful is to support them as they journey through the World Wide Web in order for them identify those resources that meet their needs. This can only be achieved through Innovative Pedagogy.

This is because the ancient pedagogies which started off as a "sage on the stage" and moved on to a small set of basic teaching methods (instruction, discovery and inquiry) have been extended to become a profusion of pedagogies and their interaction with their own philosophical and pedagogical theories. Hence, education is seen as hugely dynamic and mobile. As educators in institutions of higher learning we must be ready to keep pace of these developments in education.

Also, for Nigeria to achieve her age-old goal of crossing the borderline between being a developing country and a developed country especially, quality education must be a target. As stakeholders in education, we must join hand with the government to design specific policies that create a better environment for innovative teaching.

The emphasis of this conference which is on enhancing quality education through innovative pedagogy will in no doubt add value to education because of the paramount role education plays in achieving national growth and development. In order to achieve sustainable development that meets the needs of the present without compromising the ability of future generations to meet their own needs, educational institutions need to adopt innovative teaching strategies so that the individuals graduating from our institutions can be developed to creative individuals that will add positively to the growth and development of Nigeria, Africa and the world at large.

We mustprepare our children to deal with the ever-shifting economic and political realities of our shrinking planet. To actually build citizens for the 21st century, we must continuously strive to offer instructions that would help students learn to see "through the eyes, minds

and hearts of others". We must be ready to infuse a global educational perspective into their school experiences and give them reasons to appreciate cultural diversityas well as opportunities for survival and sustenance in our inter-connected world, then we would have fulfilled the most important challenging task in education in the 21st century.

The concept of this sixth Conference of the School of Science and Technology Education is hence very commendable. The School has always set the pace for other Schools in the University who are gradually following the trend. I sincerely appreciate the untiring effort of the Dean and the Conference Organizing Committee. Please accept my best wishes for another very successful School of Science and Technology Education International Conference.

Finally, to our distinguished invited guests, resource persons and participants, you are all welcome to this great institution and to the city of Minna.

Please do have a pleasant experience as you take time out of your busy schedule to visit places of interest in the University and Minna city.

Thank you for your attention.

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A DISCOURSE ON THE INNOVATIVE ASSESSMENT TECHNIQUES FOR VALID ASSESSMENT IN EDUCATIONAL INSTITUTIONS IN NIGERIA

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Abstract
Educational assessment has been regarded as part and parcel of teaching and learning right from the time formal education came to existence. There will never be attainment of objectives and goals in education in the absence of assessment in education. This paper reviewed some innovative assessment techniques that can be used to ensure valid assessment of teaching and learning activities in the institution of learning. It also discussed efficacy of Computer-based test as an innovative technique and finally rounded-off with some examples of CATs developed by which contains techniques used in the assessment of classroom instruction. The paper concluded that if these assessment techniques are patronized and judiciously utilized by teachers, there will be improvement in the quality of teaching and learning in schools and assessment will become more valid which by extension will improve the quality of education.

Keywords: Educational Assessment, Innovative Assessment Techniques, Computer-Based Test, ICT, Validity, CATs.

Introduction

Teaching and learning can never be successful in absence of assessment. Which usually gives a hint on how far is the achievement of learning objectives, and at large, achievement of educational goals. Assessment is the bedrock of education because test scores usually derived are used to measure learners' academic strengths and weaknesses. Also societies solely depend on the students' performance to weigh the quality of their respective educational systems and level of goals' attainment (Ojerinde, 2009).

For several decades, assessment in education has been analogue or manual in nature until recently when Information and Communication Technologies (ICTs) were incorporated. The analogue system was not without some problems ranging from inefficiency, insecurity, delay in results production and so on. For example, in Nigeria, one of the most outstanding problem in educational assessment was the production of valid test scores and grades in examinations (Aworanti, 2016). But with the integration and diffusion of ICTs in education, there was evidence of positive reforms in methodologies as the traditional methods of information delivery of information has changed, thereby, offering up-to-date learning experience for both teachers and students (Ololube, Ibogu & Ossai,2007). ICT is defined as as electronic tools for storing and retrieval of information (Matthew, Danjuma Joro & Manasseh, 2015). They are powerful tools that if used correctly, are capable of expanding access to education to workplace and educational quality (assessment inclusive).

Integration of ICT in to education is the use of ICT tools such as computers, internet facilities, mobile technologies, projectors to mention but a few, in teaching and learning and research

activities in the institutions. There is rapid growth of the use of computers in learning institutions particularly in Nigeria nowadays where the trend is relatively new compared to advanced countries like United State of America, China, Japan and others. However, computer literacy is fast increasing in the country by the day.

E-assessment or Computer-Based Test are often used interchangeably to connote the use of computers and other electronic media for assessment. It is also a new development in Nigeria educational system with few examination bodies like Joint Admission and Matriculation Board (JAMB), few Universities embarking on it. The major motive of e-assessment in the country apart from crave to becoming ICT compliant nation was to curb examination malpractices which engulfed the nation for years. Some of the lapses accorded old and analogue system of assessment in educational institutions in Nigeria include delay in producing results of examinations, examination malpractices (Adegbeja, Fakomogbon & Daramola,2012), which contributed tremendously in eroding the nation's quality of education over time.

None the less, regardless, regardless of mode of assessment or testing, the most signinficant psychometric property to be protected in a test is validity. Validity is defined as the degree to which evidences and theories support the interpretation of test scores entailed by proposed use of test (AERA, APA & NCME, 1999). It was also defined as the ability of a test to measure what it is purported for (Kolawale,2010). Thus, any invalid test or assessment is nothing than harm in education and at worst, may lead to invalid decision making concerning test results.

Therefore, this calls for the need to have valid and effective assessment techniques in the institutions of learning as to work smoothly towards achieving educational objectives in the country which will result to national development.

Computer-based Test as an Innovative assessment in Nigeria

As mentioned earlier, e-assessment or computer-based testing is a new development in Nigeria which is even at the moment, undergoing gradual acceptance and implementation in the educational system. In Nigeria, the CBT as an innovation started very recently with few number Universities that were able to partially incorporate it in to their daily assessments or examinations. these includes Federal University of Technology Minna, University of Ilorin, Covenant University Ota, Nigerian Open University of Nigeria (NOUN) and the host of others. (Olawale & Shafii,2018)

Strengths of CBT as a Mode of Assessment

Computer-Based Test as an innovative mode of assessment has been accorded several potentials among which are discussed as follows:

(i) Objectivity, speed and accuracy

One of the most outstanding glory of CBT is accuracy. Computers are highly objective in operations which helps in giving accurate results and operate in a greater speed (Abioye, 2016).This enable institutions of learning and examination bodies to assess large population of test takers within short period of time as against the traditional paper examination that is time consuming and cumbersome.

(ii) Contusive Environment

Computers as electronic machines are usually kept in a conditioned environment for effectiveness and protection. Most of the computer centers have good furniture, air conditioners, light which make the environment conducive for examination. This

benefits testees as it motivates them during assessment. Recently, Statistics revealed that candidates who took part in CBT in 2014 obtained better results compared to the PPT formats (Abioye,2016)

(iii) Cost and Time saving in Large scale examination

Another advantage accorded CBT is cost saving, that is to say it enables assessment of large population of students wishing short period of time using computers which administer and score the test instantly. This eliminate the costs of manual administration, scoring and reporting and also saves time compared to traditional practices. Chua (2012) conducted a comparative study of computer and paper tests, whose results indicated that the CBT mode is more reliable in terms of internal and external validity. Also from the result, the CBT significantly reduced testing time and developed stronger self-efficacy, intrinsic and social testing motivation in the participants.

With the few facts about the advantages of CBT in educational assessment, it is evident that implementing CBT in the institutions of learning will pave way effective and quality assessment as opposed to the traditional system.

Innovative Assessment Techniques (IATs)

Another dimension worthy of giving attention as relates to valid assessment is the innovative assessment techniques. They are strategies in assessment that provide instant information about what learners understand and what they don't (Lee, 2008). One of the unique features of these techniques is that they motivate learners to most especially if consistently integrated in to teaching and learning processes. Though IATs are no used for grading, rather they provide chances for improving learning.

Some of these techniques as analyzed by Lee (2008) are discussed as follows:

(i) **Analysis of Learners Work**: - In this technique, learners are given tasks like assignments, home works, tests, quizzes as usual, after the submission, teachers carefully go through the responses to identify learners' current knowledge, skills and attitudes concerning the subject matter. They also identify strengths and weaknesses of the learners so that proactive measures could be taken. Thus, the issue in this technique is not to allocate grades as it is in the current continues assessment practice, but it also demands seriousness from the teachers as to patiently gather information about learners in the class.

(ii) **3-way Summaries**: - this another astonishing IAT, it involves learners using different modes of attention and thinking, working in a group or isolation. the teacher ask question and instruct the learner to write three different summaries of their responses, for example 10-15, 30-50 and 75-100 words length of summaries at a time. This enriches the learners with abilities or experiences to communicate ideas in minimal wordings.

(iii) **Think-Pair-Share**: - In this technique, teacher asks the learners individually. After coming up with their responses, they are instructed stay in pairs and exchange ideas contained in their responses, and eventually, the teacher circum-navigate the pairs and listens to their discussions. Finally, the teacher shares responses of the pairs to the class. This allows learners to have deep in-sight of subject matters. it also improves learners' self-esteem, self-concept and problem solving skills most especially by the time they heard their views being shared to the entire class.

(iv) **Classroom Polls**: - This has to do with allowing learners to cast their ideas or opinions on certain issues or topics in the class unanimously. This enables learners characterized

to be introverts to express their opinions easily as they find it difficult to speak out. In this method, devices like mobile phones can be used in the class to gather learners' opinions at a time which can be sent to the teachers' phone directly which is speedy and confidential. Much will be gotten from learners using this technique.

(v) **3-2-1 Countdown**: - A very good technique which implies that whenever a learner gains knowledge of something relevant, they tend to utilize it immediately. Thus, teacher gives out some cards demanding information about three things, which are (i) 3- things you didn't know before (ii) 2-things that surprises you about a topic and (iii) 1-thing that you want to start doing with what was learned. This help boosts comprehension and synthetic abilities in learners.

(vi) **strategic Questioning**: - Questioning method is one of the basic learning strategy advocated by an old philosopher, "Socrates". It can be applied to individuals or groups. It involves asking learners higher-order questions to appraise their level of understanding issues or concepts. For example, words like how? Why? Are being used to stimulate in-depth thought among learners which enhances their creative and logical thinking abilities.

(vii) **Around robin charts**: - It is another yielding technique, and it involves grouping learners in to four or five as a group. Each group is given a chart and a marker, and the throws an open-ended (free response) question to the class and expect responses using charts. The chart are later circulated among learners for discussions, and finally the teacher generally discusses the submissions of the groups.

All these centrally concentrate on learners, and they give much information on how and what they learned. Our discussion will now move to the dimension of teachers themselves, in order words, assessment of teaching or instruction.

Assessment of Teaching in the Classroom

Apart from knowing the level of understanding amongst learners, there is also every need to check or assess the quality of instruction may it in the classroom, laboratory, lecture hall or any learning environment. To achieve this, some classroom assessment techniques could also be adopted such as Classroom Assessment Techniques (CATs) developed by Cross and Angelo, (1993) as cited in Faculty Innovation Centre (2018). CATs consists of activities to provide feedback in the course of instruction which will enable teachers assess the quality of teaching generally by pin-pointing strengths and weaknesses instantly for modification and improvement.

CATs has several advantages for both teachers and students. To the teachers, among others it provides frequent feedback that can be reacted to immediately, provides information of what students learn and showcase areas of misconceptions. On the other hand, it hints the students on what they understand and what they do not, help increase their ability to think critically and above all, foster attitudes that value understanding and long-term retention of learned materials.

Examples of CATS

There are several types of CATs which can be used for assessment of the classroom instruction. In this paper, we discussed only three simple ones that can yield good results in the assessment as follows: -

(a) **Written Reflection**: - This is an assessment technique that sometimes referred to as "Minute Papers" or "Muddiest Point". It involves asking some logical questions to the

learners which response will provide true reflection of what they learned, the questions are: -

i. What are the most important thing you learned today?
ii. What important question remained unanswered?
iii. What was the muddiest point in .....?

After the collation of the responses, it will guide the teacher on the level of understanding of the learners and as well the technique will enhance learners ability to reflect on the major facts of subject matters.

(b) **Start-Stop-Continue**: - This is also another revealing and promising technique of assessment. In the technique, teacher asks learners some questions a teaching is going on that will instantly improve quality of teaching. The questions are:-

i. List one or two things that I, the instructor(teacher) am currently doing that are not working (things that I should STOP doing)
ii. List one or two things that I am currently doing that I should CONTINUE)
iii. List one or two things that I am not currently doing that will be beneficial to me to START doing.

After the assessment, teacher will be guided on his or her strengths and weaknesses as regards teaching and better ways to improve. Consequently, quality of teaching will be enhanced with time provided the technique is practiced by the teachers.

(c) **Suggestion Box**: - This can inform of small wooden, plastic or steel box that can be placed in classes or halls during instruction or be hanged in front of staffrooms or offices after instruction. Teacher asks the students to drop any suggestions, observations, queries and dissatisfaction as regards teaching so that steps can be taken for improvement. This is done unanimously to avoid any threat to students, and the teacher is expected to whole-heartedly accept all observations. This will go a long way to improve the expertise of teachers and solve several problems of teaching and learning, and above all enhance the quality.

Conclusion

Innovation is crucial in every aspect of life as the world is dynamic in nature. It is apparent from this discourse that if techniques of assessment mentioned can be utilized in teaching and learning at all levels of education a lot of problems of poor teaching and performance will solved. In a broader perspective, quality will be enhanced in educational assessment not only in Nigeria but the world entirely.

Recommendations

from the contents so far highlighted, we recommend that:-

- Teachers should implement the formative assessment techniques interchangeably in teaching as to benefit from their potentials
- CBT or e-Assessment should be given much attention to curb examination malpractices and to improve quality and validity of assessments in the institutions of learning.
- To improve quality of teaching, CATs should be adopted by instructors in classroom instruction

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