

**MANAGERS OF SMART CLASSROOMS FOR THE
DIGITALIZATION OF EDUCATION IN NIGERIA**

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Preamble

Success of any organization to a very large extent depends on the quality of its management. This is true even with the classroom management. Teachers are classroom managers and they are central to the learning process. They play a critical role in improving learning outcomes. Thus, beyond any other school based factor, teacher effectiveness and competency have been found to be the most important predictor of students learning.

Some months ago, Ajayi (2018) reported of the Federal Government's moves to establish a digital education institute and provide smart learning classrooms across the country as a way of boosting its investment in the Information and Communications Technology. A mind boggling thought by some educators was who will be the managers of such classrooms? What infrastructures are there on ground? Is government now ready to be realistic?

The theme for this first international conference is therefore very apt in time and relevance. I appreciate the conveners for the bold step to discuss this issue.

Introduction

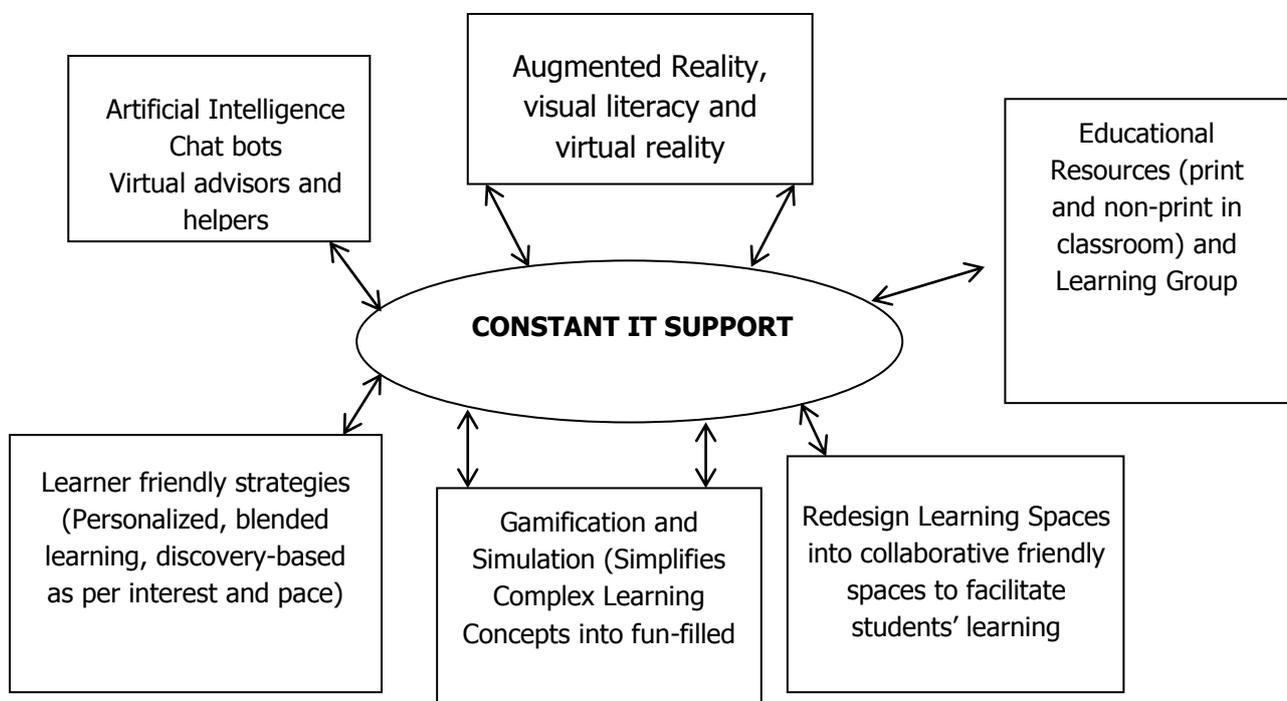
Two sets of concepts stand out in this topic begging for in-depth explanation. These are 'Smart Classroom' and 'Digitalization of Education'.

Smart Classroom simply refers to a learning environment that is technologically enhanced. It is a teaching and learning environment designed with learning groups, tablets and interactive white boards around. In a typical smart classroom, students form themselves in a shared learning space to construct, manipulate, view video programmes, discuss, do presentations on topical issues and engage with various other learning resources while working in groups. The learning environment thus becomes immersive as learning takes place all around the shared space. All interactive surfaces become shared perceptual space where all learners discuss meaning of concepts, search for their clarity and arrive at a collective understanding.

In such learning environment, knowledge opportunities must be provided for knowledge to be constructed in a deeper way.

The infrastructural design of such learning environment should permit the use of personal devices in a complementary capacity. A smart class has digital display boards and projectors that are fully synchronized such that a teacher or learning group could easily carry out demonstration with a display of some practical solutions from the web, precisely from the virtual classroom.

Digitalization of Education refers to an enhanced use of computer (intranet and internet) software applications and any digital technology for teaching across all levels of education system. It is a progressive plan to completely digitalize educational pursuits through the use of Artificial Intelligence and Virtual Reality to teach students. Where education is fully digitalized, students learn at their speeds both within and outside the classroom with teachers monitoring and directing as necessary.



DIGITALIZED TRANSFORMATION TRENDS IN EDUCATION (Adapted from Newman, 2017)

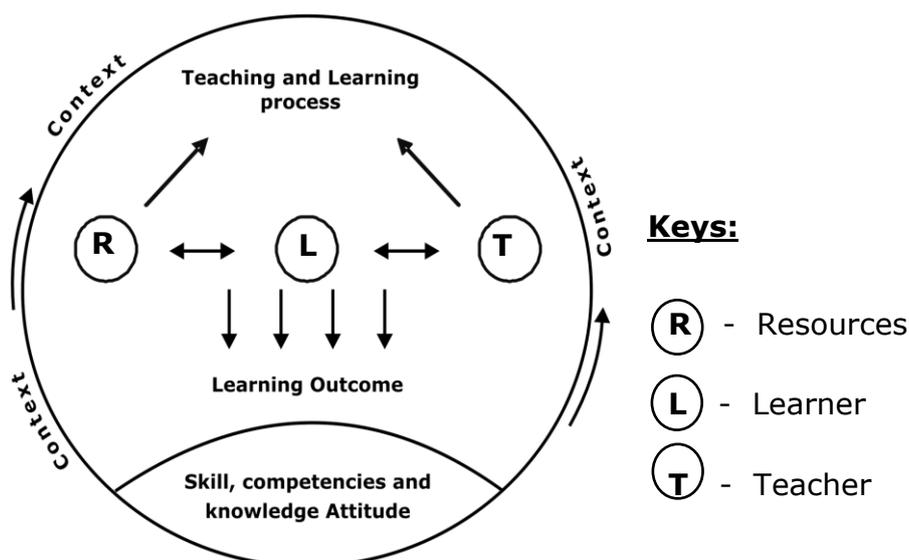
The two concepts are therefore like Siamese twins. Digitalization in education will produce smart classroom environment, and competent use of smart classroom is digitalization of education.

Teachers As Managers

In conventional classroom, the process of ensuring that lesson run smoothly without any disruptive behaviour from the students and that learning is maximized is considered as class management. As managers, therefore;

- Teachers are expected to take care of noisy students who can distract others from the class activities;
- Use appropriate instructional strategies to gain students' attention and sustain same;
- Provide clear expectations as outlined from the lesson learning objectives;
- Ensure effective management of the class time while organizing learning opportunities;
- Make changes in the seating arrangement as necessary;
- Provide positive work environment while being firm in class discipline.

A Typical Social Interaction In A Teaching – Learning Event



Thus, in organized teaching and learning event, there is a purposeful interaction to cause a change in the behaviour of the learners.

Managing a Smart Classroom

Managing a smart classroom takes more than that of a conventional class. The teacher is expected to manage both offline and online learning environments at the same time and still facilitate learning. Students have to be engaged to stay interested without which the learning will not take place. The smart class environment allows for life interaction between the teacher and the learners. The environment should therefore be one where the students feel safe and free to participate. They should be motivated to participate in the discussion and activities that ensue thereby boosting their confidence.

How Competent Are Today's Teachers For The Smart Classroom Of The 21st Century?

It is a great responsibility to be a teacher and there is a lot of expectation from him/her. To the public, a teacher is an individual who plays the most vital role in the development of any human being. The parents expect the best from their wards and from the teacher even if they failed as parents. To the students, an effective teacher should be one who:

- encourages them even when they seem weak, disorganized and unmotivated;
- loves teaching and uses a variety of instructional strategies;
- has a deep knowledge and passion for the subject at hand;
- considers himself/herself as the learners' parents, listens patiently to their needs and makes efforts to help even if unsuccessful;
- respects student and does not humiliate them before their peers;
- does not exact or extort from them;
- is skilled in current technological trends; and
- is a model in great moral values and punctuality.

(Ekpo, 2010).

It is the training exposures and professional development of the teachers that could equip them to meet these myriads of expectations.

ISSUES TO BE CONSIDERED IN THE DIGITALIZATION OF EDUCATION IN NIGERIA

- **Initial Teacher Recruitment**

The making of a teacher should start from recruitment. It is at the point of recruitment that most professions like medical practice, engineering, law etc. strive to maintain desired standards and consider the issue of staff motivation.

Finland with the best education system in the world meticulously recruits her teaching force. Well-motivated student teachers with high academic qualifications are recruited. Unfortunately in Nigeria, there is no regularized mode of admission which may give the Initial Teacher Training Institutions opportunities to look into the kinds of quality desired at recruitment point. In the past, prospective student- teachers were selected through close association with senior experienced teachers, such would be teachers were able to show evidence of commitment, intelligence, empathy, patience, courage etc. Presently, Joint Admission and Matriculation Board (JAMB) routinely admits and send student-teachers to ITT institutions. The national selection procedures actually did encourage the woolly admission pattern for Teacher Education Programme (TEP) because as a prerequisite to the launching of the Universal primary Education (UPE) Scheme in 1076, a crash teacher programme was introduced. What quality of teachers did the nation really expect when the candidates who failed West African School Certificate Examination were recruited into the Grade II teacher training programme? The pattern goes on till date.

- **Deficiencies In Teacher Education Programmes**

Teacher education curriculum which aims at producing competent teachers is much criticized because of increased expectations. Critics are of the opinion that the curriculum does not adequately equip the student teachers with skills for self-evaluation, leadership, communication, problem solving, computer application, research and individualized learning techniques. In effect, the Initial Teacher Training (ITT) curriculum appears not to meet the needs of the 21st century teachers in the field. These teachers are not equipped for new

challenges and new roles that are apparent in a dynamic world of the 21st century. On this, McKenzie (2001) observed that,

When it comes to teachers, learning and valuing the effective use of new technologies, some schools are discovering that the kind of training programmes offered in the past may not represent the most generative method of reaching a full range of teachers and their students.

The use of generative term here means that behavioural outcome and daily practice will only be changed for the better as a consequence of the professional development experience. For such reasons teacher preparation should not be a one-shot training exposure.

Professionally, the pre-service teachers are inadequately developed. The student teachers do not have enough exposure during teaching practice to make them competent teachers on graduation. Some ITT institutions lack micro teaching laboratories for sustained practice. The Faculties and Institutes of Education cannot effect appreciable changes on Teacher Education Programme (TEP) for specific reasons. This is because student teachers take courses from other faculties where the curricular contents were designed for their students. Well-designed tutorial sessions with emphasis on teaching and teachers' needs would bridge that training gap; again, this is not provided. Also in the cooperating schools where the pre-service teachers have their practical experience, the system often operates a different time schedule from the training institutions thereby reducing the actual training time. These and the incessant closure of Universities and Colleges of Education in the country further put restrictions on the actual length of time the student teachers have for teaching practice. These training gaps should have been taken care of by systematic CPD programmes, again these are sporadically planned.

- **Wangling Policy**

The Vice President, Professor Osibanjo rightly observed that e-learning is one way Nigeria can resolve the educational challenges facing the nation. He unfolded the Federal Government's commitment to digital training of teachers. Meanwhile, before the training commences, the smart classroom project has been launched. The 6-3-3-4 programme was similarly handled. Before teachers were trained or workshop built, Technical equipment were acquired and distributed to schools.

- **Resources Component**

Dearth of media resources for use in conventional classroom setting has consistently been reported in the literature. Ayu, 1994; Kolo, 2005; Hardly does one find any public primary, secondary or tertiary education institutions with minimum media requirement of graphics, white board and a slide projector in all the classrooms. In a smart classroom, learning is resource-based; students must have access to rich collection of didactic resources as well as opportunity to access on-line resources to blend their learning experiences.

- **Poor Infrastructure** has been one major barrier to educational development in the nation. It is obvious that the use of technology to enhance access to quality and affordability to education is feasible. Technology like desktop or laptop computers, camera and interactive white boards are hardly found in public schools.

- **Power Supply:** One of the greatest challenges to the adoption of smart classroom for Nigerian learning environment is the issue of epileptic electricity supply which apart from inconveniences can also damage ICT equipment with frequent power surges. With all the rural electrification projects undertaken in Nigeria, it is difficult to ascertain what percentage of the nation is connected

to the national grid. The option of utilizing solar energy could be a welcome alternative but is there a government's willpower to such commitment?

- **Lack of Records and Valid Data:** The issue of proper and valid data on education sector is another inhibiting factor to the effective digitalization in education. An ideal smart class size accommodates twenty (20) to thirty (30) students at a time (5 or 6 per group). Presently, we have as many as 100 pupils in primary school classrooms, 50 – 60 in secondary schools and as many as 400 in tertiary institutions. What is the students' and teachers' population in Nigeria?

The Minister of State for Education, Professor Anthony Anwukch (2018), disclosed government's intention to stop engaging all unqualified and quack teachers both in public and private schools across the country by December, 2019.

To the professional teachers and the general public, this would be a right step in the right direction and the starting point to make teaching a desired profession. The questions most parents and the general public would want answered are:

- What is the actual student population in formal school system?
- How many professionally trained and certified teachers are available?
- How many have the competency for employment in the 21st century classroom?
- Will the number of qualified teachers enhance the approved ratio of an ideal smart classroom of 20 – 30 students?

It is believed that by voicing that "all the necessary measures are now in place to stop the usage of unqualified teachers, the Minister has the data handy to enforce the policy when implemented, (trcn.goo.ng/p-1280, assessed Monday, November 11, 2019).

- **Teachers' Welfare:** It will definitely take a well-motivated teacher to facilitate learning in a smart classroom. Some teachers have viewed the digitalization as a plan to disengage them. They are suspicious about accepting the technology. Management of a smart classroom will require intelligent teachers with a good sense of judgment and initiative. Teachers have to be trained and re-trained on the use of various learner friendly instructional strategies used in the smart classroom. Teachers' morale must also be raised by government. Salaries and allowances should be paid as when due.

Conclusion

Gone are the days when teachers were regarded as custodians of knowledge. Today learning can take place with or without them. Rapid development in science and technology has caused a paradigm shift in pedagogy and resource provisions in schools. Globalization and digitalization cannot be held back. Teachers should therefore be trained and retrained to meet the 21st century challenges. Teachers are very relevant even in the era of digitalization of education. The Institution of teachers remains sacrosanct pillar of the education system. Teachers do not only inspire the learners, they create the human interface that prompts students to exploit the digital resources gainfully.

Smart classrooms require intelligent, highly motivated facilitators not incapacitated individuals. Digital age cannot replace the human teachers, who are trained to manage the social, moral and emotional development of the learners as they interact with technology. Chatbots will not replace trained and competent facilitators of learning but they will replace untrained teachers who constitute themselves into NOISE. What every stakeholder should look forward to is to see a responsive government with will power to provide the needed technology and training for 21st century classroom managers.

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