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*Review*

# Shifting Paradigm in our Educational Assessment

**Osuji USA**

School of Education, National Open University of Nigeria, Victoria Island, Lagos
Osujiojiugwo2006@yahoo.com

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**The quest for paradigm shift in our educational assessment has become obvious. This is because the huge technological developments in the world today have become new tools that will enable us to use data generated from the new assessment procedures and indeed the new educational system of the future to continuously improve the society. For the future of our education and assessment we need to throw away all theories and processes which through research have been found to be flawed or wrong. There are assessment procedures that need to be changed for more effective and better academic achievement of our students. Digitalization should be embraced in our educational assessment to change as modern societies are changing. This paper takes a look at the concept of paradigm shift, comparing the current and new paradigms, the vision of the new paradigm in educational assessment, technological support and paradigm shift and the need for paradigm shift in assessment.**

**Keywords:** Paradigm, Shift, Education, Assessment, Technology.

## INTRODUCTION

The challenges we have to face in our education and assessment currently, have become so much that we need to push towards having a brighter future for our educational assessment. This calls for a concerted effort to position new paradigms or new agenda which can be a logical extension of what we have known to work as far as the development of a “whole” individual and his intellectual competence is concerned. The school system needs to provide logical alternatives to the current educational assessment procedures. These alternatives should be such that can better position our educational assessment for the future. It requires tangible alternatives that can present assessment systems that will be able to engage and produce more responsive students. According to Resnick and Larry (2010), advances in educational research, statistics, technology, design and policy have prepared the education system for breakthroughs in standards, curriculum, assessment and the relationships among them. Today, we have the knowledge and the technological tools needed to keep ambitious teaching and learning at the centre of the system as we sustain our commitment to the new paradigm shift in our educational assessment. This was not previously possible in our society. The huge technological developments in the world today have become new tools that will enable us to use data generated from the new assessment procedures and indeed the new educational system of the future to continuously improve the society. These should be tuned to the needs of every student in our education system. It should produce an aligned system of standards, assessments and curriculum. According to the Gordon Commission (2012), over the past two decades we have been tying to build a standard based assessment system as a foundation for a more equitable and higher achieving education system. But in practice, we have created a test- based assessment system that does not reflect the standards we aimed for at the beginning of the 1990s, much less today’s fewer, clearer and higher common core standards. This is why Anagnostopoulos (2003) and koretze and Hamilton (2006) reported that several studies, using several different methodologies, have

shown that the assessment tests used in our educational system do not measure up to expectation. They do not measure the higher order thinking, problem- solving and creativity needed for students to succeed in the 21st century. These tests, according to McNeill (2002), with only few exceptions, systematically over represent basic skills and knowledge and omit the complex knowledge and reasoning we are seeking for our higher education and career readiness. Most of the teacher- made assessment tests show a misrepresentation of standards. This indeed has negative effect on teaching and learning. This is evident from the performance of secondary school students in the examinations conducted by such examination bodies like the West African Examination Council (WAEC) and the National Examination Council (NECO) in recent years. The ends of term examination results given to students carry some consequences. This is because many teachers try to raise test scores, in some cases, the only way they know. Teachers provide practice on exercises that substantially match the formats and content of examination questions. This type of exercise often departs substantially from best instructional practices (the Gordon Commission 2012). The continuous assessment tests carried out in most secondary schools largely mirror the end of term or end of year examinations. They do not model the kinds of performance intended by the educational standards. This is because the continuous tests count in the final assessment of the students. Again teachers are afraid that without such practices, students will not do well enough to meet adequate yearly progress requirement. Every year the examination bodies send reports to schools indicating which items students hard difficulties in answering. This is good. But unless the process is guided by a fundamental understanding of the type of teaching and assessment which help the students acquire robust competence, it would not be surprising that the most frequent response to low test scores is to practice the test. Although this is not intentional, yet it creates a binding force which as it tightens, it drives attention away from the intended standards (Anagnostopoulos, 2006). The current approach to raising achievement and increasing equity in the education system is having an opposite effect from the intended. It is subjecting the students to basic skills teaching programmes which give them a little chance of acquiring the deeper knowledge and abilities sought for in the new dispensation. As schools and educational institutions turn their energies towards the test based basic skills programmes, they lower learning opportunities and standards. There should therefore be a paradigm shift in the educational assessment. The educational assessment in the new agenda or for the future should be driven by the technological developments in the society. The rest of the paper looks at the concept of paradigm shift, comparism of the current and new paradigm, the vision of the new paradigm, technological support for the new paradigm and the need for a shift in paradigm.

**The Concept of Paradigm Shift**

The term paradigm shift, according to Karen (2014) applies to throwing out theories that can no longer stand because research has shown them to be flawed or wrong. For instance, in the Sciences we had believed for a very long time and had held on to the idea that the atom was the smallest indivisible particle of an element. This is because that was all we could with the technological tools available as at that time. Today, new technologies and Science have come out to prove that theory to be wrong. This has created a paradigm shift in the world view for every one of us. In the education system we have known for years that there are better and more effective ways of educating and assessing our children than the current school model. There are assessment procedures that need to be changed for more effective and better academic achievement of our students. It has taken a long time for institutions and examination bodies to change from status quo, even when everybody can see that there is a need to do so. The development of emerging technologies such as personal computers and the internet is playing influential roles in the current quest for paradigm shift in our educational assessment. This also includes brain research which started this paradigm shift for so many years ago.

**Comparism of the Current and New paradigm**

According to Karen (2014), research has clearly shown that for years, many of the practices that are held tightly by traditional education and assessment are flawed and even harmful to continue. It is clear that man has the ability to do brain scans and collect data on how the brain learns. It is also clear that we know more about how memory works and how people process information than any other time in the history of educational assessment. Yet most people have continued to make do with traditional education and assessment models as if it has continued to be the right way. Let us look at the characteristics of the new educational and assessment paradigm in order to compare them with the old so as to make up our minds.

According to Ferguson (2013) in Karen (2014), the larger paradigm looks at the nature of learning rather than methods of instruction. Learning after all is not only about schools, teachers, literacy, mathematics, grades or achievement. It is the process by which we have moved every step of the way since we first breathed, a transformation that occurs in the brain. Whenever new information is integrated, whenever a new skill is mastered, learning is kindled in the mind of the individual.

| S/N | OLD PARADIGM | NEW PARADIGM |
|---|---|---|
| 1 | Emphasis is on content, acquiring a body of right information, | Emphasis is on learning how to learn, how to ask questions, pay attention to the right things, be open to and evaluate new concepts, have access to new information. Context is very important. |
| 2 | Learning is a product, a destination. | Learning is a process, a journey. |
| 3 | Relatively rigid structure, prescribed curriculum. | Relatively flexible structure, believes that there different ways to teach given subjects. |
| 4 | Lock step progress, emphasis on the appropriate ages for certain activities- age segregation. | Flexibility and integration of age groupings, individuals not automatically limited to certain subjects. |
| 5 | Priority is on performance. | Priority is on self- image as the generation of performance. |
| 6 | Guessing and divergent thinking discouraged. | Guessing and divergent thinking encouraged as part of creative process. |
| 7 | Emphasis on analytical linear left brain thinking. | Strives for whole brain- education. |
| 8 | Labeling contributes to self- fulfilling prophesy | Labeling used only in minor prescription role and not as a fixed evaluation. |
| 9 | Concern is with the norms. | Concern is with the individual performance in terms of his potentials. |
| 10 | Primary reliance on theoretical abstract knowledge. | Theoretical and abstract knowledge heavily complemented by experiment and experience. |
| 11 | Everyone is taught the same thing at the same time by age. Emphasis is on teaching. | Every one learns when they are ready developmentally. Emphasis is on meaningful learning. |
| 12 | Classrooms designed for efficiency and convenience. | Concern for the environment of learning- lighting, colours, physical comfort, needs for privacy and interaction, quiet and exuberant activities. |
| 13 | Education seen as a social necessity for a certain time to train for a specific role. | Education seen as life- long process. one only tangentially related to schools. |
| 14 | Increasing reliance on technology. | Human relationships, teachers and learners are of primary importance. Appropriate technology. |
| 15 | Teachers impact knowledge, one way street. | Teachers are learners too, learning from the students. |
| 16 | The old assumptions generate questions about how to achieve norms, obedience and correct answers. | The new assumptions lead to questions about how to motivate for lifelong learning, how to strengthen self discipline, how to awaken curiosity and how to encourage creative risk. |
| 17 | Child is passive. | Child is thinking, self- propelling, well adjusted individual. |
| 18 | Grades as the rewards/ consequences | Learning as the reward, grades are secondary. |

Anything else is mere schooling.

The new paradigm is all about looking at mentoring, educating, teaching and assessment as the process of leading the learner back to himself. It is not about whom we want him to be, but to whom he is. He learns more to become more. Therefore, as parents and teachers, we should develop the child to be whom he is and not try to make him who we want him to be.

**The Vision of the New Paradigm in Assessment**

In the new paradigm, the vision of educational assessment is to produce and support students through learning to become, according to Cheng(2000), contextualized multiple intelligence citizens who will be engaged in life- long learning and will creatively contribute to the building up of multiple intelligence society and a multiple intelligence global village. This is the antidote to the traditional aim of educational assessment which is to equip students with the necessary skills and knowledge to survive in a local community or to support the development of a society particularly in the economic and industrial aspects. Educational assessment in the new paradigm is geared towards subjecting students to active learning strategies which are based on the theories of active learning such as constructivism, inquiry and meaningful reception among others. When the teaching and assessment are based on these strategies and theories, the result will be effective teaching strategies that promote effective learning. It is based on this fact that we are thinking about the future of assessment in education and to consider the best estimates of what education can become. Based on this too, we look forward to what may be required of the educational assessment enterprise in the nearest future.

We are therefore considering a variety of anticipated and emerging changes in the new paradigms in which the goals and processes of education are changing continuously. According to Koren(2014), we see a shift from thinking about education as concerned with "filling buckets to lighting fires". In other words the goal of education should increasingly reflect the growing concern for encouraging and enabling students to learn how to learn and to learn to continue learning. They should be encouraged to become enquiring persons who do not only use knowledge but who produce and interpret knowledge. It is hoped that this will change the pedagogical challenges concerned with imparting factual knowledge and be more concerned with turning learners on to learning and the use of their mental abilities. To this effect, the emphasis on the three Rs of 'Reading, wRiting and aRithmetic" as the essential skills in education is gradually being replaced and increasingly pointing to varying combinations of the "Cs" as the essential processes in education. It means that the Cs, which is Creativity, Conceptualization, Collaboration, Communication and Computation, are replacing the Rs as the modern ends towards which education is directed. This involves learning how to think, reason, interpret, access and create knowledge that will be more and more privileged in the nearest future.

The future of our educational assessment places high value or premium on communication as reading and speaking, but also as listening, collaborating and processing information from multiple perspectives. People who are regarded as illiterates in the society are going to be those people who can not navigate the world of digital technology. This is because the computer literacy of this time requires far more than word processing, social networking and playing electronic games. It means that digitalization is going to change the modern societies more rapidly and radically than did industrialization. This implies that in this process education and assessment will also change. Although assessment of the learning outcomes in the interest of decision making has been with us for a long time now, yet the future is likely to bring increased concern for assessment as the purpose of informing and improving learning and the teaching processes that enable learning.

According to Resnick and Resnick(2013), it is a known fact that political pressures have continued to permit the inappropriate use of educational assessment data for decision making purposes. Such practices are not supported by empirical evidence. Therefore, such practices are actually counterproductive for the intended purposes. It is also known that what we do in education is not precise, that one model does not fit all and that much of our intervention is under- analyzed trial and error. It is believed that assessment in education can and should inform and improve the teaching and learning processes and out comes without ignoring the importance of decision making and accountability.

**Technological Support and Paradigm Shift**

In order to prepare our students with the skills they need so as to compete in the global economy, they need to be enabled to navigate the hyper- connected world as digital citizens, thereby creating interactive, individualized learning experiences. The students need to be engaged in authentic learning that develops the future skills like critical thinking, creativity, communication, collaboration, conceptualization and computation. It is only the power of education and technology that can make this happen. If technologies are wisely and thoughtfully used and implemented, they can radically transform the learning experiences and provide opportunities for the future of learning and assessment. Technology is a wonderful thing to have. It brings creativity to teaching, learning and assessment. This is because creativity is no longer an elective. It is the future of our education and assessment. It can change the world. Creative thinking ic critical for problem- solving. With the challenges which the world is facing today in the global economy, in the environment, the climate change, and in the social life and issues, the need for creative ideas has become greatly imperative. This is why the belief is that creativity must be a priority in education and assessment. Teachers should help the students develop creativity and digital skills to enable them make increased impact in the society. The students of this should be multi-functional to make a difference in the world. They want to do it their own way, using the tools of the connected world. Therefore as teachers, we need to provide an engaging learning environment which support learning on any device, anytime and from anywhere. The role of the teacher here is to provide the enabling situation to help them acquire creative thinking, collaboration and the development of digital skills. The school system should be provided with technology platform which, according to Koretz and Hamilton (2006), makes it easy for schools and teachers to manage the assessment process, and which puts at the teacher's finger tips the insights and actions that should follow from assessment data.

**Need for Paradigm Shift**

Educational assessment should remain at the heart of national policy. We need and educational system that is geared towards equity, quality and national prosperity. The educational system should be able to stretch the educators, administrators and the communities to work towards high achievement. Therefore, there should be new forms of assessment which is functioning in new ways within the new system to meet the needs. In the recent past and in some instances these days, teachers are charged to prepare their students for examinations. These examinations are worth studying for. But we need an educational assessment system that reflects the

substantive cognitive demands, while maintaining a standard of psychometric rigour necessary to support comparability, quality and equity agenda. According to Resnick and Resnick(2013), we need a paradigm shift in which the educational assessment system that:-

- Models the kinds of instruction that are valued so that preparing students for assessment works for, rather than against, high cognitive demand instruction;
- Situates examinations within the stream of on-going instruction so that assessments support teaching rather than distract it;
- Ensures content and instructional validity of all assessments so that the alignment problems that have plagued the testing systems can be resolved;
- Provides reliable and valid accountability measures for student, school and educator performance;
- Includes diagnostic tools for instruction to meet individual student's needs; and
- Leverages advanced data collection and computational resources to mass personalize the formative assessment, improving their precision and usefulness.

The new paradigm in educational assessment should be educative enough for those who use it. It should not just tell us how well students, teachers and schools are performing, but also teach the teachers how to teach, teach the students how to learn and teach educational organizations how to develop teaching expertise. It is a technology based platform that can make it possible for the deployment and management of all the elements necessary for a high scale cost effective way while minimizing additional burdens for teachers, students and administrators. This technology or online platform is much more than a system for administering, scoring and reporting on assessments. According to Engel (2010), it can surround what of assessment outcomes with useful representations of so what? (Professional development), and new what? (more targeted instructional resources), so that every one focuses on the consequential and instructional validity of assessment and not just the accountability pressure.

## CONCLUSION

Many people have come to express their concern and desires for paradigm shift in the educational assessment system. This is because the educational system is stifling creativity. Therefore a transformative change is needed. Creativity and creative thinking are some of the elements that will fuel the future economies. It means that the education and assessment system should be able to prepare the students along these lines and to encourage them to become innovative thinkers of tomorrow. We should be able to avoid having an educational system that is too reliant on testing. Teachers should not be so restricted from straying outside the curriculum in order to accommodate some degree of flexibility, innovation and creativity. The curriculum should be organized and integrated to be technologically based in order to enable students acquire the digital skills that will make them creative, innovative and computative. The tools, resources and training should be provided to enable the teachers teach creativity more effectively.

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