

EDUCATIONAL PSYCHOLOGY IN THE 21ST CENTURY: CHALLENGES FOR NIGERIA DEVELOPMENT

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Abstract

Nigeria is in a critical time in the field of educational psychology. As our educational system in the country continues to depreciate, the educational psychologists need to engage in some specific types of program so that teaching and learning can truly impact policy and practice. What is clear is that the work of 21st century educational psychologists has shaped the face of education by achieving a level of mastery in identifying and labeling problems. However, identifying and labeling problems is only the first step in any problem solving strategy. This paper looks at what educational psychology in the 21st century should target. Some specific challenges for the educational psychology family in Nigeria were offered, and suggested among others that student teachers should be well groomed in all aspects of educational psychology which equip them with psychological theories and principles for effective management of learning environments.

Keywords: Educational Psychology, 21st Century Challenges, Development.

Introduction

Psychology is the science of human behavior and mental processes. Everything we do in life is related to psychology. Psychology is basically the study of who we are, why we are the way we are and also what we can become. There are numbers of unique and distinctive branches of psychology. Each branch looks at questions and problems from different perspectives. While each branch has its own focus on psychological problems or concerns, all areas share a common goal of studying and explaining human thought and behavior.

Some of the major branches of psychology within the field include: Abnormal psychology, Educational psychology, Experimental psychology, Organizational psychology, Military psychology, Political psychology, Women psychology, Sport psychology, Developmental Psychology and Clinical Psychology. In psychology,

the scope of study and the fields of operation are extended to cover the behavior of all living organisms related to all their life activities which include education, health, development, law, and everyday life of individual in a society or community.

Psychology shares with anatomy, physiology, sociology, counseling, anthropology, history and other sciences that concern changes in man's bodily or mental nature, the work of providing thinkers and workers in the field of education with knowledge of the material with which they work. Just as the science and art of agriculture depends on chemistry and botany, the art of education depends upon physiology and Psychology. Applied psychology would tell every fact about everyone's intellect, character, and behavior, would tell the cause of every change in human nature, would tell the result which every educational force – every act of every person that changed any other or the agent himself – would have (Omotola, 2021). It enables humans to use human beings for the world's welfare with the same surety of the result that humans now have when they use falling bodies or chemical elements.

Educational psychology is about how people learn. It is dedicated to the study and improvement of human learning across the lifespan; in whatever setting it occurs (Gaines, 2021). Such settings include not only schools, but also work places, organized sports, government agencies, and retirement communities – anywhere humans are engaged in instruction and learning of some sort. Educational psychology is important because of its focus on understanding and improving the crucial human capacity to learn.

For a very long time, the field of educational psychology has been interested in formulating the laws of human behavior. It collects data about animal behavior under controlled conditions and formulates hypotheses or generalizations. The report on “How People Learn” (Bransford, Brown & Cocking, 1999) published by the national Research Council Committee on Developments in the Science of Learning Highlights five new conceptions of learning based on research from the past 30 years. All five areas noted represent a shift in view about effective learning, way from drill and practice toward understanding and application of knowledge in a variety of contexts. These new conceptions of learning require learning environments that are “student centered, knowledge centered, assessment centered, and community centered” (P.16). These conceptions of learning also require that teachers understand pedagogy as it interacts with their specific content knowledge rather than simply learn a set of general teaching methods they apply to any content; recognize the role prior knowledge plays in the learning process; and understand the importance of cultural contexts in learning. Educational psychologists have a responsibility to incorporate these research findings into teacher preparation, staff development, and field consultations.

In truth, for more than half a century, the field of educational psychology has focused on identification procedures and this focus on quantitative assessment now permeates our social consciousness, placing standardized testing at the forefront of social and political agendas. Socio-political policies rely upon the field of educational psychology to provide standardized tests of intelligence and abilities that help identify and label individuals who are not succeeding in school. In the past decade, state proficiency test results are being used as a major component of district report cards that identify successful and unsuccessful school systems in Ohio, as well as other states (North, 2001). While many educators express concerns about using test results to permanently label learners or determine a school district's success, what is clear is that the work of 21st century educational psychologists has shaped the face of education by achieving a level of mastery in identifying and labeling problems. However, identifying and labeling problems is only the first step in any problem solving strategy.

There are many educational psychology bodies in Nigeria today. The major functional ones include: Association of Nigerian Educational Psychologists (ANEP) which is a professional body for educational psychologist across Nigeria; it brings together educational psychologists across the country to promote research and development in the field of teaching, learning, and awareness creation on the importance of educational psychology in the society. Another one is educational Psychologist Association of Nigeria (ePAN) whose aim and objective is to develop strategies for the growth and development of the educational sector. In this 21st century, ePAN is recruiting teachers to participate and be empowered to empower. ePAN helps children and youth succeed academically, socially, behaviourally, and emotionally. They collaborate with educators, parents and other professionals to create safe, healthy and supportive learning environments that strengthen connections between the home, school and community for all learners. One other body is the Nigerian Society for educational Psychologists whose objective is to provide psychologists with opportunity to practice their discipline.

This chapter looks at the brief history of educational psychology, theories of educational psychology, the scope of educational psychology, job description and role of educational psychology, challenges and relevance of educational psychology, educational psychology in the 21st century, educational psychology and the concept of vocational aptitude in Nigerian educational system, and conclusion and recommendations

Brief History of Educational Psychology

Early Greek philosophers such as Plato and Aristotle were concerned with the learning process, for factual and moral knowledge. However, it was not until later in

history that educational psychology emerged as a field in its own right, distinct from philosophy. **John Locke** (1632-1704), the influential British philosopher and father of psychology, famously described the human mind as a *tabula rasa* (blank slate) that had no innate or inborn knowledge, but could only learn through the accumulation of experiences.

Johann Herbart (1776-1841) is considered the founder of educational psychology as a distinct field. He emphasized interest in a subject as crucial component of learning. He also proposed five formal steps of learning: 1. Receiving what is already known, 2. Previewing new materials to be learned, 3. Presenting new material, 4. Relating new material to what is already known, and 5. Showing how new knowledge can be usefully applied.

Maria Montessori (1870-1952) was an Italian physician and educator who started by teaching disabled and underprivileged children. She later founded a network of schools that taught children of all backgrounds using a hands-on, multi-sensory and often student directed approach to learning.

Nathaniel Gage (1917-2008) was an influential educational psychologist who pioneered research on teaching. He served in the United States Army during the World War II, where he developed aptitude tests for selecting airplane navigators and radar operators. Gage went on to develop a research program that did much to advance the scientific study of teaching. He believed that progress in learning highly depends on effective teaching and that a robust theory of effective teaching has to cover:

1. The process of teaching,
2. Content to be taught,
3. Student abilities and motivational level, and
4. Classroom management.

This brief history is only a sample of the influential thinkers who have contributed over time to the field of educational psychology.

The Scope of Educational Psychology

The scope of educational psychology is very extensive. It can be classified into 5 broad areas:

- 1. Human Growth and Development:** In order to get people to learn, it is necessary to understand their capabilities, what they already know, how they think, and so on. The various facets of human development – physical, intellectual, linguistic, moral, social, etc are of great interest. Besides, the authors do know that people are differently endowed and how their

environments have made them different. Of special interest are the environmental factors that have been very beneficial in development.

2. **Learning and Instruction:** Educational psychology is concerned with the general nature of the learning process, the factors that influence learning, how and when different types of materials are learnt. Do people learn skills? Of particular concern is how to ensure that knowledge acquired in school is transferred to life outside school, not just immediately it is learnt but several years after the students have left school.
3. **Personality and Adjustment:** Educational psychology is interested in how people develop and maintain healthy personalities and attitudes especially students and teachers. Also, it is concerned about Social relationships and how students adjust to the school situation, make friends and interact with everyone in the educational setting as well as character formation.
4. **Psychological measurement:** Educational psychology is interested in measuring those psychological characteristics on which individuals are at variance, for example, intelligence, learning ability and aptitudes, and in the application of the results of the measurement to enhance learning and development.
5. **Research Techniques and Methods:** The scientific study of educational problems and practices are of interest to educational psychologists. The implementation of research findings and techniques in the classroom setting is also of primary importance.

The content of educational psychology covers many other areas of psychology such as Developmental psychology, Experimental psychology, social psychology, Abnormal psychology, Clinical psychology, Environmental psychology, Genetic psychology, and Psychometrics. Educational psychology is thus the application of the knowledge gained from these areas to solve educational problems. It is the application of psychological principles, techniques, and other resources of psychology to the solution of educational problems confronting the teacher as he attempts to direct the process of learning and growth of the child towards the objectives set by the teacher, the school, and the society.

Theories of Educational Psychology

Various theories have been developed to account for how humans learn. Some of the most enduring and representative modern-day theories are:

1. **Behaviourism** which holds that the behavioural responses that are positively reinforced are more likely to recur in the future,
2. **Cognitivism** whose belief is that learning occurs when information is received, arranged, held in memory, and retrieved for use, and 3.

Constructivism which holds that, from childhood on, humans learn in successive stages (Piaget, 1955).

For the constructivists, there is always a subjective component to how reality is organized. From this perspective, learning cannot be said to reflect a pre-test external reality. Rather, reality is always an inter-play between one's active construction of the world and the world itself.

Recent investigation in educational psychology has included how socio-emotional factors affect students' achievement. For example, Zysberb and Schwabsky (2020) examined the relationship between positive school climate, students' sense of self-efficacy, and academic achievement in Israeli middle and high school settings. They found that school climate was positively associated with students' sense of self-efficacy. Self-efficacy, in turn, was positively associated with academic achievement in Mathematics and English. This study reflects a constructivist approach, emphasizing how students create meaning out of their educational experiences.

Yeomans and Reich (2017) found that sending learners regular prompts to complete online work resulted in a 29% increase in courses completed. They concluded that sending regular reminder prompts is an inexpensive and effective way to enhance online course completion. This study reflects a practical behaviourist approach to improving educational outcomes.

Another research domain in educational psychology involves the use of brain imaging techniques during learning activity. Takeuchi, Mori, Suzukamo and Izumi (2019) studied brain activity in teachers and students while teachers provided hints for solving a visual-spatial problem (assembling puzzles). They found that the prefrontal cortex of the brain involved in planning and monitoring of complex cognitive activities, was significantly activated in teachers, not when they planned hints to be given, but only when they actually gave the hints. For the student participants, the prefrontal cortex was significantly activated when they had solved the puzzle with hints provided. This study emphasizes a cognitivist approach, focused on brain activity during learning. For the cognitivists, understanding how the brain converts instructional inputs into learning can lead to improved teaching strategies and better learning outcomes.

Job Description and Roles of Educational Psychologists

Educational psychologists work in a variety of teaching, research, and applied settings such as universities, the military, sports, and educational industries like textbook and test developers. They conduct research on areas such as the best measure of literacy skills for students in secondary school education, the most

effective for teaching early career professionals in engineering, and the relationship between educational level and emotional health in retirees. Educational psychologists also work in various applied roles such as consulting on curriculum design, evaluating educational programs at schools or training and formation sites, and offering teachers the best instructional methods for subject area, grade level, or population, be it mainstream students, those with disabilities, or gifted children.

Challenge and relevance of educational psychology

A major problem for educational psychology to solve in the 21st century is how the schools can provide knowledge and services that contribute to national development. The teacher must know the growth and development of the child and her requirements at different stages. Educational psychology helps the teacher to study the abilities, interests, intelligence, needs, and adopt different techniques of teaching for effective communication.

The knowledge of educational psychology is important as it provides teachers with some basic skills and guidelines to solve the problems of the teaching and learning process. The knowledge of educational psychology has great relevance for the teacher because it helps the teacher to realize his objectives of effective teaching and educating the learners properly. There are three focal points of education: the learner, the learning process, and the learning situation (Tijani & Abdullahi, 2021). The learner is the first concern of the teacher. In order to know the child, the teacher must understand the psychology of the child's growth and development, including her environment and if possible, her heredity.

Educational psychology determines how the learning process takes place, hence, the utility of the knowledge of educational psychology for a teacher. There is the learning situation which the teacher must take into consideration. This includes the school, the classroom environment, the objectives to be achieved, parental expectations and so on. These foci of education demand that the knowledge of educational psychology be possessed by a teacher (Alaji, Tijani & Abdullahi, 2021:2277). Some of the relevance of educational psychology in teacher education for national development include:

1. The teacher who has knowledge of psychology can make his teaching very successful while keeping in view, innate nature of the learner. The learner has natural urges, instincts, potentialities and propensities. These innate qualities are the prime movers of the child's behavior.
2. It helps the teacher in giving guidance to the learner by having an understanding of interests, abilities, aptitudes, achievements, problems,

educational and vocational plans of the learner.

3. It also helps the teacher in understanding the physiological and psychological base of behaviour, which are, nervous system, endocrine glands, instincts, emotions, motives, sentiments, play intelligence, heredity, environments and so on.
4. It helps the teacher to know about himself. He learns the psychology of being a teacher and acquaints himself with the traits of a successful teacher.
5. Children pass through different stages of development at infancy, childhood, and adolescence. These developmental stages have their own characteristics. If the prospective teacher knows the characteristics emerging at different stages of development, he can utilize these characteristics in imparting instruction and molding their behavior according to the specified goals of education.
6. No two individuals are alike. The teacher with the knowledge of these kinds of individual differences may adjust his teaching to the needs and requirements of the class and thus may be helpful in creating conducive environment in the schools where the students can develop their inherent potentials to the maximum.
7. Educational psychology provides a teacher with knowledge of the learning process in general and problems of classroom learning in particular, that, understands the nature of classroom learning.
8. It also provides the teacher with knowledge of appropriate teaching methods. It helps in developing new strategies of teaching. It also provides knowledge of different approaches involved to tackling the problem of teaching at different age levels.
9. Educational psychology helps the teacher understand the causes of the problems of learners which occur at different age levels and enables him to successfully solve them.
10. Educational psychology also helps the teacher to recognize the importance of social behavior and group dynamics in classroom teaching and learning.
11. With the knowledge of educational psychology, the teacher utilizes the importance of indirect discipline rather than corporal punishment. It tells the teacher that discipline should be self-discipline, dynamic, positive and constructive through participation in purposeful activity. Pleasure and pain, reward and punishment, praise, and so on, should be appropriately administered. If the teacher is unaware of the principles of educational psychology, he may be unable to solve the problems of his students and thereby fail to induce order and discipline among them.

Educational Psychology in the 21st Century

As mentioned earlier, the field of educational psychology seeks to scientifically explore human learning, and is one of the fastest-growing subfield in psychology in the 21st century. Mohta (2021) revealed that according to the United States Bureau of Labour Statistics, 25% of all psychologists are employed in the education sector. There are many reasons for this boom, starting with the general increase in the value of psychology as a social and natural science. High level of private investment in higher education institutions and state focus on making schools the backbone of community have also fielded higher interest and demand for educational psychologists.

Also, there has been a recent push to make education more accessible and inclusive. This involves redefining and innovating methods of pedagogy and curriculum to best engage with the students' psyche. Research surrounding learning style differences and learning disabilities has revolutionised education systems and even work environments. Growing scientific and social inquiries into the causes of poor performances in academic or professional spaces have widened our understanding of communication, language, and even productivity. The growth in the number of educational psychologists correlates with the increase in diagnosis and management or treatment of disabilities that would have otherwise hindered the effective functioning of an individual.

According to research by Evans, Hsieh and Robinson , there has been a sustained increase in the number of women in the field of educational psychology over the past few decades, with the number increasing in the 21st century. This can be attributed to the higher levels of participation of women in the educational sector; it has contributed to the development of inclusive and feminist theories in subjects and issues in the past.

The rise of educational psychology in the 21st century is a welcome and positive change from the perspective of inclusive and holistic education. It has yielded individual and social benefits for marginalized groups. However, the 21st century must continue to ensure that the benefits of research and exploration in this field are reaped by all of society and not monopolized by socio-economically emancipated and elite sections of the society.

What is clear is that the work of twentieth century educational psychologist has shaped the face of education as we know it by achieving a level of mastery in identifying and labeling problems. However, identifying and labeling problems is only the first step in any problem solving strategy. Educational psychology in the 21st century must therefore take the society beyond identifying learning problems to

finding solutions; electing from various instructional methods and implementing action plans that help students meet grade-level learning goals. The time has come to operate as problem solvers (North, 2001).

To do this, educators need a repertoire of assessment skills and content-appropriate teaching methods to guide decisions about instruction. This is a pedagogical foundation and it must be integrated into each educator's way of thinking about student learning and teaching. These well-developed habits of mind must operate at an intuitive level to direct a teacher's attention to identifying and responding to individual learners' needs. Developing these habits of mind take time; time to understand the philosophical, theoretical and scientific underpinnings of sound content-related pedagogy; time to develop pedagogical skills themselves; and time to develop the expertise necessary to make sound pedagogical decisions based upon particular students' needs. According to North (2001), these skills cannot be developed in one or two introductory courses for pre-service teachers, but must be infused throughout pre-service teacher education and on-going professional development. This leads us to consider the issue of vocational aptitude as a basis for development in our society.

Educational Psychology and Vocational Aptitude

According to the Partnership for 21st Century Skills (2012), 21st century skills have 3 major categories, learning and innovation skills, information, media and technology skills, and life and career skills. Learning and innovation skills comprise creativity and innovation, critical thinking and problem-solving, and communication and collaboration. Information, media and technology skills include information literacy, media literacy and ICT literacy. Life and career skills consists of flexibility and adaptability, and leadership and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility.

There have been increases in diversity-affirming activities in the 21st century. The push for more diverse classrooms has yielded positive results in that the academic settings now have diverse learners (Njoku, 2015). Technology has also contributed to greater diversity in open and distance learning settings. Therefore, it has become imperative for educational psychologists to ensure that they recognize diversity and develop their learning and teaching resources to provide adequate and diverse experiences. To engage teaching effectively in this century, educational psychologists need self-awareness, knowledge and specific skills (APA, 2003).

Self-awareness as explained in the American Psychological Association's (APA, 2003) multicultural guideline states that psychologists as cultural beings may hold attitudes and beliefs that can detrimentally influence their perceptions and

interactions with individuals who are different from themselves. This claim requires educational psychologists to be aware of their own attitudes and beliefs and potential ways these factors can impact their work.

Vocational aptitude is simply the individual skills and characteristics needed for excellent performance of the jobs comprised in a specific profession. It seeks to assess potential careers that an individual may be particularly apt for. Vocational aptitude is also known as technical training or creativity formation. It disembodies and enables the proficient potentials in a learner to blossom into a better individual through development and human formative metamorphoses. It prepares the learner for inventive and creative skill that would enable him to be self-dependent, industrious and productive.

Lately, it is observed that vocational aptitude is quickly dilapidating, collapsing and eroding. Students in these latter days are no longer instructed to make use of their skills and talents to create some vital things which they need through making beeds, shoe making, barbing, dress making, soap making and so on. The resultant effect is that there is a notable rate of unemployment, crime and all kinds of profligacy in this contemporary age. It is based on this backdrop that this chapter calls to mind the need for educational psychologists to emphasise the installation of vocational aptitude in the Nigerian educational system for development.

Obi (2017), emphasizes practical application of what is learned through vocational aptitude. In other words vocational education exposes the learner to understand and know what to do practically and technically in order to be self-sufficient even when there is no government job. In the past, at the dawn of the birth of UBE in the late 80s, students were exposed to making use of available human resources to solve social problems. The level of skill acquisition then was pragmatically high, but within this dispensation, students do not even have the technical know-how of molding clay pots, drawing cartoons, making palm-kernel oils, baskets and the like.

Recent studies have shown that vocational education in Nigeria is gradually becoming a thing of the past without anyone asking for the cause for the decline nor for the way forward (Obi, 2017). It is very worrisome to see the leaders of tomorrow gradually but surely becoming the slaves of tomorrow as a result of unemployment and lack of self-empowerment. Thus, vocational aptitude in Nigeria educational system is gradually dilapidating. Students do not fully get the required educational services or training in schools, perhaps as a result of lack of teachers remuneration and, or unavailability of qualified teachers to take the students through the practical aspects of the learning processes in the schools.

Beside this, most parents and care-givers have been the ground architects of examination malpractice and miracle centers where students copy from textbooks or chalk-board during examinations. Directly or indirectly some modern parents no longer wish that their children be grounded in some vocational aptitude such as soap making, fashion design, snail keeping, bee keeping, hair dressing and so on. Some parents want their children to be professionals in medicine, engineering, computer literacy and the like.

Conclusion

The contribution of educational psychology to national development is invaluable. From enabling children to perform better at school to empowering adults to cope with relationships and life events, the educational psychologist's role is present at every stage of human life. Educational psychology in the 21st century should be focused on finding solutions to the problems identified by the field during the last century. The links between disciplines have become vital to understanding the ways humans learn, and we must serve as education's bridge to these other disciplines. Educational psychologists must move beyond the role of problem finders by reframing their role in teacher preparation and field work to include all the steps in the problem solving model.

The field of educational psychology played a major role in shaping the focus of education during the last century. In the 21st century, the field must shape the focus of education by directing the field's and society's efforts beyond identifying problems to exploring and disseminating solutions. Educational psychology must include the most current understandings science provides about how people learn in our educational psychology courses and field interactions, and focus research efforts on developing, testing, and disseminating practical applications of these interdisciplinary research findings in order to provide future and practicing teachers with sound pedagogical alternatives.

Recommendations

Since educational psychologists are the engine room and life wire of the educational sector which is the heart of national development, the following recommendations are made:

1. Based on the numerous significance of educational psychology to teachers, the management and academic staff should ensure proper implementation of educational psychology courses in teachers' education programs.
2. Student teachers should be well groomed in all aspects of educational psychology which equip them with psychological theories and principles for effective management of learning environments.

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