Philosophy and Knowledge in the Twenty-first Century: Redefining the Role of Universities and Schools

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Abstract

Philosophy and knowledge are indispensable in the process and practice of education. The essence of education is to train human mind. Education enables one to reason and think critically using mind. Knowledge is essential in the process of education. What kinds of things can be known? How can it be said that a learner knows something? These questions make knowledge one of the most fundamental aspects of philosophy and education. This paper reviews literature to examine what knowledge is and what it ought to be in the 21st century. It employs speculative approach, conceptual analysis and prescriptive research methods in philosophy to expound the creation of knowledge that will be relevant for the 21st century society. The paper has revealed that there are educational initiatives in place that are being taken in the 21st century to set an educational agenda that meets the local and global standards/needs. This implies that universities and schools have an increased role to play in the 21st century including training and recruiting learners, who can, at different levels, demonstrate creativity, critical thinking, communication and collaboration. The paper recommends that knowledge creation must extend to include the physical, mental, emotional and social domains of learning as required in the 21st century.

Keywords: *collaboration, communication, critical thinking, education, knowledge*

Introduction

Education attempts to develop a man intellectually to bring out the best in him. Different disciplines exist and have their own ways of conceptualizing and creating knowledge. Philosophy is one of the several fields of endeavours to achieve this purpose. Philosophy raises questions and provides answers to how human beings or learners acquire knowledge. Various theories and analyses of knowledge have been propounded to provide answers to issues related to knowledge acquisition. These theories and analyses expounded that knowledge must be certain and undoubted, since this is the foundation of belief system. What is contradictory, doubtful and uncertain cannot be regarded as knowledge. These according to Ludwig Wittgenstein

endeavoured to explain conditions in which learners could be said to have acquired knowledge. Plato and Aristotle made efforts to examine the nature of knowledge, as this has been a major concern of philosophy from the past. Both scholars agreed that knowledge is about what is true, and that this truth must be justified explicitly. This has set foundations for philosophy and the process of education till to date. On some accounts, 'knowing' would be a way of relating with things, events, and processes around and within the learner, which may have to do with information or understanding as stated by Ludwig Wittgenstein, Socrates and others. In essence, knowledge is very important and valuable in the process of education. How can the present education respond to challenges that have been created? Will Nigeria's educational system which has been traditionally preoccupied with the pressures and problems of the present rather than the anticipation of the future, live up to the expectations of the age?

Methodology

In order to provide answers to questions raised and proffer solutions to issues discussed in this paper, this study adopted the philosophical research methods of speculation, conceptual analysis and normative approach. In the field of philosophy, speculation involves general thinking about matters of concern that is, systematic, logical and creative thinking about the object or issue of study. Human mind is very important to his existence because it helps in thinking not just about himself but also about others and things around him. The conceptual analysis is used for clarification, rationality and consistency of ideas. It also employs the logical examination of facts in matters of discourse in order to arrive at logical conclusion (Oyeshile & Ugwuanyi, 1997). The normative approach establishes standard or benchmark for assessing as well as determining solutions to issues and/or problem(s) discussed.

Knowledge Claim in Education

Knowledge is very essential in education. However, the content of knowledge must be substantiated. When the vast variety of things to be known is considered, what a person learns makes such individual claim knowledge. Socrates and some notable scholars identified several distinctions in the forms or kinds of knowledge-claims and what can be said to be known or 'objects of knowledge'. It is usually thought that the most important of these distinctions is between 'knowing that' and 'know how'. The former is sometimes referred to as propositional or factual knowledge claim while the latter is technical knowledge. In essence, there are several ways by which we can know; this can be through experience and perception according to John Locke in his "Essay Concerning Human Understanding", as well as David Hume in his book "An Enquiry Concerning Human Understanding". This reveals that what is known could be inferred through experience and perception. This leads to considering the necessary conditions for knowledge.

In philosophy, there is no widely accepted definition of knowledge. However, philosophers have been attempting to construct one for ages. While agreement with the definition may not be universal, it can serve as a starting point to define knowledge.

In philosophy, the definition of knowledge will involve satisfying three conditions; (a) the 'knower' or person has a belief in the statement (b) the statement is in fact true (c) the person is justified in believing the statement to be true. Consider a factual statement like 'the student will come first in the examination'. Drawing on this statement, three conditions to be satisfied are identified as 'belief', 'truth' and; 'justification', which provide the tripartite basis for the definition of knowledge. Beliefs are not like rocks you come across while strolling along the way rather, they are what people have. They are in the head and are generally viewed as just the way you hold the world or some aspects of the world to be. If it is believed a student can never come second in the examination, one just accepts it as truth that the student will come first in the examination. It should be noted that accepting that something is true implies that what you accept could be wrong. It implies that what you think about the world may not match with the way the world really is. This suggests that there is a difference between belief and truth (Pardi, 2011). There are philosophers notably, postmodernists and existentialists, who think such a distinction cannot be made because knowledge is really a personal encounter with reality (Akinpelu, 1981). From this claim, pragmatic philosophers are of the opinion that belief is in our heads, and truth is about the way the world is. In essence, what is believed can be judged by examining behaviour in the face of present reality (Dewey, 1938).

Truth exists, not subjectively, but objectively as well. Truth is not just in the head, but it is out there for all to see. The statement that 'the student came first in the examination' is true when in fact the student came first in the examination. When an individual believes a statement, it holds that the statement or proposition is true. It could be false and; that is why the belief may not 'match with the way the world really is. The truth condition in justify-true-belief (JTB) assumed that if one knows P, then P is true in the sense that P states how things are.

A pertinent question at this point is, if the seed of knowledge is belief, what turns belief into knowledge? Some philosophers believe that justification is required here; this is because justification makes the belief in something be true. However, some philosophers accepted that a belief or knowledge is not justified if it is based on wishful thinking (Pardi, 2011) – for example, a product of fear or guilt (you are terrified of death and so form the belief in an after-life). Since beliefs come in all shapes and sizes, it is hard to find a single theory of justification that can

account for everything we would want to claim to know (Audi, 1988). This makes justification an important factor in the theory of knowledge.

Knowledge in the 21st Century

Knowledge is one of the perennial concepts like the nature of matter in the hard sciences that philosophy has been refining since the pre-Socratic era. In John Locke's "Essay Concerning Human Understanding", Plato and other idealists seem to adopt a representative theory of perception. According to John Locke, the only things we perceive, at least, immediately, are ideas. Many of Locke's readers have wondered how we can know the world beyond our ideas if we only ever perceive such ideas. Coming up with a definition of knowledge from this idealist approach will, therefore, prove difficult. One may ask, how then does this idealist perspective speak to the question this paper is addressing?

However, prominent philosophers have wrestled with the topic especially, the 20th century philosophers, who have provided a different view on the problem of knowledge and what type of knowledge is worth investing in. Dewey, Pierce, and other pragmatists, argued that knowledge is the product of inquiry, a problem-solving process by means of which we move from doubt to belief (Foster, 2019). However, making inquiry to discover knowledge may not proceed effectively without experimentation that is, the need to manipulate reality in certain ways. Since knowledge grows through attempts to manipulate/push the world around and see what happens as a result, it follows that knowers as such must be agents that can be manipulated, pushed or moved. This insight is central to the experimental theory of knowledge.

However, as successful and widely acceptable, the idea pushed forward by the pragmatists, the 20th century way of knowing can be critiqued for emphasising compliance and conformity over creativity and diversity, two skills that were necessary to perform well in a professional or corporate environment, and to hold down a good job in the present age. Compliance and conformity may be seen as relic, but they can still be considered as key values in many schools, which have affected and informed the major educational policy, pedagogy and curriculum choice (Shirke, 2021). Unfortunately, many students are taught using the old or conventional methods and standardised curriculum, leading to rote learning where some learners, due to lack of motivation, are disengaged from the learning process (Partridge, 2017). Based on the short fall of traditional teaching approaches, the following questions are raised: What is the relevance of going to school while learners can learn the same stuff faster by watching You tube video or playing a computer games?. Why should one memorise facts for a test when they have all the information in the palms of their hands? Studies have shown that old or contemporary methods of teaching have little impact on the present-day learners who are vast users of modern technology to acquire knowledge, making it mandatory for

schools to adjust to new pedagogy to survive (Herold, 2016). Digital technologies change people's ways of life, communication, thinking, feelings, and channels of influence on other people, social skills, and social behaviour. As Myamesheva (2015) states, the high-tech environment – computers, smartphones, video games, and Internet search engines – reshape the human brain.

A Paradigm Shift

At the eve of the 21st century, UNESCO reported the type of education that will be needed to navigate the new era. In the preface to the article 'Education for the 21st Century', Singh (1991) is of the opinion that the future scenarios of the political, social, cultural and economic sectors will depend on the contributions of the students at our schools today. More than ever before, education must be visionary and future-oriented in the face of stunning scientific and technological innovations and changes, unprecedented socio-economic challenges and opportunities, surprising socio-political reforms, and amazing cultural reawakening (Singh, 1991). Thus, a shift to 21st century education will mean giving students the skills they need to succeed in this new knowledge economy and helping them grow the confidence to practise those skills.

In rethinking education to cope with rapid changes at the threshold of the 21st century, innovation, technology, and creative research become an indispensable tool in education. Failure to innovate by and large means repeating yesterday's educational challenges tomorrow, which will only further jeopardise the reputation of education as a contributor to development efforts. The availability of information in the 21st century makes it imperative to utilise the information in effective ways. Certain skills have been identified by the Partnership for 21st Century Learning (Coalition P21) and Rusdin (2018) for the present century. These include Creativity, Critical thinking, Communication and Collaboration. They are expected to be mutually complementary across all curricular and pedagogy mapping.

According to Herold (2016), creativity in curriculum and pedagogy mapping involves new ways of thinking about information at hand, considering issues from other dimensions in order to discover new connections to arrive at innovations that can result in curriculum construction and more effective classroom interactions between the teacher and learners. Critical thinking will encourage critique and analyses of information in logical as well as objective ways. Thus, it entails disconnecting oneself from or disregarding all forms of subject views on information or issues under consideration. Communication, on the other hand, will have to do with the ability to pass information accurately and appropriately to the right audience, while collaboration is about cooperating with one another, for instance, in group(s), for the purpose of achieving better outcomes. Other skills like entrepreneurship,

inquiry, as well as problem solving are also identified, with Emotional Intelligence (EI) as one of the crucial factors to successful work and relationships (Herold, 2016; Mayer et al, 1997). Therefore, education is expected to equip learners with skills needed for transformation of their societies rather than knowledge that has outlived their importance and relevance.

These domains cover a wide and multi-dimensional spectrum to approaching the knowledge needs of the 21st century education. Unlike the science paradigm which totally rejected the ancient spiritualistic-holistic paradigm, the newly emerging world view will not reject science. Science and mind will be integrated in the middle path, elevating mankind to a new level of wisdom while integration will be the new paradigm (David, 2003).

Competencies, Curriculum and Pedagogy in the 21st Century

Creativity, Critical thinking, Communication and Collaboration (4Cs) can be integrated into the curriculum, teacher's practice and pedagogy of the educational process. The need for the fourth industrial revolution and defining a role for research universities for a paradigm shift is a necessitated call for critique, reforming and restructuring the entire educational system particularly, in the aspects of the curriculum, communication, creativity and collaboration. This is needful since education plays its roles as knowledge transmitter and builder of new knowledge. The world is changing, and in order to prepare learners for this new world, there is a need to change the way they are being educated. In the 21st century, educators must create a curriculum that will help students connect with the world, understand and take actions to resolve the issues that the world faces.

The curriculum must be designed to incorporate multiple skills to improve intelligence levels using technology and multi-media. Contrary to the world where knowledge was primarily exchanged through talk and chalk as well as paper and pencil mode, the new technologies pose great challenges to education and its process at all levels. For example, the influence of computer globally poses questions on the directions of influence between theory and calculation that has ramifications for the science curriculum in schools and research training. The changes raise questions about the locality of knowledge and the various agents of knowledge (human and non-human). In relation to the study of history, the availability of new kinds of research capacities, new kinds of on-line archives, ability to search and work with visual texts as well as records are also potentially transformational in terms of what students might need to learn or be able to do. The knowledge needed to navigate this age cannot just (and only) be book based but rather it should include social reality and learners' competence through manipulation of learning materials and contents.

In the past, teacher-centred method of teaching like rote learning where contents are repeated, learners made to conform and memorise large quantity of information for the purpose of expanding their knowledge in accordance with the idealists' curriculum which characterised the process of education. This made the class a less interesting place for learning. At the end of the term, summative evaluation was done to assess the level of understanding by students. Curriculum designers have, however, realised the need for curriculum that will discard the old method of teaching and develop initiatives as well as creativity in learners (Kolawole, 2015). The knowledge economy requires that learners develop some basic competences, and as emphasised by Obanya (2016), the emergence of the knowledge economy has created the following specific challenges; a) education no longer prepares one for specific jobs in the conventional sense, b) the principal goal of education is no longer the certificate or diploma but the inculcation of learning-to-learn skills. Thus, memorisation (knowing that things happened) is no longer as important as analysts (apprehending how and why things happen), c) education now combines the inculcation of 'knowing yourself' or 'developing the best in you' (intra-personal skills) with 'knowing and getting along with others' skills (inter-personal skills), d) in addition to developing mental (or cognitive) intelligence or brain power, the knowledge economy has brought to the fore a complementary type of human power, emotional intelligence (the ability to manage emotions), e) creativity (lack of rigidity, a willingness to explore new paths and new ways) is now a major hallmark of the educated person, f) people who have benefitted from education are now expected to have acquired a combination of 'hard' and 'soft' skills (Obanya, 2016). Therefore, for education to really become relevant to nations and their changing needs there must be a synergy between curriculum and the world of work.

The 21st century learners have access to various sources of acquiring knowledge, with added advantage in the use and application of modern technology. Teachers should, therefore, assume the role of a guide or mentor and be equipped with skills in the required technology to live up to expectation (Gutierrez, Sanchez, Castaneda & Prendes, 2017) as nation builders. Teachers, going by the acronym facilitators, go together with the quantum of work and job descriptions of teachers around the world. In modern schools, the use of dynamic and exciting teaching methodologies is employed by teachers; learners are drawn into the world of self-actualisation and realisation of their aims, aspirations, dreams, goals and hopes.

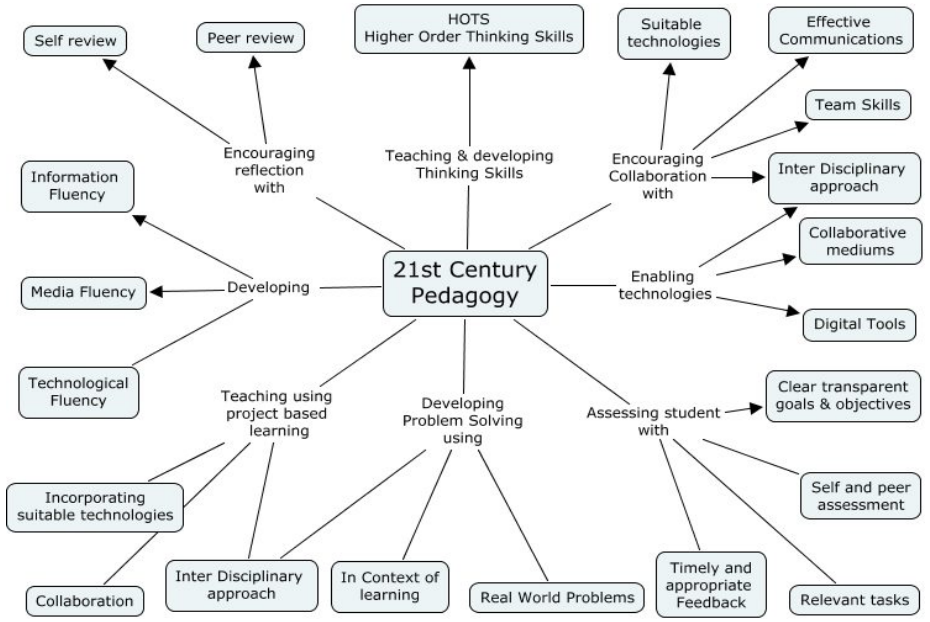
Collaboration, role-play, data sharing and, surfing the internet for research and reference, have become the norm. Experimental learning and a sense of connectivity through the internet has taken the world of education by storm. Therefore, the 21st century teacher is expected to go beyond the classroom and play the roles of a leader, a mentor, a role model, a counsellor, a coach, a therapist, a seeker, a knowledge base, a disciplinarian, a data collector, a curriculum planner, as event

manager as well as an entertainer among many more avatars (Gutierrez et al, 2017). It has become imperative that the new generation of teachers should endeavour to build learners that will be independent and autonomous through motivation of learners. This also means that teachers need to be forward-thinking, curious and flexible. Teachers must be learners who learn new ways of teaching, and they are learning alongside their students.

There is, therefore, no doubt that digital integration is fundamental to a thorough 21st century education. It should, however, be noted that it is not sufficient to simply add technology to existing teaching methods. Technology needs to be applied strategically to the benefit of the process of education. It has been ascertained that learners are increasingly advanced users of technology (Herold, 2016). Many learners have surpassed their teachers in the use of technology thus, embarrassed by the level of technology demonstrated/displayed. Therefore, it is imperative that modern learner must sift through a lot of information to be able to navigate the world in the 21st century. This means that higher-level thinking skills like analysis and evaluation are necessary to be innovative and establish the credibility of information (Herold, 2016).

The diagram below shows the various pedagogical components by the P21. Components include Higher-Order Thinking Skills, Peer Collaboration, and Media Fluency.

Figure 1: The P21 pedagogical components of Higher-Order Thinking Skills, Peer Collaboration, and Media Fluency.



Source: 21st century pedagogy. Churches, 2011.

Furthermore, the UNESCO recommended the following teaching strategies for the 21st century; experimental learning, storytelling, values education, enquiry learning, appropriate assessment, future problem solving, outside classroom learning, and community problem solving (UNESCO, 2010). The application of innovative teaching methods by teachers is imperative for education today. The greater the strategies and methods of teaching by the teachers, the more interesting and diverse the classes will be. This will motivate students' cognitive activity.

Conclusion

In conclusion, educational reforms are presently being made in the 21st century world to set an educational system that meets a global standard. Based on the above analysis, it becomes so clear that education has an increased role to play in the 21st century to mould learners who can at the different levels demonstrate multiple competencies of the 21st century. The most valid knowledge in the 21st century world should therefore be the development of these competencies to incorporate cognitive, social, and intrapersonal domains of learning. This suggests that a world-class education must consist of not solely mastery of core subjects such as Literacy, Numeracy, Scientific literacy, ICT literacy, financial literacy, Cultural and Civic Literacy, but also of training in higher order thinking skills. Such high level competencies are drives to self-reliance and economic development and security in a world where knowledge matters more than ever for the success of societies.

Recommendations

Based on the analysis above, the following are recommended for action and future research;

1. Research universities need to encourage collaboration among disciplines to get the best of research works. This can be done when lecturers and researchers in Educational Technology collaborate with their counterparts from other department(s) to design methods of disseminating knowledge through modern technology.
2. Universities should promote researches that are relevant to the nation. The idea of imitation and transfer of knowledge from other lands that do not have relevance should be discarded.
3. Researchers, educational practitioners and employers in the world of work must team up to see what works such that resources are appropriately devolved to research works. The curriculum adopted should also be in synergy with the world of work. This will enable graduates of schools to adapt to changing requirements of the labour market through transformational changes in both technological and technical capacities. This will make the products of schools to be employable and relevant in the world of works.
4. Since a large percentage of the 21st century teachers are digital immigrants, there is need to train and empower them on the use of the latest technology that will help to improve their research skills and pedagogical practices.

5. Finally, there is a call for holistic education. That is, emphasis of knowledge should be on the physical, mental, emotional and social skills as emphasised in the 21st century domain of learning. This would ensure an all-round development of each learner to meet the needs of the present generation.

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