CRITICAL THINKING AND CREATIVITY IN EDUCATION: WHY DO WE NEED THEM?

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Abstract
        This paper advocates the need for critical thinking and creativity in education. It described critical thinking as the capacity to think more clearly and logically in order to understand the valid connections that exist between ideas. Critical thinking is being considered in this paper as the defining quality of the fruitful and creative mind. It further noted that critical thinking is important in education because without the skills of critical thinking it may be difficult to determine some issues of societal concern in the society. In the era where knowledge economy is driven by information technology, the paper argued that critical thinking, creativity and problems solving skills are indispensable. It added that both critical thinking and creativity are essential to development. Five criteria of critical thinking were also outlined in the paper to include: Doing away with any form of bias in passing judgment about an issue; identifying the different objectives there are in relation to a particular issue; evaluate an opinion to determine how strong or valid it is; Recognize any weakness or negative points that there are in an argument; and provide structured reasoning and support for an argument that one wishes to make. The paper concludes that Nigeria may continue to depend on others for solutions to its own problems unless it begins to think critically and creatively towards solution to its own problems.

Introduction
        The educational and philosophical roots of critical thinking are as ancient as its etymology and eventually traceable to the ideas and vision of the famous Greek philosopher, Socrates a thousand years ago (Sofos, 2016). Socrates established the importance of asking deep questions that scrutinize deeply into thinking before one accepts ideas as worthy of belief. This method of enquiry is

generally known as Socratic Questioning (SQ) and it is one of the best known critical teaching strategies. Like Socrates, Plato and Aristotle have also emphasized the need for critical thinking in education. Critical thinking is the product of education and training and therefore, learners ought to be trained in it. The arts of thinking and not mere imagination need to be emphasized in order to achieve higher cognitive skills and habits. Critical thinking helps a person to think, analyze and evaluate the thinking of others before assenting to their thinking. The entire activity of critical thinking is aimed at improving qualitative thinking, creativity and problem solving skills.

Nigeria's 9-3-4 system of education offers very little in the areas of critical thinking and creativity as it does not brilliantly encourage the arts of critical thinking and creativity to a large extent. This is because students during examinations are always expected to provide same answers to questions without regard for individuals' wisdom. The problem of this paper is that although critical thinking and creativity are important as they help us understand deeper realities in education, the art of critical thinking appears not to be highly accentuated in the process of education. The concepts of critical thinking and creativity have not been well accommodated in the Nigerian Philosophy of education. Learners appear not to be given the freedom to learn and solve educational problems in their own way. This is a clear indication of the need for critical and creative thinking in education. Dewey (1953) says that "education is good so far as it produces well-developed critical faculty…which can be truly said that it makes good citizens." From the foregoing, it can be argued that one of the aims of education should be the cultivation of the habit of critical thinking and creativity.

What is Critical thinking?

Since the time of the early Greek philosophers, critical thinking has been the subject of a lot of debate. Critical thinking has often been cited as the most important outcome of education (Lai, 2011). According to Dewey (1953), critical thinking is an active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it. The aim of critical thinking is to gain more insight about what may constitute knowledge. Therefore, one engages in quality thinking when he tries to connect between what has been done and consequences of the action. In other words, one would plan for the thinking and constantly questioning the conclusion that has been made.

Critical thinking is the ability to think reflectively and independently. As human beings, we cannot function effectively and be productive in our society without critical thinking. That is to say that critical thinking is in consequence necessary in every aspect of human endeavours. We often hear individuals at one time or the other say "I had to think critically to find solution this or that" Several meanings have been given to the concept of critical thinking. It is the act of using

your mind and not books to find answers to problems. According to critical thinking.org (2016), critical thinking is an intellectual and disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and/or evaluating information gathered from or generated by observation, experience, reflection, reasoning or communication, as a guide to have faith in an action. It also involves asking or generating questions and finding solutions to them. It is more of a careful process by which an individual analyses all possibilities when dealing with a particular situation in an attempt to find remedy to the situation. It is a sort of taking a big approach to evaluate situations. For instance, supposing you were a headmaster in a particular school and then, one of the major issues in that school you are heading is the problem of late coming to school? In this case, to think critically entails evaluating the entire situation by taking a broad consideration of a number of situations by way of asking questions. Questions such as, why do students always come to school late? Could it be that the parents do not send them to school on time? Could it also be that they go to farm before coming to school? Is it that they divert branch somewhere before coming to school? Is there solution to this problem? Critical thinking also involves using the art of questions and answers.

Critical thinking is a sort of thinking that is in depth in nature which gives attention to every detail of a given scenario. It can be compared to in depth analysis. For instance, looking at a building you are critical when you ask questions like: why is the plan of the building like this? Why use steel roofing rather than wood roofing? Why also use grass roofing rather than corrugated iron roofing? Is it not possible for the building to take this or that shape? Thinking critically entails going beyond normal thinking by being critical to every detail. People who think critically can get out of trouble faster than those who do not because such people can discover and explore many alternatives to solving those problems. Critical thinking means **"analyzing a topic from all sides considering the pros and cons basically, not accepting what you are told…"** (Sofos, 2004). This clearly means that critical thinking can lead to one having independent opinion about something.

What is Creativity?

Like critical thinking, creativity is not an easy concept to define in spite of the fact that it is essential to every field of life. Critical thinking is an important requirement for creativity without which it may be difficult for one to be creative. Dewey (1953) further adds that critical thinking is the foundation of a reflective thought and hence, the defining quality of the fruitful and creative mind. That is to say that creativity is the way in which you express your talent of critical thinking. How is that done? It is simply putting into use your own skills of critical thinking in action. Critical thinking therefore comes first before creativity. It can be described as doing something differently. Creativity can also be described as an act

of putting one's ideas into action. For example, in football one can be creative in shooting the ball. Similarly, one can employ the skills of creativity during teaching and learning in the classroom. To be creative connotes being unique there by making someone to wonder sometimes.

Why do we need Critical thinking and Creativity in Education?

We have earlier described critical thinking as the ability to think more clearly and rationally in order to understand the logical connections that exist between ideas. Critical thinking is good because it enables us to think more clearly there by enabling us to question assumptions and ideas. A person who thinks critically does not accept things as they are, but those who do not think critically accept things as they are without questioning them. Students can be encouraged to be creative if they are not hampered by the thoughts of the teacher's red biro. Students who are not hampered by the thoughts of teacher's red biro may want to maintain commitments to critical thinking and creativity in education. Education should as much as possible encourage the skills of creativity and critical thinking as this can go a long way to resolving some societal problems. Critical thinking is important in education because without the skills of critical thinking it may be difficult to determine some issues of societal concern.

If used properly, critical thinking skills and creativity can help solve and analyze some problems thoroughly in all spheres of life. Critical thinking is not only limited to particular fields of learning, but applicable to all field s of studies. In education for instance, critical thinking can help us in evaluating our policies in education. We can know what to add and what to delete from our curriculum only through critical thinking. Critical thinking and creativity in education are desirable because they bring about originality in educational discourses. In view of their relevance to education, it is logically necessary for the learners to be introduced to an understanding of the standard of excellence in the field of education. It is worrisome that despite the emphasis on creativity in education particularly teacher education by the Federal Republic of Nigeria, National Policy on Education (2009) that the spirit of enquiry and creativity be encouraged, onlysmall number of students turn out to be creative writers, scientists, engineers, lawyers, teachers and farmers.

In this technological era where global and knowledge economy is driven by information technology, much critical thinking skill is necessary. The new knowledge places much emphasis on flexible intellectual skills and the ability to analyze information and integrate diverse sources of knowledge in solving problems. To this extent, critical thinking is very necessary in the attainment of technological advancement. Critical thinking can help an individual to express his ideas in logical and clear terms. Learners can best develop their skills of both critical thinking and creativity if they are allowed the freedom to put to use the ideas

they have in their minds. The authoritative teacher according to Lee (2010) places limit and control on students and in consequence, it affects their critical thinking and creative ability.

In our discussion on the concept of creativity, we were meant to understand that critical thinking is necessary for creativity. This is to say that for there to be creativity, one must think critically and rationally. Through the study of critical thinking, we can make good decisions for ourselves and the society at large. We can best evaluate new ideas by way of thinking critically. Critical thinking allows one to become an autonomous personality and a better team player. Autonomy is one of the most important aims of education and therefore critical thinking and creativity are crucial in the development of an autonomous person. It should therefore be encouraged through education. It is important to state that both critical thinking and creativity are very essential to development. Nations all over the world have peculiar challenges some of which can be tackled through critical thinking and creativity and therefore, the need for these two concepts to be encouraged. We cannot as a nation continue to depend on others for solutions to our own problems. For how long should we continue to hire foreigners to come and help us solve our problems while we have the brain to think and reflect on those problems?

Criteria for Critical thinking
  i. Think about an issue in an objective or decisive manner.
 ii. Identify the diverse objectives there are in relation to a particular issue.
iii. Evaluate an opinion to determine how strong or valid it is.
 iv. Recognize any weakness or negative points that there are in an argument.
  v. Provide structured reasoning and support for an argument that one may wish to make.

Does the Nigerian System of Education Promote Critical Thinking and Creativity?

When one reflects on the final examinations that are done at the end of primary and secondary school in Nigeria, one notices very little emphasis on critical thinking as well as creativity. In most exams students are asked to report what books say about some phenomena without showing any regard to the student's ability to think from an independent perspective. Ijaiya (2010) shares this sentiment when he said that a lot of emphasis is being placed on recall and understanding only. These approaches hinder the subsequent important habit that we ought to be imparting in schools which is critical thinking and creativity among the students. While higher cognitive levels of learning are expected to be achieved in the higher levels of educational ladder the truth is that many students in Nigeria drop out of school at some point in elementary or secondary level. These levels of education

therefore must have to ensure that they are providing the most important life skills for rational being which is thinking.

Creative thinking entails generation of new ideas, unique solutions or new association of existing ideas of an aesthetic or practical purpose. Creativity can be nurtured in all fields if stakeholders in Nigeria's education sector work together to revise the curriculum. Just like critical thinking, creative thinking is also an important skill that can and ought to be stressed in schools. Unfortunately there are both inherent and indisputable exclusion of creativity to students in Nigerian education system. Parents, schools and the community force students to conform to certain stereotypes that are held for an ideal citizen. These stereotypes affect the natural career path of students which takes into account talents and other subjective factors. All these stereotypes aim at making students marketable.

Should Critical Thinking and Creativity be taught as a Subject in Our Schools?

It is high time our scheme of education begins to consider introducing curriculum materials that can develop effective critical thinking and creative problem solving skills. These three skills do not need to be introduced as new subjects but can be blended in the current subjects taught today. The world is fast undergoing changes due to technological advancements in all areas of human endeavours. Nigeria cannot afford to lag behind since our citizens are not prepared to think. The current century and the future at large calls for a population that is able to think deeply through various global challenges and evolve with creative ways to address those problems and solve them as well as they can. Nigeria should act as soon as possible in equipping its next generation with the critical thinking; creative thinking and problem solving skills as this well help them become great people and great nation in times to come.

Conclusion

This paper focused on the need for critical thinking and creativity in education. It highlighted the significance of critical thinking and creativity to education. Although the current century and the future at large call for the need for critical thinking and creativity due to various global challenges, emphasis on education should not be placed only on recall and understanding alone. This is because placing emphasis on recall and understanding only may underscore the importance of critical thinking and creativity in education. Therefore, critical thinking, creative thinking and problem solving skills should be allowed its place in education if Nigeria is to become a great nation. Unless that is done, Nigeria will continue to depend on others for solutions to its own problems.

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