

Lifelong Learning in Science Education

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Abstract

There is a common notion that as human advances in age, the quest for knowledge also diminishes or stopped. This might not be the case again due to advancement of Science and Technology for a better life. Hence a problem for the average man who believed that learning new things at their present age is meaningless since they are not young. This paper is on Lifelong Learning (LLL) in Science Education. The importance of Lifelong Learning cannot be underestimated due to constant research and development in the Technological world where knowledge in Science is very important. Lifelong Learning in Science Education as the name implies is a continuous learning where different skills in Science are learnt throughout man's life for the purpose of improvement and at times for financial reasons. The skills obtained are not only to satisfy ones 'self but mankind with the skills learnt. For this reason, this paper is discussed under the following sub headings; concept of Lifelong Learning, Importance of Lifelong Learning, benefits of Lifelong Learning in Science Education, challenges of Lifelong Learning in Science Education, and how to be successful in Lifelong Learning in Science Education.

Keywords: Learning, Lifelong Learning, Science Education

Introduction

To acquire knowledge, one must learn. When one learns, one grows and when one stop learning, he or she stops growing knowledge wise. As one engages in learning, there should be improve in the acquisition of knowledge and ability to do better, exploring deeper into the horizon of our interest. There is no limit to learning, no age limit, no time limit, no area limit, as well as no boundary limit to learning. Learning is therefore a continuous process throughout man's life, involving different spheres of man's life and disciplines. According to Aleandri and Gabriella (2012) people and societies are involved in a continuing changing process, such that education has become crucial for the individual life, knowledge, work and for economic well-being of societies. Learning therefore can be easy or difficult to acquire, cheap or expensive, time consuming, cheap or expensive to acquire depending on the type of learning and where it is acquired. It does not necessarily need to be learned in the school environment but can also be traditional coaching like sculpture, pottery, farming, to mention a few learning processes as well. Wikipedia (1) explain learning as a process built on the acquisition of new understanding or knowledge in behavior, skills, values, attitudes and preferences. Through these processes,

new knowledge is gained; new skills and values are acquired, thereby improving the life style of man. This not only builds the individual but develops the growth the community or society at large.

Concepts

Learning is a process that leads to changes which occur as a result of experience (Ambrose, et al, 2010). This involves the increase in the potential for improve performance and future learning. Similarly, Behlol and Dan (2010) define learning as a quantitative increase in knowledge involving the memorization of facts, skills and methods that can be retained and used as necessary. From all indications, it shows that learning is important, and since it is important, it should continue for a long time as far as it is for the benefit of man's growth. Lifelong learning which takes place throughout one's life is defined by Wikipedia as an ongoing voluntary and self-motivated pursuit of knowledge carried out for either personal or a professional reason.

Soran, Akkoyunu and Kavky (2006) asserts that Lifelong Learning means creating new opportunities for individuals by updating their skills or providing more advanced educational possibilities. In Encarta's (2008) assertion Lifelong Learning is the development undertaken after formal education. This involves the continuing development of knowledge and skills that are experienced by people after formal education as well as throughout their lives. Lifelong Learning system according to Ates and Alsai (2012) has a cradle until death philosophy that provides people with competition power to maintain their position in society and in the world. Solmaz (2017) defines Lifelong Learning as a learning process that continuous throughout life and is everywhere in order to adapt to ever-changing conditions in contrast with education and learning skills compressed to a particular period of time. Mankind faces new challenge in coping with rapid change in knowledge consequently, adapting oneself to this challenge affected society directly (Yazici & Ayas, 2015). They explained that Lifelong Learning seems to be the only tool to satisfactorily reply to the stated challenge and covers all modes of learning throughout life: formal, non-formal or informal. Lifelong Learning can be self-taught activities whereby one learns of his/her own accord according to interest and motivation.

The interest developed by such individuals spore them to undergo studies online also, leading to the acquisition of new knowledge and skills. Lifelong Learning as explained by Korosec (2019) is the learning throughout man's life, it shows that man does not stop learning and improving upon one's self everywhere man goes. The learning can enhance the understanding of the world around man, provides man with better opportunities and improve quality of life. Capps (2018) sees lifelong learning as an ongoing, voluntary and self-motivated pursuit of knowledge for personal and professional purposes, and further mentioned some among the following as ways to practice lifelong learning at home;

- a. Creating and maintaining a positive attitude to learning both for personal and professional development
- b. Learners are motivated to learning and development because they want to

- c. Learning is a deliberate and voluntary act
- d. It can enhance the understanding of the world around man
- e. Provide man with more and better opportunities and improve the quality of man life.

Science Education according to Wikipedia is the teaching of Science to non-scientists. These should be school children, college students or adult within the general public involving scientific content and process. Science Education is aimed at increasing understanding of Science and the construction of knowledge as well as the promotion of scientific literacy to the responsible citizens of a country, like Nigeria. Science Education however seeks to promote the development of scientific skills to meet the specific education policy objective and practice of government. Lifelong Learning in Science Education is aimed at acquiring a lifelong Science knowledge and conceptual understanding in skills to solve problems. This is achieved through taking the rightful decision as regard scientific contexts.

Lifelong Learning and Science provides the foundation for learning and working supports thinking, self-management and social interaction, thereby enabling the support of goals. The learning is a form of self-initiated education and focuses on a person as an individual. Lifelong Learning in Science Education is a multidimensional concept which describes attitudes and way of life in order to achieve a continuous knowledge, skills and competencies developed (Aleandri & Girottic, 2012). They explain that to achieve a deep-rooted lifelong learning and education culture, it is important to increase education programs and activities at every span of life, from youth to adulthood. Lifelong Learning in Science Education involves learning new skills and technology, acquisition of new knowledge as well as self-taught study to mention a few.

Importance of Lifelong Learning in Science Education

Lifelong learning promotes learning and provides experience acquisition through which scientific knowledge is attained as a result of scientific literacy. This is as a result of understanding the learning area and development. Similarly, in science direct, lifelong learning does not only enhances social inclusion, active citizenship and individual development, but also increases competitiveness, employability. Lifelong learning which is a voluntary act of learning throughout life is, involving the processes of gaining knowledge and learning new scientific skills in life.

Lifelong learning according to Filk and Dierking (2012) is the learning that takes place beyond school and brings about changes in the society on how people live and are transformed. They further contend in order to create a comprehensive lifelong learning in science education the society must recognize, respect and support the various places, ways and reasons why people of all age learn in their everyday lives. Yazici and Ayas (2015) assert that Lifelong learning does not only enhance social inclusion active citizenship and individual development but also increases competitiveness and employability. They also stated that, Lifelong learning increase life expectancy, increasing the old age dependency, the desire to increasing the quality of life as well as trying to keep them in good physical and mental condition. Science education

process is very important for the effectiveness lifelong learning in science education bearing in mind that a problem of interest needs to be identified. These required the scientific processes to be able to arrive at an answer to the problem.

Benefit of Lifelong Learning in Science Education

Korosec (2019) mentioned the following as benefits of Lifelong Learning in Science Education; renewal of self-motivation, recognition of personal interest and goals, improvement in other personal and professional skills as well improvement of self-confidence. Similarly listed the following as benefits of Science Education;

1. It can help man to succeed at one's work
2. It can help man brain to stay healthy
3. It can help man to stay connected
4. It can help man to stay fulfilled in life
5. It can help man to be happier
6. It can improve self-confident, it involves the ability to produce something new and original
7. It can improve self-trust in oneself and one's level of competence
8. It can give values to others
9. It can be innovative; it involves the ability to imagine or invent something new
10. It can be creative, involve the innovation which creates new ideas
11. It can give excellent problem-solving skills.

Success of Lifelong Learning in Science Education

Lifelong learning in Science Education is concerned with how things are done for the benefits of one and others. It is not done out of compulsion. These successes are achieved by the following ways

1. By taking notes
2. By setting goals
3. By ordering books on topics of interest
4. Planning day trip and take tours
5. By seeking resources and what to do with them
6. By knowing ones interest and goals
7. By visiting local museum
8. By surrounding oneself with other lifelong learners
9. By learning from different mediums
10. Attending seminars on topic of interest
11. By using technology
12. By encouraging critical thinking
13. By encouraging independent learning
14. By developing innovating skills and growth mindset

Lifelong learning according to Yazia and Ayas (2015) initially belong to only the most developed countries around the world before its horizon has been widened to now including developing countries and less developed countries. Some challenges in Lifelong Learning in Science Education as further mentioned by them in developing countries include the following;

1. Creating awareness of lifelong learning to the general public
2. By improving the condition and governance of lifelong learning
3. By improving career guideline
4. By improving data on lifelong learning and better monitoring and evaluation
5. By providing adequate and effective financing of lifelong learning
6. By improving levels of school attainment to create solid foundations for Lifelong Learning
7. By providing a system for recognition of prior learning
8. By improving quality assurance and delivery of Lifelong Learning

Conclusion

Lifelong Learning in Science Education is a continuous process throughout man's life as well as for professional areas. It occurs as an interest and involves innovative and creative skill. Lifelong Learning in Science Education involves scientific literacy and the application of scientific knowledge for the benefit of mankind. Though Lifelong Learning in Science Education has its own share of challenges, but its' benefits outweigh any problems it faces when it processes success for the individual and society at large. Some Lifelong Learning is done for personal satisfaction and fulfillment because the people involved are happy doing what they do out of interest as well as hobby, since it is their dream job and cannot be valued in money. Learning which is of self-initiated, self-taught or trial and error process brings out the curiosity in man and it does not necessarily take place in the formal education setting. In the end, the haughty mindset of Lifelong Learning led people to their success or their own end.

Suggestions

Lifelong Learning in Science Education should be encouraged in the society by appreciating peoples' creativity and innovation. All those who show interest in their personal development and societal development should be encouraged and motivated. Finances should be made available for those who are creative but cannot sponsor their research work, provided research works will be beneficial for the development of the society.

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