

TEACHING AND LEARNING AGRICULTURAL SCIENCE FOR SUSTAINABLE DEVELOPMENT USING CREATIVE EDUCATION AND ENTREPRENEURIAL SKILLS IN SENIOR SECONDARY SCHOOLS.

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Abstract

This study used creative education and entrepreneurial skills in the senior secondary school agricultural science curriculum as a panacea for sustainable national development. The paper also discussed the concepts of creative education, entrepreneurial skills, curriculum, senior secondary school agricultural science curriculum, and sustainable national development. The use of and the rationale for creative education and entrepreneurial skills for better productivity were highlighted. Furthermore, the paper looked at how creative education and entrepreneurial skills through the senior secondary school agricultural science curriculum could be of assistance to sustainable national development. It then concluded by saying that the duo of creative education and entrepreneurial skills has great potential for ensuring the sustainable national development of a nation. However, the paper then suggested that students should avail themselves of every opportunity to learn creativity and entrepreneurial skills for a better mindset, teachers are to seek all avenues to be effective at teaching creativity and entrepreneurial skills, and teachers should research more on how to make every classroom encounter with students a creative teaching and learning opportunity, among others.

Keywords: Creative Education, Entrepreneurial Skill, Curriculum, Sustainable Development

Introduction

Creativity is a trait that is desired by people in all works of life. It gives room for one to fashion out solutions to problems in different situations, particularly, challenging ones. It comes from the word create which means to make something or develop, bring into existence among other meanings. The term creative is an adjective of the original term create and it simply modifies the capacity of an individual to

develop or produce something skillfully and uniquely from the known previous ways or forms (Obialo, 2018). And most times when a person is creative, he or she is described as an embodiment of creativity. The foregoing seems to be presenting creativity as a skill needed to do something better than the normally known pattern or that which is possibly known and acceptable to the society. Therefore, creativity bears some level of semblance with bringing innovation into

an act/art and practice of carrying out an activity and especially because education is amenable to dynamism as orchestrated by the changing nature of the society, leeway to show that creativity in education or creative education is permissible, most importantly because education is the transmission of a people's culture from one generation to another.

From the above, creative education could be conceived as an approach driven towards skillfully transmitting a people's culture from one generation to the next based on the current trend, needs of the society, its sustainability, and aspirations of the people. Creative education may also be a perceived new approach to people's cultural evolution; it is a process, hence, skill is a basic component of the term creative (Gabora, 2017). The description above depicts a situation where a new way of doing, acting, or otherwise precedes from an existing manner an operation of practice takes place; that means that no creativity can happen without a pre-existing condition, in this case, no creative education can take place without an already prevalent educational practice, otherwise, this idea of creativity would be lost. Creative education then is pointing at carrying out education in a manner that would capture what the society needs now and where the world is going, an idea that opens up some new challenges that may be peculiar to the present age among which unemployment stands out and it happens to have driven nations of the world to embrace entrepreneurship which is, of course, a skill that is taught and learned through creative education.

To be entrepreneurial simply means to have the abilities and competencies needed for entrepreneurship. That is to say that the

acumen for entrepreneurship in a person or what it takes for one to be referred to as an entrepreneur or be entrepreneurial is observable in the individual in question. The observable attributes so talked about are the skills that are characteristics of being entrepreneurial; a combined, conglomerate of technical, management and personal skills. These sets of skills are not exhaustive, particularly because due to creativity, new skills emerge at intervals. Skills here could represent acquired knowledge, attitudes and values put together innovatively to achieve set objectives. This may be why Ogunjobi, et al (2020) see skill as the competence and potential use in which knowledge acquired previously in a creative way is applied to solve a problem at hand. It seems that creative education and entrepreneurial skills present themselves to be inseparable considering that the senior secondary school age of a student is when fundamental and intermediate learning and practice is developed by young people in school and of course a time that much of the skills they would need for life is developed, then, it becomes imperative to have exposure to a creative education that is loaded with entrepreneurial skills. According to FRN (2013), senior secondary school is an educational level just after basic education, the knowledge gained and the skills acquired makes the individual to fit in more into the society than what is obtained with graduates of basic education, this suggests according to Amadioha and Akor (2019) that the coverage of curriculum content here would be wider in scope and deeper in integration with other areas to allow the recipient to be more useful to himself and the society after leaving school, the second angle to it may be that because

the graduates at this level of the senior secondary school may never have access to higher education, it then becomes necessary to give them proper training in skills that is rounded and one subject through which this could be achieved is the Agricultural Science.

The outstanding objectives of the senior secondary school Agricultural Science Curriculum content as it relates to this discourse include: enabling students acquire basic knowledge and practical skills in agriculture, to enable students to integrate knowledge with skills and preparing and exposing students to occupations and opportunities in the field of Agriculture (Okorie, 2001 and Famiwole, 2018). The objectives stated above show that the Agricultural Science curriculum in the senior secondary school would not only be able to make students develop entrepreneurial skills but does not have the capacity to ensure sustainable national development particularly if the delivery of the contents is not effectively done by curriculum implementers. Sustainability is perceived as a way of ensuring that what is at hand stands the test of time, that is, that whatever a people have been preserved over a long period of time perhaps in one or many forms. While sustainable national development deals with a people preserving their heritage countrywide. It is perceived that sustainable national development was what the Nigerian nation had in sight when developing the National Policy on Education and it considered factors like: a free and democratic society, a just and egalitarian society, a united, strong and self-reliant nation, a great and dynamic economy and a land full of bright opportunities for all citizens as her national goals (FRN, 2013). Every society exists and always pushes for sustainability. This is the

main reason why the people's culture has continued to be transmitted from one generation to the other otherwise many societies would have been extinct by now but for sustainable development and of course sustainable national development.

This paper is coming in pursuant of solving the problems facing senior secondary school students of Agricultural Science who come out of school without acquiring the needed skills or enough skills or saleable skills, the students thereby become unemployable and unreliable, considering the skills they possess is not adequate to overcome challenges posed to the nation and forcing a crack on sustainable national development leading the nation to sit on the edge of collapse and the future bleak without an assurance of continuity for the economic and social development with a bad image of senior secondary leavers. Thus, the question may be, what should the nation do to come out of this problems? Perhaps with creative education that is fully packaged with entrepreneurial skills, school leavers may find employment in society, hence, the need to do this study on creative education and entrepreneurial skills in the senior secondary school Agricultural Science Curriculum as a sine-qua-non for sustainable national development in Nigeria.

Concept of Creative Education

To be creative is a feature that is unique with people in different spheres of life. It is a characteristic that is possessed by an individual which enables the person to develop specific solutions to specific problems or apply some general solutions to specific problems that perhaps defies such generally known problems with some

level of dexterity. It could also be observed with a group of learners put together or who come together to design an approach that is geared towards solving problems that concerns them or that of the learning process in which they are engaged. Creative persons' or groups' output usually challenge the status quo and more often than not a new approach to development would emerge from what is done or is being done.

According to Tsai (2015) and Dimnwobi, et al (2016), creative education has to do with techniques brought into teaching, thinking and learning in order to enhance support for what has been on the ground, thereby, leading to the development of new insights in already available educational arrangements. It could be deduced from here that creative education is a dimension of view towards teaching, and/or thinking pattern as well as learning from different perspective in order to possibly select for use the most viable approach that could produce the best results obtainable. Patston (2017) sees creative education from the angle of learning and conceives it as that which is indicative of learning in a better way, particularly, that which puts into consideration the individual personalities of the students such that they learn better and perform or achieve higher in their academic pursuits. Creative education is also seen as that education that develops in the students the capacity for character trait and value creation where their potentials are maximally grown or nurtured (Lee, 2013). The perspective of this definition is that of teaching, this leaves the teacher with the responsibility of being the one to initiate the idea of creativity in education in their students and of course the credit goes to him/her. Creative education has been perceived as an

advantageous educational practice in that it brings fun to learning, and permits freedom of expression. Creative education is an embodiment of four main features which are imagination, purpose pursuit, originality and value judgment (CL, 2020). These guarantees emotional development, growth of thinking competence, boosts problem solving skills, allows for improvement of focus and attention in the learner, enhance learners' communication capability etc. The characteristic features of creativity education shows that it could build a student up for entrepreneurial skills that would be relevant in the day to day dealings of the learner in the wider society.

Entrepreneurial Skills

Entrepreneurial skills are the set of abilities and competence required for one to be or become an entrepreneur. Entrepreneurial skills are those skills needed for a person to start a business and possibly manage it. There are certain skill sets required of that person, hence, it is the entrepreneurial skills which a learner may have acquired from creative education that can foster entrepreneurship in the learner. The concept entrepreneurial spans from entrepreneurship, an educational process geared towards a learning pattern that develops in the receiver the needed skills for self-reliance and for adjustment to the world of work (Omeje, et al, 2020). The description above shows that entrepreneurship and indeed entrepreneurial skills could only be developed from creative education since what is learnt in one hand is utilized to solve problems on another hand. This is because entrepreneurship thrives on existing structural methods and knowledge required to build a new business endeavour and considering that

due to economic challenges in the nation, it becomes imperative that the senior secondary school curriculum pursues this through agricultural science, a practical subject.

Agricultural science is a subject that encourages “learning by doing” in its practice, the basis for which students needed all the learning in order to become productive members of the society, producing food and other agricultural products for themselves and the society at large. Here, skills for farming, manufacturing or processing are acquired and by virtue of the students’ exposure to entrepreneurship through classroom interaction entrepreneurial skills are also learnt and developed (Ogunjobi, et al, 2020). This is because through agricultural science, the senior secondary school learner could become an industrious person, business person, agriculturist covering lots of branches, research assistant, farm superintendent etc. All these may be possible because that individual gave himself wholly to creativity learning in agricultural science and developing entrepreneurial skills that of course would be impossible without a curriculum that is functional.

Concept of Curriculum

Curriculum could be described as all the learning that a learner gets under the guidance of the school. This definition presents a picture of the curriculum being the interface between the school and the society, sewing neatly the purpose of the connection for both institutions to be relevant to each other, even though, that their continued relevance to each other is dependent on how much behavioural change takes place in the life of the learner and concurrently the society. This is why Akinwande and Olowogbon, (2019) see

curriculum as a tool for facilitating teaching and learning and for bringing about the positive change needed in the learner for his betterment and even for the betterment of the society in general. This presents the curriculum as a powerful instrument that can transform the thought, ideologies and total person of one that is exposed to it, a reason that would have made Chuka-Okonkwo and Onukwugha-Opara in (Amadioha & Akor, 2019) say that the object of curriculum could serve these purposes; develops cognitive processes, as technology, for self-actualization, as a consummatory experience and for academic thinking. The purposes so mentioned that the curriculum could serve distinguishes it from any other planned document since it could change everything about a nation in a twinkling of an eye and still guarantees the sustainability of the change.

Sustainable National Development

Sustainable development is that development which can stand the test of time without degeneration. According to Ndor, Agwale and Usman (2020), it is that type of development that does not just consider today’s situation but also mindful of how future generations could stand on existing development to advance. This means that issues of depletion is one of the difficulties that sustainable development fights. Hence, sustainable national development could now be conceived as the development of a nation that is progressive and does not mortgage the future for the sake of the present. It is also as a process that allows for people and societies to seize available opportunities to better themselves over a period of time, yet, ensuring situations that would permit for resilience and tenacity for further development in the future. The inference that could be

drawn from here is that while it is important to enjoy development for today, attention is also being called to create allowance that even in the future the generation that would be on earth could still enjoy the earth. Olowokere, et al (2022) added that sustainability calls for equity for the utility of resources of all forms both now and in the future, and in fact of human life. And considering Nigeria as a nation that is blessed with much resources, it ought to be careful in the way she makes development plans in a manner that would also permit future benefits as dreamed.

Therefore, the idea of creative education and entrepreneurial skill: The senior secondary school agricultural Science Curriculum as a sine-qua-non for sustainable national development in Nigeria should be a welcomed course.

Using Creative Education and Entrepreneurial Skills for Better Productivity

Creative education from the foregoing discourse has been accepted as consequential on entrepreneurial skills development and use, mostly because every entrepreneurial endeavour require creativity to be brought in as a way to achieve the needed results. So the idea of harnessing creative education for entrepreneurial skills for higher productivity becomes necessary. Basically, it is vital that a blend of creativity and entrepreneurial skill is harnessed for higher output. According to (Caramela, 2017), it is often observed that people value intelligence more than creativity but the fact remains that what distinguishes one level of intelligence from another is the degree of creativity that is brought in considering that intelligence in any area of life is subjective, therefore, creativity adds flavour to ones level of intelligence,

thereby setting the individual apart as unique in the application of intelligence and perhaps creativity. For Ogunjobi et al (2020). Creativity is one of the major attribute of an entrepreneur, it means that the skill for problem solving has to be nurtured in the entrepreneur, appearing as creative education and leading to good entrepreneurial skill, a mindset that is required in the business world. Below are some reasons for harnessing creative education and entrepreneurial skills for higher productivity.

A blend of creative education and entrepreneurial skill increases productivity of users (Ayua, et al, 2021). It puts into full use the dormant potential of individuals applying creative education and entrepreneurial skills.

- It leads to innovative and ground breaking discoveries tending to new perspective on issues.
- It fosters critical thinking in people. It can bring about new inventions.
- It allows gap for further researches
- It leads to new inventions, technology and scientific approaches not known before

Importance of Senior Secondary School Agricultural Science Curriculum in Entrepreneurship Development

The Agricultural Science Curriculum for the senior secondary school has a lot of roles to play in bringing about entrepreneurial skills development in learning based on the following: It prepares the learner to own a farm and advance in that direction, thereby lending itself to vocational agricultural practice

It allows for job creation and generation. This permits the practice not to just have the learner engaged in

agriculture but to also be able to engage others

It facilitates economic renewal of the community. The idea here is that while money is spent and it goes out of the community because of the people purchasing goods they do not produce, the farmers also rake in money through agricultural produce and products sales.

It facilitates inter-community relationship through marketing and sale of agro-products. Develops independence and comparative advantage for those involved (Far & Rezael Moghaddan, 2019).

How Creative Education and Entrepreneurial Skills through Senior Secondary School Agricultural Science Curriculum Ensures Sustainable National Development

This can only be achieved if the right approaches towards achieving it are set in motion. So to achieve it, the following steps may help guarantee sustainable national development. The agricultural science curriculum should be used as a tool for guiding learners on how to safeguard natural resources in their environment.

The agricultural science curriculum should teach how to process harvested produce and prevent product from being wasted.

The agricultural science curriculum should encourage knowledge sharing among those who cultivate or process one type of product.

The agricultural science curriculum should teach the learners how to value and maintain resources in their territories.

The agricultural science curriculum should educate people on how to make their produce and product attractive for marketing and sales.

The agricultural science curriculum should teach how learners can use social protection instrument to their advantage and for higher productivity

The agricultural science curriculum should teach how the ecological capacity of the domain could be enhanced for further production.

Conclusion

The discourse of this write up has clearly shown that creative education and entrepreneurial skills are interwoven for real sustainable national development to be observable in a nation like Nigeria, mostly beginning with individuals who when they are creative it robs off on their social life, economy, affecting the ecosystem and even the political landscape of their environment. Therefore, blending creative education and entrepreneurial skills should have unimaginable benefits that would be released into the country which include capacity for enhanced well-being of the people as well as the reduction in the spate of insecurity, ecological enhancement and protection among others.

Recommendations

The following are the suggestions that are made from this paper;

The students should avail themselves of all opportunities to learn creativity and entrepreneurial skill for them to have a better mindset.

Teachers should seek and advance methods that would bring about their being effectiveness at creative education and entrepreneurial skills development of their student.

Teachers should research more on how to make every of their classroom encounter with students a creative teaching and learning opportunity.

Education stakeholders should help facilitate creativity development in students through the provision of facilities that would enhance the thinking pattern of students and the teaching process for teachers.

Curriculum designers should incorporate such means that would permit creativity in teaching and learning whenever the opportunity for curriculum revision comes up.

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