

Perspectives of Educational Stakeholders on Establishing Agriculture Science Subject in Public Secondary Schools: A Case Study of Kongwa District

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Abstract: *Agriculture being the backbone of the country's economy, considering the perspectives of educational stakeholders on establishing agriculture science subject is inevitable. The building capacity through formal agricultural education is needed for the development and production of skilled manpower to serve the agricultural sectors in the world. It is necessary to examine the connection between perspectives of educational stakeholders on establishing agriculture subject and the position of agriculture subject in contemporary life. Therefore, the study investigated the perspectives of educational stakeholders on establishing agriculture science subject in public secondary schools. Employing descriptive research design, the study sampled 41 respondents from Kongwa district in Tanzania. The study revealed that agriculture science subject is well known to the area, agriculture subject is perceived as an employment post, and the subject requires quality instructional facilities to deliver knowledge.*

Keywords: Educational Stakeholders, Agriculture Science Subject, and public Secondary Schools

1. Introduction

Studying agriculture science subject will enhance the chances of production of better variations of crops that yield more and take less time in growing. Agriculture science subject involves a variety of subjects that include the aspect of science, technology, and business all together. It teaches to invent and to work on better quality of yield and crops and also to run a business based on agriculture. A student can take up this field of education from secondary to college level of studies.

In developed countries, such as USA, China, and Brazil, agriculture education is ranked highly and is offered as a compulsory subject in the curriculum in middle and high school (Krishnaswamy&Rajit, 1993). In the 2005–2006 Annual Report indicates that Agricultural Education proposed the goal to establish 10,000 quality agricultural education programs in the United States by 2015. To help to meet this goal, several initiatives were launched including the national standards program, national curriculum content standards, and a national research agenda for agricultural education. Incorporated within those initiatives there were goals to align the secondary agriculture curriculum with science standards, specifically, the curriculum of agricultural sciences education (Team AgEd, 2007).

In Africa, agriculture education is worth being emphasized at all levels of education to enhance food sustainability especially in nations where population increases rapidly (Waithera, 2013). Since the greatest challenge at present is to generate adequate food production to sustain the Animal husbandry activities are an important source of income and employment for the farms and contribute to the improvement of the productivity of soil resources and provide healthy and balanced nutrition for the population. Also farmers select animal husbandry as a source of income

and employment depending on factors such as land resources and topography (particularly the gradient of the land), soil fertility, available of meadow and pasture, household labor force, price of feeds, value of produce, livestock accommodation, machinery assets of the farms and in particular consumer demand, trends and traditions (Tanrivermis et al 2007).

In sub-Saharan Africa, the agricultural sector is still the dominant provider of employment and it remains crucial for economic growth. However, in most parts of Africa, food security is still a critical issue and therefore, food production will continue to be a major focus of agricultural education and training institutions (Vandenbosch, 2006). It is observed that agriculture has a poor image as a career choice in the eyes of most students in schools in Tanzania. Students' decision to pursue agricultural science as a field of study or career, and the involvement and success there in may be predictable by investigating students' towards agricultural education. Darko et al (2015) explains that the major economic activity in Ghana from the pre-colonial, up to the present is agriculture. Despite the fact that the source of the Ghana's economy is from agricultural activities, the teaching and learning of agricultural science in Secondary schools has not paid much attention. Only few students are enrolled in agriculture subjects compared to other disciplines increasing population, agricultural education plays an important role.

In Tanzania, agriculture is also the main source of the nation's economy, with about 70% of Tanzanians living in rural areas and 75% depending on agriculture for their livelihood (Park & Osborne, 2007). Also, agriculture sector contributes 95% of the food consumed in the country while the required level for food self-sufficiency is 120%. Furthermore, agriculture sector contributes 30% of total exports; and 65% of raw materials for Tanzanian industries

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(Aholi et al, 2018). Agriculture subjects are taught in some of secondary schools for purpose of providing students skills on food production, nutrition and animal husbandry which may help them to raise the living condition of the learner and the country at large (Aholi et al, 2018). Some of the factors that has a significant effect on agricultural education are the attitude and perception of the people, especially the students towards agricultural education, as it has been discovered in many parts of Tanzania that students' willingness to pursue agriculture as a carrier was related to students' attitudes towards agricultural education and science. Some recent works have indicated that student' decisions to study agricultural science and their performance can be determined by assessing student's attitude towards agriculture education and training (Basey, Ime, & Shirney, 2012). This study goes beyond the student as a single educational stakeholder to include the rest (DSEO, community, and teachers).

Much research has been done in the field of students' attitudes towards certain subjects and their subsequent enrolment in those subjects and academic achievement (Orodho, 2014; Sherry, 2010). Many of these authors have given their suggestions about the factors that influence students within the school environment (Sherry, 2010; Orodho, 2013, 2014; Kenya Ministry of Education and Human Resource Development, 1999, 2010, 2011).

Despite the fact that Agriculture is considered as the backbone of Tanzanians' economy, the teaching and learning of agricultural science in Secondary schools has not received much emphasis as it should (No secondary school offering agriculture science subject in Kongwa district). This therefore justifies the need to investigate the perspectives of educational stakeholders on establishing agriculture science subject in public secondary schools Kongwa district, Tanzania.

2. Theoretical Review

The study was guided by Social-Cognitive theory of learning. The social-cognitive constructivist theory established Vygotsky. The focus of his work is the individual's interaction with society, the impact of social interaction, the language and the learning culture. He aimed to explain the role of dialogue in structuring recognition and viewed the origin of cognitive functions as a product of social interaction. "The human learning means a specific social nature and a process through which children enter gradually in the intellectual life of people surrounding them" (Bornstein, 2018). Veer et al (1991) confirms that base on the main concepts of the socio-cultural theory, the human mind is mediated.

According to Kozulin et al (2003) the socio-cultural environment confronts children with a diverse set of task and questions. In early stages, the child is completely dependent on other people, especially on parents, who initiate his decisions while instructing him what to do, how to do it and what not to do. Initially these are realized through language, which plays a big role in the way the child adapts to the social inheritance. Vygotsky 1978 cited (Bornstein 2018) declares that the child receives the

knowledge initially through the contacts and interactions with people, and then assimilates this knowledge adding the personal values in it. This passage from the social to the personal qualities is not a simple imitation but a transfer of what has been learned from the interaction to the personal values. Vygotsky admits that this is what happens in schools. Children do not only copy what has been offered by the teachers but also transform them during the learning process. According to this theory, the interaction between teachers and children has a dynamic nature and learning happens as a result of this interaction (Karpov, 2014). This study adopted Vygotsky social-culture theory by reflecting on the Kongwa district in which agriculture subject is not taught in secondary schools while people in that particular society involve in agricultural activities. According to Vygotsky theory, parents and schools of Kongwa district are supposed to pass on to their children agricultural knowledge that is practiced in the community for the better of future generation. However, the study aimed at getting the insight of perspectives of educational stakeholders on establishing agriculture science subject.

3. Methodology

The study was carried out in Kongwa district. The study employed descriptive research design and qualitative research approach. The sample size of the study was 41 participants that include 4 Head teachers, 16 school board members, 1DEO, 4 academic teachers, and 16 Students. Purposive and convenience sampling techniques were used in selecting the sample. Data were collected through interview and focus group discussion. The collected data (qualitative data) were analyzed through content analysis.

4. Findings and Discussion

Agriculture Subject Needs Instructional Facilities

Agriculture science subject is among of the practical studies that require practical activities to simplify the accessibility of the lesson to the learners. Teaching and learning resources are all materials and equipments used to facilitate learning. A teacher selects, develops, and reorganizes teaching-learning resources for effective teaching. A teacher is therefore the most important teaching-learning resource. Respondents seem to perceive agriculture education needs instructional facilities to deliver knowledge. One of the respondents said;

"Agriculture science subject is the subject that deals with quality agriculture facilities that are used in crop production and animal husbandry". the course of study is mostly needed in our district because our major economic activities is agriculture, so if the expert could provide the quality agricultural facilities for crop production such as fertilizer, tractors, quality seeds, high breed animals which tolerate climatic condition as it is semi-desert and which may provide quality milk and beef.

Another respondent said;

Is the subject that deals with technology in agriculture which enables students to learn how to cultivate and produce crops. And students can use the knowledge to employ themselves in the agriculture sector, which is

beneficial for themselves, families and nations at large, the person who has the knowledge of agriculture can be able to deal with suitable agriculture when completed his/her studies.

The study finding concurs with the finding of Malcom (1976), who asserted that resources by being presented raw offer stimulating alternative to the convectional text books. The latter summarizes, explains, interprets and as a consequence subtly structures, perception, and understanding. Teaching-learning resources help the learner to learn efficiently. A shortage of these resources will impede learning. Moreover, the GOK Report (1999) observed that quality education cannot be achieved and sustained if the resources and facilities are not available in sufficient quantities. It recommended that all schools be provided with adequate physical facilities, teaching-learning resources and equipment to enhance quality learning. Therefore, Learning resources play a key role as far as learning is concerned. The study finding concurs with the finding of Johnson (2008), who accorded that having satisfactory facilities equipment and materials should not be minimized in establishing the curriculum because of their contribution to the effectiveness of the school. Their availability will enhance or prohibit the implementation of the curriculum. It then follows that facilities, equipments, and materials influence the implementation. Furthermore, the study finding concur with the finding of Mwiria (2002), and Owoeye&Yara (2012), who accorded that agriculture learning resources include a viable school farm, libraries, laboratories, books, workshops, spacious classroom, relevant equipments like machinery, hand tools, inputs, and farming policy.

Knowledge on Agriculture

Agriculture education encompasses the analysis of agriculture, natural resources, food sources, and related subject. At the most basic level, it's a concept that sustains the human population, as agriculture is essential to life. Many agricultural education programs also include interactive activities, where students may take field trips to local farms or participate in growing a garden on campus or school. The response were sought to examine the awareness of agriculture knowledge. One of the respondents said;

Agriculture science subject is the subject that equips students with knowledge of crop production and animal husbandry. It enables the student to use his/her knowledge to apply it in his/her life which can support them in their daily life. It can enable them to be self-employed and practices using modern method which acquired in classroom. This can helps to change the mindsets of the parents on negative perception on agriculture to their children, when they show them practically by producing high production and generating high income to the individuals and country in general. So this subject is very important to be taught in secondary schools and primary schools.

Another respondent said;

Is the subject which deals with production of different crops such as maize, sunflower, groundnuts and millets which is used for food but also for sale, also, it involves animal

keeping such as cows, pigs, goats, and donkeys which used to carry out different crops from the farm to the home place and fetching water from distant areas. Moreover this course of study is most important to the student to acquire knowledge on it.

In addition to that another said;

Is the subject during their studying they taught about importance of agriculture quality instruments used in agriculture and quality seeds used in cultivation and they were advised to fertilize the land in order to get crops with quality and suitable for the people to use them. This may help them to improve the living standard of the individuals and national economy to be high.

The findings concur with the finding of Fuseini, (2018) who asserted that the main source of livelihood of many people is agriculture. At present, agriculture is above and beyond farming it includes forestry, dairy, fruit cultivation, poultry, bee keeping, mushroom, arbitrary, and fishery. These could be effectively taught effectively through schools Moreover, the findings concur with the findings of (Sundstol, 2004) who asserted that agricultural productivity can be improved through Agricultural Education and training outreach. Thus, sufficient and relevant agricultural knowledge and competence is required, not only to improve farming systems and technologies, but also for processing, marketing of produce and for the implementation of good agricultural policies in the country. Tesha, (2018) described that agriculture is one of the subjects that teach learners skills that could be used in food production. Learners could use skills acquired at school as a means of earning a livelihood, achieving food self-sustenance, or supplement the income in the work place. They also can get employment in the agriculture sector or start their businesses and become entrepreneurs who would contribute to the development of their communities. Therefore, the aims of teaching and learning Agricultural science in secondary Schools as reinforcing interest and awareness for opportunities existing in agriculture and demonstrating that farming is a dignified and profitable occupation, to expand the students' knowledge on basic principles and practices in agriculture, develop students understanding of the values of agriculture to the family and community.

Agriculture subject serve employment needs

Agriculture is the practice of cultivating natural resources to sustain human life and provide human gain. It combines the creativity, imagination, and skill involved in planting crops and raising animals with modern production methods and new technologies. Agriculture is also a business that provides the global economy with commodities. In addition agriculture providing job opportunities and encouraging economic development. Moreover agriculture provides employment opportunities to a huge number of people reducing the percentage of unemployment and poverty. The information from interview the participants were asked to perceive on agriculture science subject in public secondary schools. One of the respondents said;

Through agricultural education, generations can have a thorough knowledge of where their food comes from, and

more people may be inclined to become employed in agriculture to help meet the needs of growing population.

Another respondent said;

The range of different professions required for the positive development of agriculture and forestry around the globe is vast and dynamic.

Another respondent added;

The agricultural sector has enormous opportunities. The sector is exceptionally friendly to young entrepreneur who have the eyes to identify business opportunities. It is the one of the best job creation sectors and welcome investors from all works of life.

Further information from focus group discussion revealed that agriculture science subject is perceived as a source towards employment and solution towards alleviating poverty. One of the respondents said;

Upon your graduation, you can decide to go into full-time agribusiness as the market conditions are favourable across the world. Therefore agriculture is very crucial to be taught in all levels of learning.

The study finding relate with the finding of Ifeanyieze (2010) who described that self-reliant as the ability to do or to take decision by one's self rather than depending on other people for help. This means that, self-reliance can be described as the ability of agriculture science students to manipulate agricultural products to create wealth for standard living, rather than depend on paid salary. The study findings concur with Moore & Rudd, (2005) who asserted that preparing students for college opportunities; increasing civic engagement of students through service learning; college skills preparation; instructing multi-task millennial generation students; and emotional intelligence skills were the least important five in-service training needs of agriculture teachers. Balancing personal and professional lives, high level of motivation, personal integrity, and high level of enthusiasm are important emotional skills, but some of these skills are occasionally included into training programs. Furthermore due to this reason, teacher in-service programs should focus on preparing them to educate students on college education opportunities and acquiring the skills for college education. Teaching teachers to use service learning is necessary for improving student's ability for civic engagement. Amadi (2001) reported that there are more qualified teachers of agriculture these days however the imbalance in skills remained high. Also Amuche (2013), asserted that the inability of secondary school graduates of agriculture to secure jobs or be self-employed have sustained the present generation gap, which has been blamed on the way and manner in which secondary agriculture curriculum is implemented.

5. Conclusion

The study concludes that having agricultural education at secondary schools contributes positively in developing agricultural human capital. Hence, there is a need to support

its teaching in secondary schools by providing practical skills that aims at modernizing farming, and to assist graduates access initial capital for agricultural activities. This will attract them to take agriculture as a career of choice. The inadequacy of agricultural tools, school farms for practical lessons, lack of agriculture subject teachers limited the opportunity of students to think about agriculture science subject. Moreover, agricultural practices such as digging ditches, watering, weeding, fallowing and taking care of the few available school's animals such as goats and cows are taken as a punishment, it thus cement negative perception of students to the study.

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