Published 18/11/2024 https://emsajpublishers.org/ijaecd

INTERNATIONAL JOURNAL OF AGRICULTURAL EXTENSION AND COMMUNITY DEVELOPMENT

ASSESSMENT OF ADULT EDUCATION PROGRAMMES AS EFFECTIVE STRATEGY FOR IMPROVED AGRICULTURAL PRODUCTIVITY IN NIGERIA

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Abstract

An essential outcome of Adult Education programmes is self-fulfillment of those exposed to it. It is often centered on the development of many who in one way or the other were deprived of quality education. Thus, it serves as a driving force to ameliorate and alleviate the living conditions of people especially people living in rural communities who are majorly farmers. These categories of people are veritable instruments par excellence for improving agricultural productivity a must for every thriving economy. To this end, this paper tends to examine how the utilization of adult education programmes for improved agricultural productivity is inevitable. This paper examined the concept of adult education programmes such as agricultural extension education, cooperative education and entrepreneurship education as effective strategies for improving agricultural productivity in Nigeria. The paper recommended amongst others that, there should be full and active participation of farmers in adult education programmes that will improve their skills and knowledge for effective agricultural productivity and that government at all levels should periodically organize and subsidize fees for adult education programmes to enable farmers take fully delivery of the programmes. In conclusion, it was deduced that the farmers who are mostly adults and participants of adult education agricultural programmes stand to earn more income/profit compared to those who do not participate and that through these programmes the farmers, take cognizance of innovations in the farming system, acquire skills and knowledge necessary for input and output in their farming endeavors, thereby enhancing agricultural productivity.

Keywords: Adult education, agricultural productivity, agricultural extension education, cooperative education, entrepreneurship education

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Introduction

Adult Education and agricultural productivity are two concepts that complement each other since they are both linked with the development of any nation in the world. They tend to open or shut doors of development depending on the contest of usage. Adult education and agricultural productivity help to ameliorate and alleviate the living conditions of people within a community and by extension the nation at large. Adult education as a concept has been faced with hydra-headed definition and such; it becomes difficult to hinge it on a singular universal definition (Aduwari, 2021). Nevertheless, Nzeneri, in Aduwari (2021), explained that adult education is that education undertaken by adults who need to make up for what they lost in formal schooling, or for those who desire to use their leisure more meaningfully or people who were unable to acquire new and improved skills in order to adjust to changes and challenges, technology and occupation. From the definition, adult education plays a key role in creating social capital, fostering social inclusion, and fighting both immediate, less apparent social exclusion expands and encompasses all education and training activities undertaken by adults for professional or personal reasons.

Just like adult education, agricultural science as a vocation and discipline opens shuts more doors for men and women than any other content area. According to Nwangwu, (2019) agriculture was truly the most important economic sector in Nigeria, which accounted for the highest source of provider of employment, highest contributor to gross domestic product (GDP) and foreign exchange earnings. By implication, agriculture plays an important role in the economic development of Nigeria. It accounts for 26.21% of the country's GDP, employs over 70% of the population, and provides more than 75% of industrial raw materials for industries (National Bureau of Statistics (NBS), 2020).

Agricultural knowledge and information and the learning ability of farmers (adults) are prerequisites for improved agricultural productivity. Farmers who are the bedrock of improved agricultural productivity must adapt to production and management systems to maintain and/or increase the competitiveness of agricultural processes. Also, the quest to meet up with innovations expressed in structural changes which include: farm size, cooperation, land ownership, labor force, own and/or loan capital, infrastructure, market structure; and in agricultural practices which include: intensity, productivity and specialization/diversification of existing systems, new products and technologies, innovations in management demand further learning processes. Hence, Rusu, Florian, & Roșu, (2020) posit that adult learning brings considerable benefits to people, to companies and to the entire society.

On the other hand, adult education is the education which tends to enable farmers become better managers of their products by enhancing their decision-making skills. Through adult education programmes, farmers who are mostly adults improve their access to information which therefore allows them to potentially pay and receive better prices for the inputs used and the outputs sold. Additionally, effective adult education programmes enhances farmers' adoption of promising new technologies that would encourage improved agricultural productivity. Rural dwellers in most developing countries are majorly farmers and through adult education programmes they are able to tackle illiteracy, ignorance, diseases, poverty, deprivation and marginalization. More so, through integration of adult education, different programmes meant to solve different problems are planned simultaneously to achieve a far-reaching impact on the lives of the farmers. Thus, Reimers, & Klasen (2011) assert that early studies on the determinants of agricultural productivity across

countries typically found significant positive coefficients for the education variables implying that higher levels of schooling lead to higher productivity.

Notwithstanding the importance of adult education in improving agricultural productivity, the awareness and utilization of this concept is relatively small. Takeshima, (2016) mention that Nigeria's agricultural productivity has been in decline in recent years with most crops producing less than their potential. With a cultivated area of 30 million hectares, two-third of Nigeria's rural populations depend on agriculture for their livelihood and income generation, yet its agriculture is still characterized with scattered landholdings of 0.5-4 hectares, low input technology, and a low-output labor productivity (Federal Ministry of Agriculture and Rural Development (FMARD) 2013 and World Bank 2018). In support of the above, Kolomi, & Mohammed, (2021) opined that Nigeria's agricultural sector faces many challenges which impacts on its productivity. According to the authors, these include poor land tenure system, low level of irrigation farming, low technology, high production cost and poor distribution of inputs, limited financing, high postharvest losses and poor access to markets. Accordingly, Food and Agricultural Organization (FAO) (2021), agree that these challenges have stifled agricultural productivity affecting the sectors contribution to the country's GDP as well as increased food import due to population rise hence declining levels of food sufficiency which the country is experiencing now.

However, the Sustainable Development Goals (SDGs) according to World Bank (2018) has led to the emergence of various policies that have had impact on the agricultural sector, which include the Nigerian Agricultural Promotion Policy 2016-2020 which focuses on food security through reducing food imports, Nigeria-Africa Trade and Investment Promotion Programmed, Presidential Economic Diversification Initiative, etc. All these efforts are aimed to increase agricultural

productivity in order to provide sufficient quantities of food to meet domestic demand as well as an abundance of commodity crops for export in the international market (Kolomi, & Mohammed, 2021).

In line with the foregoing, a well-organized planned and implemented adult education programmes such as agricultural extension education, cooperative education, and entrepreneur education will be an effective and efficient medium for improved farm production, access to loan, innovative agricultural technology, increased small and medium scale enterprise that will be reliable strategies for improving agricultural productivity in Nigeria. This paper posits that a conscious integration of agricultural extension education, cooperative education, and entrepreneur education as adult education programmes will be adhering to relevant policies formulated and implemented for improved agricultural productivity.

Conceptual clarification

Adult Education

Over the years, quest of to house the term adult education under one unified definition has not been obtainable. For example, UNESCO as quoted in Omolewa in Supo (2010) regards adult education as a form of education that is giving to those who are regarded as adult. Also, Ojo in Supo (2010) defined adult education as the education that is designed for the category of people that are referred to as adult. The author further opines that such education is not only one form it includes formal, informal and non-formal education. The implication of the above definitions is that only education that meets the above criteria can be termed adult education.

Another definition of the concept is one given by Houle as stated in Aduwari (2021) as a process by which men and women (alone, in groups of institutional settings) seek to improve themselves or their society by increasing their skill, knowledge or sensitiveness; and any process by which individuals, groups or institutions try to help men and women improve in these ways. Olori (2012) quoting Merriam defined adult education as concerned with preparing people for life, but more specifically, with helping people to live more successfully. Adult education according to Aduwari (2021) is an educational activity which individuals undertake in order to improve their social and economic conditions for the overall benefits of society. The author further posits that the gain of the process has a ripple effect and it benefits the individual(s) and transcends to the entire society. However, an encompassing definition of the concept is one reported in UNESCO (2009) as the entire body of organized educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adults by the society to which they belong, improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose: to complete a level of formal education; to acquire knowledge and skills in a new field; to refresh or update their knowledge in a particular field. Adult education can therefore be defined as any educational process engaged by an adult to gain or replace initial skills or knowledge necessary to improve their wellbeing and that of the society to which they belong.

Agricultural productivity

Agricultural productivity is conceived as the measurement of the quantity of agricultural output produced for a given quantity of input or a set of inputs. Agriculture has different ways of defining

and measuring its productivity. One of such ways according to Wiebe in Ibrahim, (2011) is the amount of output per unit of input (such as tons of wheat per acre of land), or an index of numerous outputs divided by an index of numerous inputs. The author stated that the quantities of output in relation to the quantity of inputs are the conventional measures of productivity. This implies that if output increases at the same rate as inputs, then productivity is unchanged while on the other hand if the output growth rate exceeds the growth rate in the use of inputs, then productivity is positive. Ayinde (2018) also defined agricultural productivity as a measure of the amount of agricultural output produced for a given amount of input, such as the value of all farm outputs divided by the value of all farm inputs.

Agricultural productivity is the output produced by a given level of input(s) in the agricultural sector of a given economy. It is the ratio of the value of total farm outputs to the value of total inputs used in farm production. Kuku, Ajibola & Saweda, (2011) observed that in economics, agricultural productivity refers to the output produced by a given level of input(s) in the agricultural sector of an economy. The authors further opined that it may also be defined as the ratio of the value of total farm outputs to the value of total inputs used in farm production. From the foregoing, agricultural productivity is the value derived from calculating the ratio of agricultural outputs to agricultural inputs. Minten & Barrett in Ibitoye (2012) stated that agricultural productivity is the term given to the output of agriculture in terms of the inputs such as the capital and labor. Thus, agricultural productivity can be referred to as the efficiency of the farm. This study defines agricultural productivity as the differences whether upward or downward between agricultural input and output within a given period.

Adult Education Programmes for Improved Agricultural Productivity in Nigeria

Adult education plays key roles in awakening peoples' consciousness toward the relevance of improved agricultural productivity in a nation's development. It is a significant underpinning tool that enhances active citizenship inclusion in a world that is changing socially, politically and economically on an ongoing basis with emerging fresh difficulties. In order to keep abreast to these changes, one needs to continuously learn for new knowledge, abilities and attitudes. This has led Nigerian government to diversify more on her agricultural sector. These new heightened diversifications include new farming techniques, new trading techniques, sustainable land use systems, development of structured markets, improved access to loans, etc. It is within this context that adult education, which serves as an energetic tool in spreading knowledge and skills in agriculture and rural construction, health and home economics to improve the productivity and standard of living of the people, becomes very necessary.

Additionally, since improved agricultural productivity can be achieved through employing modern farming skills and techniques, there is urgent need to engage farmers in adult education programmes that would inculcate in them the necessary skill and knowledge for improved agricultural productivity. Some of such programmes might include agricultural extension education, cooperative education and entrepreneurship education.

Agricultural Extension Education for Improved Agricultural Productivity in Nigeria

Agricultural productivity as a paramount and topical concept, which has occupied a front burner in food security discourse as well as in development discourse, requires a practical based education

which is the intent of extension education. Leagan as mentioned in Harry & Ejiofor (2022) defined extension education as the dissemination of useful research changes in their social and cultural behavior. It is the process of teaching rural people how to live better by learning ways that improve their farm, home and community institution. The authors uphold that it is an educational process directed to bring about change in people. It is a dynamic process which brings about changes in what people know; changes in how they react to situations and changes in what they can do with their hands. The scheme of extension education programmes is designed to equip rural farmers who are vastly adults for better productivity (Ehiakpor & Aidoo, 2018). From the above definitions agricultural extension education as an aspect of adult education becomes a relevant tool for improved agricultural productivity process.

In support of this, Harry & Ejiofor (2022) assert that increased agricultural productivity depends primarily on the education of rural farmers to understand and accept the complex scientific changes which are difficult for the illiterate rural farmer to understand. Danso-Abbeam, Ehiakpor, & Aidoo, (2018) agreed that agricultural extension programmes have been one of the main conduits of addressing rural poverty and food insecurity. FAO as stated by as Danso-Abbeam *et al,.* (2018) defined extension as systems that facilitate the access of farmers, their organizations and other market actors to knowledge, information and technologies; facilitate their interaction with partners in research, education, agribusiness, and other relevant institutions; and assist them to develop their own technical, organizational and management skills and practices. The cognizant of the benefits of agricultural extension education informed the establishment of the Agricultural Development Programme (ADP).

Agricultural extension education is aimed primarily at improving the knowledge of farmers for rural development since it has been recognized as a critical component for technology transfer and serves as a policy tool for promoting the safety and quality of agricultural products. Agricultural extension education makes innovation known to adult farmers and further acts as a catalyst to speed up adoption rate, controls change and attempts to prevent some individuals in the system from discontinuing the diffusion process. In reaching out to farmers, agricultural extension education officers demonstrate a technology to farmers but with much concentration on early adopters since the laggards would learn later from the early adopting farmers. Additionally, agricultural extension education is the basis for full promotion and improvement of the agricultural productivity of the rural farmers in order to increase food crop productivity and income from agriculture.

The agricultural extension agent in recent years has however played a significant role in improving agricultural production in Nigeria through advisory agent and adequate access to information on improved techniques of production ensuring the awareness and subsequent adoption of the contemporary methods of agricultural management (Harry & Ejiofor 2022). Agricultural extension education goes beyond technology transfer to general community development through human and social capital development, improving skills and knowledge for production and processing, facilitating access to markets and trade, organizing farmers and producer groups, and working with farmers towards sustainable natural resource management. By implication, where market failures, such as limited access to credit and non-competitive market structures which acts as a disincentive to farmers to produce exist, agricultural extension education tend to provide solutions.

Cooperative Education for Improved Agricultural Productivity in Nigeria

Cooperatives are important tool for real transformation. They assist members to pull their resources together hence ensures sustenance of business co-operators through this medium and to embark on self- help projects which are of direct bearing on the lives of these rural communities (Igwe & Ezechinnah, 2023). The economy of Nigeria is historically based on agriculture and about 70% of the work force is still engaged in farming and farm related activities (Apata & Shitu 2013). As a result of this, cooperative extension education which is referred to as an extension education in a particular field aimed at teaching rural people how to raise their standard of living by their own efforts, using their own resources of manpower and material, with minimum assistance from government, becomes worthwhile. Cooperative education as an adult education programme would assist farmers and non-farmers to identify and analyze their production problems and to become aware of the opportunities for improvement. In view of the above, Royer (2015) defines cooperative extension education as a voluntary, out of school educational programme designed to help rural people or farmers learn new skills, knowledge and acquire favourable attitude as a basis for making changes in their ways of living. From the above submissions, as a voluntary out of school education, it is directed at farmers to help them improve on production rate through efficient utilization of the resources of production available to them. Essentially, the term embraces all scientific activities aimed at helping farmers and non-farmers solve their problems with their own resources not only on the farms and other business forms, but also in their families.

As an adult education programme, cooperative education in Nigeria serves as a link between researchers and farmers and non-farmers by bringing to the notice of adults (farmers and non-farmers) all the latest development in the field of cooperative from the research institutes through

the ministry of agriculture and department of cooperative. In the same way, the problems of farmers and non-farmers are also taken to the researchers for solutions. In this way, cooperative extension service tries to bridge the gap between researchers, farmers, and non-farmers. Again, it aids the adoption of new innovation since most farmers are known for their reluctance to adopt new ideas that can bring changes which is probably due to poverty, as well as their belief in past farming traditions. Through cooperative education farmers are able to identify available resources and learn how to utilize them for improved productivity.

Another promising benefit of cooperative education as an adult education programme is the development of local leaders. Through this educational programme the adult farmers understand the need to develop local leaders among their rural community. This leadership development is very essential as they provide a link between member farmers and the cooperative extension agents to which they belong where all their requests and problems are formally channeled. Accordingly, through this local leaders' dissemination of useful, practical information relating to cooperative agribusiness, agriculture, fertilizers, tools, pesticides, improved cultural practices, including improved seeds, poultry, nutrition etc. are made possible.

Entrepreneurship Education for Improved Agricultural Productivity in Nigeria

According to the Organization for Economic Cooperation and Development (OECD, 2012), the last decade has seen an increasing interest in agricultural development on the part of governments in the developing world as well as national, regional and international development organizations. Nevertheless, until recently, relatively less attention has been paid to the role of agribusiness and entrepreneurship as a driving force of development (World Bank, 2013; Agriculture for Impact, 2014). This is evident in the fact that entrepreneurial education and training (EET) has been

conceived as a relatively recent phenomenon. Katz in Sherrard & Alvarado (2017) asserts that there is evidence that efforts to train entrepreneurs existed since at least the 1800's in the U.S. It was not until the 1970's that entrepreneurship education came into its own in business schools and by extension other regions of the world have followed. That agribusiness represents perhaps half of the gross domestic product (GDP) in many countries and over 2.5 billion people in these countries depend on agriculture for their survival is the result of the efforts of small entrepreneurs, who link these smallholders to markets and value chains and who provide seeds, fertilizers and other inputs (Sherrard & Alvarado, 2017).

From the above, there is need for entrepreneurship education in order to inculcate in farmers the potentials of improved agricultural productivity. Accordingly, Owoade (2014) stipulates that entrepreneurs through their active participation in the food and agricultural sector would strongly impacts food security, industrialization efforts, quality of life, economic growth, and political stability and, to a certain extent, a nation's position in international relations and trade. Entrepreneurship education, as an adult education programme, will enhance agricultural productivity because it inculcates knowledge and skills necessary for new business opportunities, improves the Nigerian economy and reduces the high rate of unemployment in Nigeria. Amungwa & Baye (2014) agreed that the foregoing is important because agriculture is an effective strategy or tool to alleviate hunger and poverty as it has huge and diverse potentials that cannot only transform the national economy but also immensely reduce the high rate of unemployment in the country. Provision of entrepreneurial education opens opportunities to farmers in Nigeria which

would further help develop the Nigerian economy as sustainable development can be achieved in Nigeria through improved agricultural productivity.

Conclusion

Although education is a very necessary tool that enables one to articulate and achieve fullness, adult education goes beyond elitist, discriminatory and installment form of education to include means self-sufficiency for self-fulfillment. The study assessed adult education programmes for improved agricultural productivity in Nigeria. The study shows that adult education programmes play significant roles for improved agricultural productivity and by so doing elevate the standard of living of farmers. Agricultural extension education, cooperative education and entrepreneurship education were discussed as adult education programmes that are effective tool for improved agricultural productivity. From the various discussions, it was deduced that the farmers are mostly adults and that participating in adult education programmes enables them to earn more income/profit compared to those who do not participate. By implication, through these programmes the farmers, take cognizance of the innovations in the farming system, acquire skills and knowledge necessary for input and output in their farming endeavours thereby enhancing agricultural productivity.

Recommendation

This paper recommends that;

- There should be full and active participation of farmers in adult education programmes that will improve their skills and knowledge for effective agricultural productivity.
- Government at all levels should periodically organize and subsidize fees for adult education programmes to enable farmers' utilization of the programmes
- Ministry of Agricultural Development and other related agencies should organise seminars and workshops for sensitization of farmers on the need for effective adult education programme for improved production.
- Adult education practitioners and professionals should be fully involved and engaged in planning and implementation of these adult education programmes.

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