Journal of Community & Communication Research
ISSN: 2635-3318
Volume 4, No. 2 December 2019
Pp. 79-87

Andragogical Principles in Farmer Education: Implications for Rural Extension Agents

Accessible at: https://jccr.sccdr.org.ng/index.php/jccr/issue/view/1

Anurugwo Appolonia Osita and Mbara Kingsley Ugochukwu
Department of Adult and Non-formal Education,
Alvan Ikoku Federal College of Education, Owerri, Nigeria
Corresponding Email: apocasalvan@gmail.com

Review Process: Received: 21/08/19 Reviewed: 02/10/19 Accepted: 24/12/19

ABSTRACT
Agriculture is perceived as the backbone of the nation's economy. This is so because, it is the source of food security, poverty reduction and revenue generation. The federal government has put in place sound policies, plans and programmes in a bid to improve food security and nutritional status of the citizenry. This creates the need for the present-day farmers to be upgraded both in knowledge and skill to cope with the nation's food supply. Agricultural extension agents from both governmental and non-governmental sectors shoulder the responsibility of farmers education. This implies that the extent of farmers effectiveness and efficiency is determined by the approaches, methods and techniques utilized by the extension agents in delivery of their duties. The rural farmers as adult learners no doubt possess same unique characteristics of all adult learners. Hence, the need for the rural extension agents to take cognizance of andragogical principles in farmers' education for optimal result. The study x-rayed the andragogical principles by Malcon Knowles, its application in farmer education and the implications to rural extension agents.
Keywords: Andragogical principles, farmer education, extension, extension agent

INTRODUCTION

The quest for food security is a major challenge to most countries including Nigeria. The continuous rise in the nation's population is accompanied with the rise in demand for food supply. Agriculture as a very important sector of the nation's economy is considered as a veritable tool for fighting hunger, generating employment opportunities as well as boosting revenue. Consequently, greater percentage of farmers especially in the rural areas practice subsistent farming. The dynamism of modern organization demands that farmers especially in the rural areas be re-skilled and re-tooled to cope with food demand. This is premised on the fact that they are not acquainted with the modern farming method. They also lack the skill in global best practices in farming as well as ignorant of viable and improved seedlings among others. Agricultural extension agents usually visit the rural farmers to teach them modern farming methods but the effect of their services remain minimal as the rural farmers, seem to be obstinate and resistant to change. They continue

to farm on subsistence basis with minimal result. The extension agents may not have taken cognizance of the unique characteristics of these rural farmers as adult learners, hence the need for this study.

Andragogical Principles

Andragogy is an adult learning theory popularized by Malcon Knowles in 1980 as the art and science of helping adults to learn. The term was derived from Greek word 'aner' (with the stem andr) meaning man and 'agogus' meaning 'leader of' Andragogy means man is leading (Nzeneri, 2008). Knowles' (1980) definition of andragogy was in emphasis of the distinction between the education of children (pedagogy) and that of adults. This was in recognition of the fact that adults cannot simply act as passive receptacles of others' expertise as children often do (Rutgers, 2019). They need different level of engagement from that of children to fully understand and utilize information.

According to Knowles (cited in Usman, 2015) the goal of adult education should be self-actualization; thus, the learning process should involve the whole emotional, psychological, and intellectual being, hence the mission of adult educators is to assist adults to develop their full potential. Rutgers (2019) opines that andragogy refers to the specialized pursuit of effective curricular design and instruction delivery for adults. Rutgers further asserts that the basic theories of andragogy, as developed by Malcolm Knowles and others, are used extensively in the design of adult-oriented training programs.

Andragogy is based on four major assumptions viz; as a person matures

- His self-concept moves from dependent personality to self-directed individual
- He accumulates reservoir of rich experiences which are resources for learning
- His readiness to learn becomes oriented towards his developmental tasks and towards his social roles
- His time perspective moves from that of postponed knowledge to immediate application. His orientation moves from one of subject centeredness to client or problem centeredness (Nzeneri, 2008)

Knowles (1980) espoused five principles of adult learning which he claimed help adults to learn best to include;

i. They understand why something is important to know or do.
ii. They have the freedom to learn in their own way.
iii. Learning is experiential.
iv. The time is right for them to learn.
v. The process is positive and encouraging.

The assumptions and principles of andragogy highlight the unique features of adult learners as voluntary, self-directed and experienced learners. Adults enter into learning programmes with various diverse experiences and knowledge. They are realistic and have insight to most topical issues. Hence, they easily relate the present to their past experiences and they enjoy having their vast experiences and knowledge explored in any given situation (Anurugwo, 2014). As autonomous and self-directed learners they prefer to work at their own pace and convenience rather than being coerced with deadlines. More so, they are more inclined if learning experience had immediate and direct application to their objectives indicating that they are goal oriented. Anurugwo (2014) posited that adult

learners learn best in a democratic, participatory and collaborative environment. She further stated that adults enjoy active involvement in a learning environment and are more relaxed in an informal setting than in a formalized learning environment. They want guidance and consideration as equal partners in the process.

Knowles, Holton and Swanson (2011) enumerated some of the important elements to be integrated in designing curriculum for adult learners to include (a) preparing the learning, (b) offering a mutually respectful climate, (c) mutual planning (by learners and facilitators), (d) mutual assessment of needs, (e) mutual negotiation of learning objectives, (f) designing learning plans that involve learning contracts and projects, (g) learning inquiry and independent study projects, and (h) evaluation through evidence.

In line with the 21st century method of teaching, andragogy can be perceived as a learner focused teaching method for all categories of learners. In concord to this notion Holton, Wilson and Bates (2009) opined that the focus of andragogy is learner centered in all areas including students' learning needs, curriculum design, course delivery, and student assessment. This gives facilitators ample opportunity to effectively impact on their students. The design elements of andragogy guide learning activities that occur before, during, and after the adult learning experience (Leigh, Whitted & Hamiliton, 2015). The andragogical principles and process design elements have proven useful in all stages of formal learning and have extended outside traditional learning to specialized learning including nursing (Holton, Wilson & Bates, 2009). This is because learning is tailored to learners need. Rutgers (2019) affirms that when learning experiences are tailored to the needs of the individual learner, he is more likely to understand, recall and use information in line with the dominant sense of his preference.

Andragogy involves various learning styles in actualizing learners need. The three major learning styles as highlighted by Rutgers (2019) include visual, auditory and kinesthetic. Visual learners prefer seeing the process demonstrated in a step-by-step way. Facilities like video demonstration and expert physical demonstration engender their learning. Auditory learners benefit more when they listen to a process or concept being described. As active listeners they enjoy asking questions and also recording lectures. Kinesthetic learners learn best by performing tasks. They are good at trial and error, praxis and project-based learning.

Farmer Education

Farmers require education to cope with changes in development in science and technology as well as other fields that affect agricultural operations. Rosegrant and Cline (2003) opined that many farmers in rural areas lack the most up-to-date information on how to grow food efficiently and economically. Most of them are born in to the farming family, as such they learn through observation and hands -on experiences right from childhood. Rosegrant and Cline (2003) posited that improving farmers' knowledge of new techniques and technologies, in addition to providing them with physical resources necessary for implementation, can dramatically increase the farmers' level of productivity. Farmers education and training helps them to incorporate the latest scientific and technology tools into their daily operations. This results to less harm on the environment, profitable practices and improved quality of life. In addition to increased productivity, farmer education engenders sustainability of the agricultural process. Knowledge and skill so

acquired facilitates farming method that will not negatively affect soil, water and air quality.
Curricular for farmer education according to Mission (2014) include: which crops to grow based on growing environment (soil, climate, water availability), nutritional value and profit; how to implement sustainable agricultural methods that will maximize yield; how to use mechanized farming tools. Potential topics embedded in the curriculum include crop rotation, cover crops, soil enrichment, natural pest predators, bio intensive integrated pest management, irrigation, food storing and processing and utilizing wastes among others.

Extension

The term extension literally means to extend, act of extending or being extended, stretching out, enlargement in breath or continuation of length. In this context, it implies extending agricultural skills, knowledge, values and practices to the less informed especially in rural areas.

Swanson (2008) asserts that extension services goes beyond technology transfer to general community development through human and social capital development. Swanson noted that extension improves skills and knowledge for production and processing; facilitates access to markets and trade; organizes farmers and producer groups and also works with farmers towards sustainable natural resource management. Extension is an instrument for acquainting the rural populace with knowledge and information on global best practices. Danso-Abbeam, Ehiakpor and Aidoo (2018) affirmed that extension programmes have been the main conduit for disseminating information on farm technologies, supporting rural adult learning and assisting farmers in developing their farm technical and managerial skills. This no doubt portrays extension as an adult education programme geared towards bettering the lives of rural adults to ensure community development.

Some of the roles of extension as enumerated by Bloom and Mbaye (2009) include:

- Dissemination of information about technologies, new research, markets, input and financial services, and climate and weather.
- Training and advice for individual farmers, groups of farmers, farmer organizations, cooperatives and other agribusinesses along the market chain.
- Testing and practical adaptation of new technologies and practices on-farm.
- Development of business management skills among small holder farmers and other local entrepreneurs.
- Facilitation of linkages between farmers, their organizations and the public sector.
- Development of informal and formal farmer organizations, and rural youth organizations, and helping them to articulate their demands.
- Support to implementing government policies and programmes through information, awareness and advice on technological options, including land stewardship, food safety and animal welfare.

Similarly, some of the challenges of agricultural extension in Nigeria as highlighted by Izuogu and Atasie (2015) include;

- Continued use of predominantly top-down, non-participatory, supply-driven extension systems/approaches.
- Poor targeting of women, youths and vulnerable groups
- Lack of synergy with the donor-supported projects domiciled within the ADP

- Inadequate and poor quality of staff
- Inadequate and irregular funding
- Poor infrastructures and inadequate working tools including mobility for the ADP field extension staff.
- Negative political influences in extension management.

In addition to the above challenges, Peters (2006) noted that the central problem of agricultural extension education is teaching and that educators have not realized the best ways to help farmers learn.

Implications of Andragogical Principles for Rural Extension Agents
The implication of andragogical principles to rural extension agents are discussed under the following sub-headings:

Self-Concept
As a person matures, his self-concept moves from one of being dependent personality toward one of being a self-directed human being. The rural farmer as an adult learner perceives himself as a self-directing individual whose main source of self-fulfillment is his performance as a worker, spouse, parent etc. and not particularly in learning (education) which is a part time endeavor. He sees himself as being totally responsible for his actions and inactions. As such, he expects the world around him to acknowledge his status. This implies that the rural farmer should be seen as a unique human being who deserves to be treated with respect. He is likely to resist any learning environment that treats him as a child, for instance- being coerced, embarrassed, punished or judged.

The rural farmer as an autonomous learner needs to take responsibility for his own learning. This implies that he should be given orientation to the new learning, so as to acquire the new psychological learning attitude. This will enable him to take charge as he does with other roles he performs in life. Ezimah (2009) opines that without such orientation, adult learning may appear a daunting task when adult learners are exposed to a learning environment in which they are treated with respect.

The physical and psychological learning climate should be congruent to the taste of the adult learner. The physical facilities should take cognizance of the declining audio-visual acuity of the adult learners. Psychologically, the rural farmer (adult learner) should be made to feel accepted, respected and supported. There should be freedom of expression without fear of punishment or ridicule. The extension agent should be a good listener to show his care, concerns and respect to the adult learners' views.

Rural farmers as adult learners should be involved in self-diagnosis of needs for learning. Knowles (1996) stated that this process consists of three stages which include; competencies required to achieve a given model of performance, diagnostic experiences for the assessment of learners' present competences and measuring the gaps between learners' present competences and those expected by the model. At the first stage the extension agent merges his values and expectations with that of the rural farmer in to a composite picture. Subsequently, he leads the rural farmer to assess his present competences in the light of the model competence. At the third stage the rural farmer discovers the gap between what he has and what is expected of him. This therefore gives

him a feeling of dissatisfaction and then motivates him to learn. In other words, he has ascertained the need for learning.

Rural farmers should be involved in planning their learning activities. Ezimah (2009) noted that the imposition of the will of the facilitator on the adult is incongruent with the adult self-concept of self-directivity. This implies that the extension agent should work with the rural farmers in translating diagnosed needs in to specific educational objectives. Both should design and conduct learning experiences to achieve the identified objectives as well as evaluate the extent to which the objectives have been achieved.

The learning-teaching transaction should be the mutual responsibility of both the extension agent and the farmer. The role of the extension agent is that of a guide, facilitator or catalyst rather than an instructor or encyclopedia of knowledge. Davis (2006) stated that we learn best when our preferred instructional style of learning is used and that understanding how people prefer to learn is critical for the development and delivery of successful educational programming. In concord, Ezimah (2009) posited that andragogical learning situation makes use of small groups consisting of planning committees, learning-teaching teams, consultation groups, project tasks force all aimed at sharing responsibility for helping one another learn.

The extension agent should not use grading system in his evaluation of farmers' performances. This makes the adult learner to feel disrespected. He should encourage self-evaluation where the rural farmers would ascertain by themselves the extent of their progress.

Experience

As a person matures, he accumulates reservoir of rich experiences which are resources for learning. The rural famer had acquired various types of experiences right from childhood. He describes himself in relation to his vast experiences in life. He establishes his self-identity in line with what his experiences have equipped him to do. This implies that he feels rejected when his experiences are not utilized or relegated to the background. Hence the extension agent should allow the farmer to showcase his experiences in a learning procedure.

Ezimah (2009) posited that the adult learners' experiences have the following consequences; (a) adults have more to contribute to the learning of others because they themselves constitute a rich resource for learning (b) adults have richer foundation of experiences which make new learning easier as it is related to past learning (c) adults have acquired a large number of fixed habits and patterns of thought that makes them conservative. In line with the above stance, Knowles (1996) affirmed that emphasis should be laid on the experiential technique.

The extension agent should involve methods/techniques that tap from the experiences of the farmers while working with them. These include; group discussion, case method, simulation exercise, skill practice exercise, field projects, action projects, consultative supervision, demonstration, seminar, work conferences and community development among others. This is premised on the fact that active participation of the learner will no doubt engender his learning.

The extension agent should dwell more on practical application of what is learnt. He should ensure that new concepts are always illustrated using life experiences drawn from learners. Farmers should be encouraged to share their experiences, learn collaboratively with and from each other.

Readiness to Learn

As a person matures, his readiness to learn becomes oriented towards his developmental tasks and towards his social roles. According to Havighurst cited in Ezimah (2009) developmental task is a task which arises at a certain time in a person's life, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to his unhappiness, disapproval by the society, and difficulty with later tasks. Each developmental task produces 'readiness to learn'. This implies that the task/problem at hand motivates one to acquire knowledge/skill to address the problem.

Ezimah (2009) noted that whereas the developmental tasks of youths emanate primarily from psychological and mental maturation, those of the adult are primarily products of the evolution of social roles. The social roles of adults include worker, spouse, parent, son/daughter of aging parent, organizational member etc. The requirement for performing each of these task produces 'a readiness to learn' and once that task is performed the 'readiness to learn' will change to that of current developmental task. This implies that emphasis should be laid on timing of learning.

The curriculum should be timed to be in line with the adult learners' developmental task at any particular point in time. The extension agent, should find out from the rural farmers the aspect of farming they are involved in and challenges encountered. Cassava farmers may not be ready to learn how to cultivate rice from the extension agent but will listen attentively in learning activities on cassava farming within the given period. Many farmers participate in educational programs if the programs are relevant and directly address their needs (Tubene and Holder 2001).

There is need to group adult learners according to their developmental tasks. Hence extension work in the rural areas will be more effective if rural farmers are grouped with reference to homogeneity. For instance, grouping according to crops being cultivated, grouping according to livestock being reared, grouping according to years of experience, grouping according to learning interests and so on.

Orientation to Learning

As a person matures, his time perspective moves from that of postponed knowledge to immediate application. His orientation moves from that of subject centeredness to client or problem centeredness. Unlike children, adults want practical application of any knowledge acquired. They perceive learning/education as a tool to improve their ability in dealing with current life challenges. Hence, they enroll in any learning programme to address a particular problem. They are problem centered.

The implication of adults' orientation to learning for the rural extension agent is that he should strive to harmonize the concerns of the rural farmers (adult learners) and those of the institutions he serves e.g. (Agricultural Development Programme ADP). He should then develop learning experiences that will address these concerns. Instead of teaching farmers principles and theories associated with agriculture, he should start with learning experiences that address the challenges of the rural farmers identified through need

diagnoses. The rural extension agent should always design his learning experiences with the problems and concerns of the rural farmers. He should engage them in dialogue to elicit information from them on what they expect to gain as he works with them.

REFERENCES

Adebayo, K. & Sofola, M. (2015) Private sector participation in agricultural extension for cocoa farming in Nigeria. *Knowledge Driven Development,* pp. 141-162. Retrieved from https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/agricultural-extension-services

Anurugwo, A.O. (2014) Application of improved methodology in teaching post graduate students for quality assurance *World Educators Forum* Vol.7(1) 313-320.

Blum, M.L. & Mbaye, A. (2009). A participatory process approach for developing a pluralistic, demand-led and market-oriented advisory system – Case Study of Niger. In Paffarini, C. & Santucci, F.M. (eds) *Theory and practice of advisory work in a time of turbulences.* Proceedings from the European Seminar on Extension Education. Assisi 15-19 September.

Danso-Abbeam, G. Ehiakpor, D. S. & Aidoo, R. (2018). Agricultural extension and its effects on farm productivity and income: insight from Northern Ghana *Agriculture & Food Security.* Vol. 7. (74)

Davis, G. 2006. "Avoiding the 'rut' in program development and delivery: Improving our understanding of learning style preferences." *Journal of Extension* 44(4). Retrieved from http://www.joe.org/joe/2006august/ rb1.shtml.

Ezimah, M.O.A (2009). *Knowing adult education; its nature, scope and process.* Springfield publishers, Nigeria.

Food and Agricultural Organization (FAO) (1997). The extension agent- *Guide to extension training* Food and Agricultural Organization of the United Nations, Rome. Retrieved from http://www.fao.org/3/to060e/To060E08.htm

Food and Agriculture Organization (FAO) (2010). *Ethiopia Country Brief* Retrieved from www.fao.org/countries/55528/en/eth/.

Holton, E. F., Wilson, L. S., & Bates (2009). Toward development of a generalized instrument to measure andragogy. *Human Resource Development Quarterly,* 20 (2), 169-193.

Izuogu, C.U. & Atasie, C. (2015). Redefining the Nigerian agricultural extension system for effective agricultural transformation. *Developing Country Studies* Vol.5 (11) 11-15

Knowles, M. S. (1980). The modern practice of adult education: From pedagogy to andragogy (Revised Edition). Englewood Cliffs, NJ: Cambridge Book Company.

Knowles, M. S. (1980). *Modern practice of adult education: From pedagogy to andragogy.* Revised and updated. Chicago: Follett Publishing Company, Association Press

Knowles, M. S. (1996). Adult learning. In R.L. Craig (Ed.), ASTD training & development handbook: A guide to human resource development (4th ed.) (pp. 254-265). New York: McGraw Hill.

Knowles, M.S., Holton, E.F., & Swanson, R.A. (2011). *The adult learner: The definitive classic in adult education and human resource development.* (7th ed.). Oxford, UK: Butterworth-Heinemann.

Leigh, K.; Whitted, K. & Hamilton, B. (2015) Integration of andragogy into preceptorship *Journal of Adult Education* Vol.42. (1) 9-17

Mission (2014). *Feeding the world- Farmer Education and Agricultural Extension.* Retrieved from http://12.000.scripts.mit.edu/mission2014/solutions/farmer-education-agricultural-extensionld

Nzeneri, I.S. (2008). *Handbook on Adult Education: Principles and Practices.* Uyo, Abigam Associates Ltd.

Peters, S. 2006. "Every farmer should be awakened: Liberty Hyde Bailey's vision of agricultural extension work." *Agricultural History* Vol. 80(2):190–219.

Rahim M. S. (2008). Concept and practice of extension education. *Extension Bulletin*, Bil. 1, University Putra Malaysia.

Rosegrant, M. & Cline, S. (2003). Global food security: Challenges and policies. *Science*, 1917-1919.

Rutgers (2019) *The principles of adult learning theory.* Rutgers Online. Rutgers, The State University of New Jersey

Swanson, B. E. (2008). *Global review of good agricultural extension and advisory service practices.* Rome: Food and Agriculture Organization of the United Nations.

Tubene, S. & Holder. D. (2001). *Serving small farmers in the 21 century.* Maryland St. Cooperative Extension: The Small Farm Institute.

Usman, Y. (2015). Differences between pedagogical and andragogical methods of teaching and the preference of andragogy for the teaching of adults. *International Journal of African and Asian Studies* Vol.6, (1) 58-62