Review of Education, 2025, Volume 37, Issue 3, pp: 164-181

IMPLEMENTATION OF OUTCOME-BASED EDUCATION IN ADULT LITERACY EDUCATION PROGRAMME IN ENUGU STATE, NIGERIA

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Abstract

This study explores the implementation of Outcome-Based Education (OBE) within Adult Literacy Education Programme (ALEP) in Enugu State, Nigeria. The study evaluates eight learning outcomes (lifelong learning and information management, communication skills, managerial and entrepreneurial skills, psychomotor/practical/technical skills, knowledge, social skills, professionalism, values, and ethics) that the National Commission for Mass Literacy, Adult and Non-formal Education (NMEC) has projected, and the three learning domains (cognitive, psychomotor and affective), in order to provide learners with high-quality education. Four specific objectives, four research questions and two hypotheses guided the study. Utilizing a descriptive survey research design, data were collected from 400 adult literacy facilitators (ALFs) through a structured questionnaire. The face validation of the questionnaire was done by three experts in research methods. Cronbach Alpha estimate was used to establish the reliability, and reliability co-efficient of 0.92 was obtained. Frequencies, percentages, mean, and analysis of variance (ANOVA) were used to present the data. The study found varied ALF perceptions on teaching effectiveness and learning outcomes, noting strengths in communication but weaknesses in managerial skills. The study recommended collaborative curriculum design, ongoing training, and greater state investment to align literacy programmes with adult learners' needs.

Keywords: outcome-based education; learning domains; learning outcome; adult literacy education

Introduction

A shift from traditional education models to Outcome-Based Education (OBE) has gained momentum across various levels of education globally, including adult literacy education programme (ALEP). According to Scholarly Community Encyclopedia (2024), OBE is an educational theory that bases each part of an educational system around goals (outcomes). By the end of the educational experience, each learner should have achieved the goal. There is no single specified style of teaching or assessment in OBE; instead, classes, opportunities, and assessments should all help learners achieve the specified outcomes. Concerns on the fact that the education system widely practiced ill-adequately prepares graduates to face challenges in life and at work places in the 21st Century have prompted people across the world to explore new ways of designing and re-branding academic and educational curriculum (Aiston & Walraven, 2024).

OBE is an educational philosophy organized according to several basic beliefs and principles for the learners to practice how to become successful in life when they finish their studies. It starts with the belief that learners can benefit from any educational programme only when the instructional outcomes can be measured because of any instruction (Council for the Regulation of Engineering in Nigeria [COREN], 2020). Outcome-based methods have been adopted in education systems around the world, at multiple levels. Australia and South Africa adopted OBE policies from the 1990s to the mid 2000s. The United States has had an OBE programme in place since 1994 that has

ISSN: 978-2585-10-6 (PRINT)

been adapted over the years. In 2005, Hong Kong adopted an outcome-based approach for its educational institutions (Scholarly Community Encyclopedia, 2024). OBE was developed and has been in practiced since 1950s in Malaysia (Damit et al., 2021). It is now being implemented at all levels of education in Nigeria, especially at ALEP. National Commission for Mass Literacy Adult and Non-Formal Education (NMEC) monitors the levels of outcomes expected from any subject through the propagation of quality teaching by qualified adult literacy facilitators (ALFs) (NMEC, 2020). These will in-turn result in meaningful learning experiences for the learners. Instructions should be strategized in accordance with the desired outcomes. This would be largely dependent on relevant instructional strategies utilized by the facilitators to achieve relevant skills with high standards of achievement in line with high expectations of all adult learners.

The learning domains are framework used in education to classify different types of learning outcomes that ALFs aim to achieve with their learners (Kurt, 2019). The most referenced framework includes three primary domains: cognitive, affective, and psychomotor. Each of these domains represents a different aspect of learning and development, serving as a guide for instructional planning, curriculum development, and assessment methods. The cognitive domain involves mental skills and the acquisition of knowledge. It encompasses various levels of thinking from basic recall of facts to higher-order thinking skills such as analysis, synthesis, and evaluation (Sincero, 2011, Hoque, 2016). The cognitive domain is often classified using Bloom's Taxonomy. The affective domain relates to emotions, attitudes, values, and beliefs. It includes the development of attitudes that influence how individuals feel and respond to learning experiences (Kuo et al., 2023). The psychomotor domain encompasses physical skills and the ability to perform tasks that require coordination and motor skills. This may include anything from basic skills to more complex tasks that combine multiple actions (Cratty & Noble, 2022).

Understanding and utilizing these learning domains allows ALFs to design effective curricula and assessments that cater to various aspects of adult learners' development (Itmeizeh & Hassan, 2020; Darling-Hammond et al., 2023). By addressing the cognitive, affective, and psychomotor domains, ALFs ensure a holistic approach to learning, promoting not just knowledge acquisition but also the development of values and practical skills necessary for real-world application (Kumar, 2023). This comprehensive approach is particularly relevant in adult education, where learners often seek to apply their knowledge and skills in practical and meaningful ways. The focus on outcomes creates a clear expectation of what needs to be accomplished by the end of the course. Adult learners will understand what is expected of them and ALFs will know what they need to teach in the programme. Clarity is important over years of schooling to know when team teaching is involved. Each team member, or year in school, will have a clear understanding of what needs to be accomplished in each class, or at each level, allowing learners to progress (Tam, 2014). Learners are actively involved in OBE. They develop their knowledge and skills by constructing ideas in their way when they understand their meaningful learning experience (Guzman et al., 2017; Midraj, 2018). According to Scholarly Community Encyclopedia (2024), OBE focuses on the following skills when developing curricula and outcomes: i. Life skills, ii. Basic skills, iii. Professional and vocational skills, iv. Intellectual skills, and v. Interpersonal and personal skills. To ensure that these skills are more transparent and more comfortable translating into action, four basic principles have been set: clear focus, expanding opportunities, high yield expectations, and design backward (Damit et al., 2021). Mangali et al. (2019) described each OBE principle as follows:

ISSN: 978-2585-10-6 (PRINT)

- A clear focus involves educators improving knowledge and building the right choices in determining teaching and learning strategies to facilitate students to achieve set learning outcomes.
- Expanding opportunities means that all students are exposed to different and appropriate teaching and learning strategies to provide opportunities for students to succeed.
- High expectations of outcomes make students more confident and increase learning motivation.
- Design backward means careful planning from setting learning outcomes after graduation, followed by learning setting that students need to achieve.

OBE has transformed the conventional education system into a new and more learner-centred approach. Notably, traditional education methods are seen as less effective than what adult learners can do after undergoing the learning process (Ortega & Cruz, 2016). Thus, the OBE approach makes adult learners more dynamic (Mangali et al., 2019), increases workability (Juanyu, 2019), innovative (Rao, 2020). It reduces the comparison gap between learners (Mangali et al., 2019). This change also involves ALEP in Nigeria. The change in system of ALEP from school stream to skilled-based programmes was implied to fullfill the new approaches in developing a curriculum that supports learning and understanding and encourages the construction of new knowledge where learners could see how their ideas can be transformed into something more formal (Hassan & Wai, 2019).

In ALEP, OBE is being implemented in its teaching and learning strategy. Apart from the three learning domains, namely, cognitive, psychomotor and affective, ALEP has also emphasized that adult learners achieve eight learning outcomes as determined by NMEC which are important in providing wholesome quality education to learners (Southworth, 2022). The learning outcomes are Communication Skills, Critical Thinking and Scientific Approach, Knowledge Skills, Lifelong Learning and Information Management, Managerial and Entrepreneurial Skills, Professionalism, Values, Attitudes and Ethics, Psychomotor/Practical/Technical Skills, and Social Skills and Responsibility (Yusuf & Adeoye, 2012; Bhuttah et al., 2024). At its most basic level, OBE is where the ALEP and community first determine what skills and knowledge adult learners should possess upon graduation, then work backwards from there to develop curriculum, strategies and materials to help the learners achieve those goals. Generally, in OBE learning, all educational programmes and instructional efforts are designed to have produced specific, lasting results in adult learners by the time they leave the programme (Zulfadli et al., 2014). The learning outcomes can serve as a benchmark to measure a success of ALEP. Learning outcomes as 'being something that adult learners can do now that they could not do previously' are changes in an adult because of a learning experience (Rossi et al., 2021). Learning outcomes can be used in a way that meets the needs of all stakeholders in ALEP (i.e., the adult learners, the ALFs and state agency for mass literacy, adult and non-formal education [SAME] staff). It has been theorized that learning outcomes consists of three broad categories or domains of learning as shown in Table 1.

ISSN: 978-2585-10-6 (PRINT)

Table 1: Learning Domains

S/No.	Domain	Learning Domains	Teaching Strategies/ Teaching Approaches
1.	Cognitive (Thinking domain)	Involves the acquisition of information and refers to the learner's intellectual abilities, mental capacities and thinking processes.	• One-to-one instruction • Computer-based instruction
2.	Affective (Feeling domain)	Involves increasing internalization or commitment to feelings expressed as emotions, interests, attitudes, values or beliefs.	• Case study • Role-playing • Simulation • Games • Group discussion
3.	Psychomotor (Skills domain)	Involve acquiring motor abilities and the capabilities to perform perceptual-motor tasks.	• Demonstration • Practice

Table 1 illustrates the three domains: cognitive, affective and psychomotor domains. In the implementation, these are the strategies that have been adopted to achieve higher level of the above three domains. Adult learners' learning outcomes, on the other hand, encompass a wide range of adult learners' attributes and abilities, both cognitive and affective, which are a measure of how their experiences have supported their development as individuals (Wanah et al., 2021). Cognitive outcomes include demonstrable acquisition of specific knowledge and skills. Affective outcomes are also of considerable interest; how has the ALEP's experience impacted adult learners' values, goals, attitudes, self-concepts, worldviews, and behaviours? Psychomotor domains involve physical movement, coordination, and use of the motor-skills areas. Development of these skills requires practice, and is measured in terms of speed, precision, distance, procedures or techniques. The outcomes also serve the following purposes:

- The specific outcomes of the learning areas are organized so that ALEP can prepare learning programmes appropriate for each phase of education.
- ALFs will prepare lessons and activities to assist adult learners in meeting the required outcomes.
- The learners will be assessed to see if they can demonstrate the outcomes. The results of the assessment show whether the learners are competent or still need assistance to achieve a particular outcome.
- If a learner still needs assistance, more activities are designed around the same outcomes in the learning programme. These activities address the learner's weaknesses.

  If the learner is competent, they can start working on more complex outcomes.

The purpose of adult learners' learning outcomes is to ensure that the ALEP graduates (post-literacy learners) acquire the essential core of ALEP in keeping with the mission and the strategic plan of NMEC. Post-literacy education is the next level after basic literacy education (NMEC, 2020). It is a literacy programme that is equivalent of primaries 4-6 standard. The language of instruction at this level is English Language. Amongst the subjects at this level are Integrated Science, Civics, Health Education, Local Language and Mathematics. The target groups are neo-literates that are considered to have mastered or completed basic literacy but want to continue learning. It can be regarded as second stage in non-formal education sector. Language of instruction is expected to be English

ISSN: 978-2585-10-6 (PRINT)

Language. In addition, the learning outcomes provide an opportunity for graduates to acquire the knowledge and skills.

Adult literacy education centres (ALECs) in Enugu State that have successfully implemented OBE programmes which ascribed auspicious results reported significant improvements in attitude and performance by both adult learners and ALFs within the first year (Agboeze & Obetta, 2010). Upon graduation, OBE has assisted adult learners to achieve radical gains in grades and test scores (Zulfadli et al., 2014). The teaching and learning instructions are conducted using the termly system where one academic year is divided into three terms. During each term, adult learners are taught according to the aims and objectives of each subject offered in ALEP. Evaluations on adult learners' academic performance are conducted in the forms of quizzes, assignments, examinations and other forms of assessment such as practical works and field practices. There are 16 subjects offered by Enugu State Agency for Mass Literacy, Adult and Non-Formal Education (ENSAME). They are Agriculture, Basic Science and Technology, Business Studies, Christian Religious Studies, Civic Education, Cultural and Creative Arts, English Language, Entrepreneurship, French Language, Mathematics, Home Economics, Igbo Language, Information Technology (IT), Physical & Health Education, Security Education, and Social Studies. Each subject needs to fulfil a total number of credit hours for an adult learner to undertake before they are considered qualified for a Primary School Leaving Certificate (PSLC). The subjects offered are divided into two categories: the core subjects and elective subjects. The core subjects are compulsory for all adult learners to take, lest, their study will be considered incomplete. The elective subjects are subjects offered for the purpose of enriching adult learners' general knowledge in fields related to their programmes. Adult learners have the freedom of choosing from the list of subjects provided by ENSAME. Though ENSAME has achieved much and made great strides in recent years, particularly in the areas of research and innovation, there is still much to be desired and done before ENSAME can attain the status of a first-class, renowned agency around learning. If ENSAME is to achieve its goal of becoming an overall excellent agency, it must address the claims made by some quarters that ALEP is not actually producing quality graduates. For example, there are anecdotal evidence that come which indicate that many ALEP graduates are found to be having difficulty and weak in the skills of communication and creative self-expression. Many are lacking in higher-order and lateral thinking skills, creativity, analytical skills and other skills required to make them efficient and proficient problem-solvers and decision-makers.

In order to produce quality graduates at ALEP, teaching and learning instruction, assessment procedures and techniques should be highly tailored for the desired exit outcomes (Iringan & Bansig, 2019). ALEP's goal of producing quality graduates should be reflective in the teaching and learning objectives which are observable and achievable via the adequate and appropriate teaching and learning approaches and strategies. Assessment should possess high degree of discriminating effect that classifies learners according to their actual skills and abilities. There is a wealth of assessment methods used in ALEP to assess adult learners' achievements. The choice of assessment procedure should be tailored to meet the learning needs of adult learners. ALEP in Enugu State implements OBE principles across all subjects and instructional strategies and in all ALECs. This ensures that adult learners acquire essential skills such as communication, critical thinking, professional, vocational, and interpersonal skills. However, the current implementation of OBE in the state faces several challenges. While OBE has been adopted, there are

ISSN: 978-2585-10-6 (PRINT)

anecdotal evidence indicating that many graduates of ALEP are struggling to develop critical skills deemed essential for their personal and professional growth.

Reports suggest deficiencies in communication abilities, analytical thinking, creativity, and problem-solving skills among graduates. Despite the use of multiple subjects and assessments, the instructional strategies and resources may not fully align with the desired outcomes or cater to the diverse learning needs of adult learners. Consequently, the graduates' capabilities often fall short of what the OBE principles aspire to achieve, leading to concerns regarding the quality and efficacy of the educational programmes offered. These lead to the discrepancy between the intended outcomes of the OBE framework and the actual competencies demonstrated by graduates of the ALEP. The systemic weaknesses in curriculum design, teaching methodology, and assessment strategies that do not adequately support adult learners' needs hinder the successful implementation of the OBE philosophy. Moreover, there is insufficient empirical evidence and scholarly research focused on evaluating the effectiveness of OBE in the context of Nigeria's ALEP. As a result, both adult education administrators and policymakers lack concrete data to drive improvements, thereby perpetuating the cycle of inadequacy in achieving quality educational outcomes. The study, therefore, aimed at exploring these issues in detail to provide insights and actionable recommendations for improving the implementation of OBE in ALEP in Enugu State.

Purpose of the Study

The purpose of the study is to assess ALFs' perceptions on how far the adult learners in ALEP in Enugu State, Nigeria have achieved the stated learning domains and learning outcomes. The specific objectives of the study were to:

1. ascertain the distribution of ALFs' perception levels in learning domains in Enugu State.
2. determine the ALFs' perception levels in teaching and learning domains in Enugu State.
3. determine the distribution of ALFs' perception levels of attainment of learning outcomes in Enugu State.
4. ascertain the extent to which the adult learners in Enugu State attain learning outcomes.

Research Questions

The following research questions guided the study:

1. What is the distribution of ALFs' perception levels in learning domains in Enugu State?
2. What are the ALFs' perception levels in teaching and learning domains in Enugu State?
3. What is the distribution of ALFs' perception levels of attainment of learning outcomes in Enugu State?
4. To what extent do the adult learners in Enugu State attain learning outcomes?

Hypotheses

The following hypotheses were developed to direct the analysis, and they were evaluated at a significant point of 0.05:

$H0_1$ There are no significant relationships between ALFs' levels of perception of utilization of teaching and learning domains by adult learners among clusters of social sciences, health and wellness education and basic literacy and numeracy.

ISSN: 978-2585-10-6 (PRINT)

$H0_2$ There are no significant relationships between ALFs' levels of perception on the attainment of learning outcomes by adult learners among clusters of social sciences, health and wellness education and basic literacy and numeracy.

Methods

A descriptive survey research design was adopted for the study. The survey design is a quantitative research technique in which a researcher administers a questionnaire to a sample or to the entire population to identify the population's behaviours, beliefs, expectations, or characteristics (Creswell, 2012). The population of the study was 449 adult literacy facilitators (ALFs) from 118 adult literacy education centres (ALECs) in Enugu State (Enugu State Agency for Mass Literacy Adult and Non-Formal Education [ENSAME], 2024). The sample size was 400 ALFs. In composing the sample, the researcher employed a simple random sampling technique to 400 ALFs out of the entire 449 ALFs in 118 ALECs in Enugu State. This represents 89.1% of the entire population. The instrument used for data collection was a structured questionnaire titled, "Implementation of Outcome-Based Education in Adult Literacy Education Programme (IOBEALEP) Questionnaire". The researcher designed and developed the instrument by focusing on two major domains: teaching and learning taxonomy (cognitive, psychomotor, and affective) and NMEC's learning outcomes. Levels and explanation for each domain are referred from Bloom's Taxonomy. The instrument was meant to measure the perceived attainment level of learning outcomes that have been developed by NMEC for subjects that were taught in a session. A rating scale of 4 points was used to characterize the respondents' views, and the rating scales were assigned numerical values of 4 points. The instrument was face-validated by three research method experts. They made corrections and modifications on the phrasing of the objects, the degree of language, their importance to the question and the study objectives. The researcher carried out a survey on 14 ALFs in Ishielu Local Government Area of Ebonyi State. This was done to check the instrument's reliability. Cronbach alpha method was used to estimate the coefficient of reliability. A reliability coefficient of 0.92 was obtained, showing that the performance was high and the instrument was accurate. The researcher distributed 400 copies of the instrument to ALFs in ALECs according to the number of subjects taught. The entire copies of the instrument distributed were successfully filled and returned. The 16 subjects offered in 1st Term; 2nd Term and in 3rd Term of 2022/2023 session are categorized into three clusters. They are: Social Sciences, Health and Wellness Education and Basic Literacy and Numeracy. Subjects under Social Sciences include Christian Religious Studies, Civic Education, Cultural and Creative Arts, Security Education, and Social Studies. Subjects under Health and Wellness Education are Agricultural Science, Entrepreneurship, Home Economics, and Physical and Health Education. Also, subjects under Basic Literacy and Numeracy include Basic Science and Technology, Business Studies, English Language, French Language, Mathematics, Igbo Language, and Information Technology (IT). Table 2 shows the responses of ALFs from each cluster.

Table 2: Distribution of Respondents by Cluster in 2022/2023 Session

		1st Term		2nd Term		3rd Term	
S/No.	**Cluster**	**N**	**%**	**N**	**%**	**N**	**%**
1.	Social Sciences	172	43	144	36	160	40
2.	Health and Wellness Education	112	28	132	33	124	31
3.	Basic Literacy and Numeracy	116	29	124	31	116	29

ISSN: 978-2585-10-6 (PRINT)

Total	**400**	**100**	**400**	**100**	**400**	**100**

*N = Number of responses received

Results were quantitatively analyzed using statistical software (SPSS version 20) to respond to the four research questions. As such, the quantitative results were analyzed using descriptive statistics (mean and standard deviation). To assess the substantial mean difference between the respondent groups, one way analysis of variance (ANOVA) was estimated at 0.05 significant point for the two hypotheses. The ANOVA was used to determine whether there are significant differences between teaching and learning domains and learning outcomes among clusters of Social Sciences, Health and Wellness Education and Basic Literacy and Numeracy.

Results

Research Question 1: What is the distribution of ALFs' perception levels in learning domains in Enugu State?

Answers to research question one are presented in Tables 3-5:

Table 3. Distribution of ALFs' perception levels in cognitive domains by clusters

S/No.	Cluster	1st Term						2nd Term						3rd Term					
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
		%						%						%					
1.	Social Sciences	2.3	4.3	17.9	24.6	19.9	30.9	2.3	5.1	22.3	19.5	20.5	26.0	2.3	4.7	20.1	22.1	20.2	28.5
2.	Health and Wellness Education	3.0	15.2	23.4	19.8	17.8	20.8	3.6	8.1	29.4	25.4	11.2	21.8	3.3	11.7	26.4	22.6	14.5	21.3
3.	Basic Literacy and Numeracy	3.0	7.4	27.7	33.2	17.8	10.9	1.1	4.8	22.0	36.0	15.1	18.8	2.1	6.1	24.9	34.6	16.5	14.9
Average		**2.8**	**9.0**	**23.0**	**25.9**	**18.5**	**20.9**	**2.3**	**6.0**	**24.6**	**27.0**	**15.6**	**22.2**	**2.6**	**7.5**	**23.8**	**26.4**	**17.1**	**21.6**

*% = Percentage; 1 = Knowledge; 2 = Comprehension; 3 = Application; 4 = Analysis; 5 = Synthesis; 6 = Evaluation

Table 3 shows the distributions of the ALFs' responses on their perception levels in cognitive domains in Enugu State. The cognitive domains involve knowledge and the development of intellectual skills. These domains consist of six major categories starting from the simplest behaviour to the most complex. The categories can be thought of as degrees of difficulties. Table 3 illustrates the following interpretation: i. Averagely, 25.9% of the ALFs perceived that the learners were able to attain level 4 (Analysis) of the cognitive domains in 1st Term. ii. Averagely, 27% of the ALFs perceived that the learners were able to attain level 4 (Analysis) of the cognitive domains in 2nd Term. iii. Averagely, 26.4% of the ALFs perceived that the learners were able to attain level 4 (Analysis) of the cognitive domains in 3rd Term. iv. ALFs fairly utilized all levels of cognitive domains from all the clusters. The data in the table showed that fairly equal emphasis was given towards utilizing all the domains in cognitive skills. The findings of the study were in line with the assertions of Sincero (2011) that the cognitive domain involves mental skills and the acquisition of knowledge. Hoque (2016) also stated that cognitive domain encompasses various levels of thinking from basic recall of facts to higher-order thinking skills such as analysis, synthesis, and evaluation.

ISSN: 978-2585-10-6 (PRINT)

Table 4: Distribution of ALFs' perception levels in affective domains by clusters

		1st Term					2nd Term					3rd Term				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
S/No.	**Cluster**	%					%					%				
1.	Social Sciences	2.0	13.6	28.6	27.2	28.6	0.5	13.0	29.3	23.7	27.9	1.5	13.5	29.2	26.4	28.5
2.	Health and Wellness Education	2.0	17.8	35.0	29.4	15.7	3.0	13.2	41.1	27.4	13.2	2.9	16.0	39.5	28.8	15.2
3.	Basic Literacy and Numeracy	3.5	16.3	47.5	24.8	7.9	3.2	18.8	39.2	28.0	8.1	3.7	17.7	45.3	27.4	8.2
Average		**2.5**	**15.9**	**37.0**	**27.1**	**17.4**	**2.2**	**15.0**	**36.5**	**26.4**	**16.4**	**2.7**	**15.7**	**38.0**	**27.5**	**17.3**

*% = Percentage; 1 = Receiving Phenomena; 2 = Responding to Phenomena; 3 = Valuing; 4 = Organizing Values; 5 = Internalizing Values

Table 4 shows that the affective domain includes the way the study deals with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The other skills in the affective domains were fairly utilized by the ALFs as shown in the following interpretations: i. Averagely, 37% of the ALFs perceived that the adult learners were able to attain level 3 (Valuing) of the affective domains in 1st Term. ii. Averagely, 36.5% of the ALFs perceived that the adult learners were able to attain level 3 (Valuing) of the affective domains in 2nd Term. iii. Averagely, 38% of the ALFs perceived that the adult learners were able to attain level 3 (Valuing) of the affective domains in 3rd Term. Supporting the findings of the study, Kuo et al. (2023) asserted that the affective domain relates to emotions, attitudes, values, and beliefs. The affective domain includes the development of attitudes that influence how individuals feel and respond to learning experiences.

Table 5: Distribution of ALFs' perception levels in psychomotor domains by clusters

		1st Term							2nd Term							3rd Term						
		1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
S/No.	**Cluster**	%							%							%						
1.	Social Sciences	5.3	14.0	15.6	27.9	12.6	15.6	9.0	8.8	12.1	23.7	12.6	13.5	14.0	7.9	7.0	13.5	14.2	25.6	13.2	14.9	8.9
2.	Health and Wellness Education	8.6	8.1	25.4	28.4	14.2	9.6	5.6	4.6	10.2	24.9	37.1	7.1	12.2	0	6.2	9.3	31.5	26.5	10.7	11.2	4.8
3.	Basic Literacy and Numeracy	5.9	9.9	28.7	35.6	8.4	10.4	1.0	2.2	8.6	26.9	36.0	10.2	9.7	3.8	4.3	9.5	32.7	32.1	9.6	11.1	4.1
Average		**6.6**	**10.7**	**23.2**	**30.6**	**11.7**	**11.9**	**5.2**	**5.2**	**10.3**	**25.2**	**28.6**	**10.3**	**12.0**	**3.9**	**5.8**	**10.8**	**26.1**	**28.1**	**11.2**	**12.4**	**5.9**

*% = Percentage; 1 = Perception; 2 = Set; 3 = Guided Response; 4 = Mechanism; 5 = Complex Overt Response; 6 = Adaptation; 7 = Origination

Table 5 shows the distributions of the ALFs' responses on their perception levels in psychomotor domains in Enugu State. The psychomotor domain consists of physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques as shown in the following interpretations: i. Averagely, 30.6% of the ALFs perceived that the learners were able to achieve level 4 (Mechanism) of the psychomotor domains in 1st Term. ii. Averagely, 28.6% of the ALFs perceived that the learners were able to achieve level 4 (Mechanism) of the psychomotor domains in 2nd Term. iii. Averagely, 28.1% of the ALFs perceived that the learners were able to achieve level 4 (Mechanism) of the psychomotor domains in 3rd Term. The findings of study agreed with the assertions of Cratty and Noble (2022) that the psychomotor domain encompasses

ISSN: 978-2585-10-6 (PRINT)

physical skills and the ability to perform tasks that require coordination and motor skills. The psychomotor domain includes skills from basic to more complex skills.

Research Question 2: What are the ALFs' perception levels in teaching and learning domains in Enugu State?
Answers to research question two are presented in Table 6:

Table 6: ALFs' perception levels in teaching and learning domains

		1st Term			2nd Term			3rd Term		
S/No.	Taxonomy	Mean	Level	Taxonomy level	Mean	Level	Taxonomy level	Mean	Level	Taxonomy level
1.	Cognitive	3.33	4	Analysis	3.26	4	Analysis	3.20	4	Analysis
2.	Affective	2.76	3	Valuing	2.63	3	Valuing	2.61	3	Valuing
3.	Psychomotor	3.06	4	Mechanism	2.90	4	Mechanism	2.89	4	Mechanism

Table 6 shows the ALFs' perception levels in teaching and learning domains in Enugu State. Majority of the ALFs perceived that the learners have achieved cognitive domains of level 4 (Analysis), affective domains of level 3 (Valuing), and psychomotor domains of level 4 (Mechanism). The analysis showed that the utilization of each of the three domains was diminishing as they moved from 1st Term to 2nd Term of 2022/2023 academic session. The findings of the study were in line with the study of Itmeizeh and Hassan (2020) which indicated that learning domains allows ALFs to design effective curricula and assessments that cater to various aspects of adult learners' development. Kumar (2023) stated that utilizing the cognitive, affective, and psychomotor domains, ALFs ensure a holistic approach to learning, promoting knowledge acquisition and the development of values and practical skills necessary for real-world application. This comprehensive approach is particularly relevant in adult education, where learners often seek to apply their knowledge and skills in practical and meaningful ways (Darling-Hammond et al., 2023).

$H0_1$ There are no significant relationships between ALFs' levels of perception of utilization of teaching and learning domains by adult learners among clusters of social sciences, health and wellness education and basic literacy and numeracy.
The Analysis of Variance (ANOVA) was computed on hypothesis one and the results were presented in Table 7:

Table 7: Analysis of variance for different domains by cluster

			1st Term				2nd Term				3rd Term			
S/No.	Taxonomy	Cluster	Mean	SD	F	Sig-F	Mean	SD	F	Sig-F	Mean	SD	F	Sig-F
1.	Cognitive	Social Sciences	3.58	1.33	15.27	0.00*	3.33	1.59	0.97	0.38	3.44	1.46	0.46	0.46
		Health and Wellness Education	3.17	1.46			3.17	1.42			3.19	1.44		
		Basic Literacy and Numeracy	3.10	1.20			3.27	1.33			3.20	1.27		
2.	Affective	Social Sciences	2.94	1.09	14.55	0.00*	2.79	1.33	5.27	0.01*	2.85	1.22	3.98	0.00*
		Health and Wellness Education	2.71	1.02			2.62	1.08			2.69	1.03		
		Basic Literacy and Numeracy	2.54	0.92			2.49	1.08			2.51	1.03		
3.	Psychomotor	Social	3.19	1.70	4.07	0.02*	2.89	1.99	1.05	0.35	3.01	1.83	1.02	0.33

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Sciences							
Health and Wellness Education	3.04	1.55		2.85	1.45	2.97	1.49
Basic Literacy and Numeracy	2.87	1.31		3.04	1.43	2.96	1.37

*Significant at 0.05

Table 7 shows the relationship between ALFs' perception levels on the utilization of teaching and learning domains in Enugu State. The analysis based on hypothesis one revealed that there are significant differences on the ALFs' perception level of achievement in teaching and learning domains from all the clusters in 1st Term. Also, there are significant differences on the ALFs' perception level of achievement in affective domain from all the clusters in 2nd and 3rd Terms. The significant differences in ALFs' perceptions of the utilization of teaching and learning domains from different clusters in the 1st Term could be attributed to several factors, including their varying levels of experience and training, resource availability, and support from administration. Furthermore, significant differences in ALFs' perceptions of the utilization of affective domain from different clusters in the 2nd and 3rd Terms could be attributed to the fact that ALFs with more motivated or higher-level learners might perceive a higher utility of advanced teaching domains. Some facilitators may have more opportunities to attend workshops, seminars, or training sessions that expose them to different teaching domains, making them more aware and favourable towards their utilization. However, there is no significant difference between the ALFs' perception levels of achievement of adult learners from different clusters in cognitive and psychomotor domains in 2nd and 3rd Terms showing that all ALFs agreed on equal parameter on the levels of achievement of adult learners in cognitive and psychomotor domains from different clusters in 2nd Term and 3rd Term.

Research Question 3: What is the distribution of ALFs' perception levels on attainment of learning outcomes in Enugu State?

Answers to research question three are presented in Table 8:

Table 8: Distribution of ALFs' attainment level on leaming outcomes through subjects by cluster

S/No.	Learning Outcomes	Cluster	1st Term	2nd Term	3rd Term
1.	Communication Skills	Social Sciences	2.94	3.06	3.01
		Health and Wellness Education	2.59	2.58	2.56
		Basic Literacy and Numeracy	2.57	2.51	2.55
2.	Critical Thinking and Scientific Approach	Social Sciences	2.85	2.87	2.88
		Health and Wellness Education	2.79	2.85	2.84

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		Basic Literacy and Numeracy	2.82	2.94	2.86
3.	Knowledge	Social Science	3.50	3.48	3.52
		Health and Wellness Education	3.31	3.40	3.37
		Basic Literacy and Numeracy	3.26	3.16	3.22
4.	Lifelong Leaming and Information Management	Social Sciences	2.97	3.13	3.06
		Health and Wellness Education	2.80	2.88	2.86
		Basic Literacy and Numeracy	2.79	2.91	2.88
5.	Managerial and Entrepreneurial Skills	Social Sciences	2.26	2.33	2.34
		Health and Wellness Education	2.08	1.94	2.06
		Basic Literacy and Numeracy	1.86	1.90	1.89
6.	Professionalism, Values, Attitudes and Ethics	Social Sciences	3.12	3.14	3.14
		Health and Wellness Education	2.66	2.62	2.64
		Basic Literacy and Numeracy	2.55	2.53	2.57
7.	Psychomotor/Practical/Technical Skills	Social Sciences	2.57	2.48	2.55
		Health and Wellness Education	2.82	2.74	2.78
		Basic Literacy and Numeracy	2.66	2.71	2.69
8.	Social skills and Responsibility	Social Sciences	3.05	3.22	3.14

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Health and Wellness Education	2.62	2.58	2.63
Basic Literacy and Numeracy	2.47	2.24	2.36

*****1-1.4 = Very Low; 1.5-2.4 = Low; 2.5-3.4 = Moderate; 3.5-4 = High

Table 8 presents the distributions of response of ALFs on the perceived attainment level of learning outcomes in Enugu State. Majority of the ALFs perceived that the learners are highly fluent in attaining all the eight elements of learning outcomes as proposed by NMEC for all the subjects.

Research Question 4: To what extent do the adult learners in Enugu State attain learning outcomes?

Answers to research question three are presented in Table 9:

Table 9: Mean score for the attainment of learning outcomes through subjects

		1st Term		2nd Term		3rd Term	
S/No.	**Learning Outcomes through Courses**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
1.	Communication Skills	2.73	6.83	2.72	2.41	2.74	2.04
2.	Critical Thinking and Scientific Approach	2.82	1.89	2.88	2.18	2.84	2.03
3.	Knowledge Skills	3.33	1.57	3.35	1.92	3.34	1.74
4.	Lifelong Learning and Information Management	2.87	2.03	2.98	2.19	2.93	2.01
5.	Managerial and Entrepreneurial Skills	2.09	2.65	2.07	2.77	2.05	2.27
6.	Psychomotor/Practical/Technical Skills	2.66	2.49	2.64	2.72	2.67	2.05
7.	Professionalism, Values, Attitudes and Ethics	2.82	2.27	2.78	2.56	2.85	2.04
8.	Social skills and Responsibility	2.76	2.27	2.70	2.60	2.80	2.43

Table 9 shows the mean responses of ALFs on the perceived attainment level of learning outcomes in Enugu State. The table showed that the overall perception ranged from low to high. The managerial and entrepreneurial skill were rated low in terms of attainment, while the rest lies in the region from 'moderate' to 'high'. The results as illustrated in the table showed that the highest perception level was the knowledge skills (item 6) where in 1st Term, 2nd Term and 3rd Term, it was ranked the highest at 3.33, 3.35 and 3.34 respectively. Managerial and entrepreneurial skills (item 4) ranked as low (i.e., 2.09, 2.07 and 2.05 for 1st Term, 2nd Term and 3rd Term, respectively). The rest of the learning outcomes (items 1, 2, 3, 5, 7 and 8) were fairly perceived at high levels of achievement. The findings of the study were in consonance with the study of Tam (2014) which stated that learning outcomes creates a clear expectation of what needs to be accomplished by the end of the programme. Adult learners will understand what is expected of them and adult literacy facilitators (ALFs) will know what they need to teach in the programme (Damit et al., 2021).

$H0_2$ There are no significant relationships between ALFs' levels of perception on the attainment of learning outcomes by adult learners among clusters of social sciences, health and wellness education and basic literacy and numeracy. The Analysis of Variance (ANOVA) was computed on hypothesis two and the results were presented in Table 10:

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Table 10: Analysis of variance for learning outcomes by cluster

			1st Term				2nd Term				3rd Term			
S/No.	**Taxonomy**	**Cluster**	**Mean**	**SD**	**F**	**Sig-F**	**Mean**	**SD**	**F**	**Sig-F**	**Mean**	**SD**	**F**	**Sig-F**
1.	Communication Skills	Social Sciences	2.94	1.85	17.53	0.00*	3.06	1.90	20.86	0.00*	3.10	1.78	16.20	0.00*
		Health and Wellness Education	2.59	2.23			2.58	2.52			2.56	2.56		
		Basic Literacy and Numeracy	2.57	1.97			2.51	2.53			2.50	2.01		
2.	Critical Thinking and Scientific Approach	Social Sciences	2.85	1.77	0.36	0.70	2.87	1.93	0.48	0.62	2.91	1.68	0.42	1.21
		Health and Wellness Education	2.79	2.08			2.85	2.30			2.89	2.08		
		Basic Literacy and Numeracy	2.82	1.89			2.94	2.27			3.03	1.93		
3.	Knowledge	Social Sciences	3.40	1.46	3.30	0.04*	3.48	1.55	9.79	0.00*	3.52	1.38	6.54	0.03*
		Health and Wellness Education	3.31	1.67			3.40	1.75			3.46	1.56		
		Basic Literacy and Numeracy	3.26	1.60			3.16	2.29			3.11	2.02		
4.	Life Long Learning and Information Management	Social Sciences	2.97	1.79	4.25	0.02*	3.13	1.79	5.09	0.01*	3.15	1.66	4.67	0.00*
		Health and Wellness Education	2.80	2.22			2.88	2.49			2.94	2.32		
		Basic Literacy and Numeracy	2.79	2.13			2.91	2.17			2.93	2.14		
5.	Managerial and Entrepreneurial Skills	Social Sciences	2.26	2.55	8.94	0.00*	2.33	2.55	9.86	0.00*	2.35	2.34	9.40	0.01*
		Health and Wellness Education	2.08	2.76			1.94	2.92			1.81	2.71		
		Basic Literacy and Numeracy	1.86	2.59			1.90	2.71			2.12	2.66		
6.	Professionalism, Values, Attitudes and Ethics	Social Sciences	3.12	1.75	30.93	0.00*	3.14	1.96	23.66	0.00*	3.19	1.86	27.30	0.01*
		Health and Wellness Education	2.66	2.54			2.62	2.74			2.60	2.56		
		Basic Literacy and Numeracy	2.55	2.36			2.53	2.60			2.82	2.49		
7.	Psychomotor/ Practical/ Technical Skills	Social Sciences	2.57	2.54	3.61	0.03*	2.48	2.75	3.68	0.03*	2.46	2.49	3.65	0.00*
		Health and Wellness Education	2.82	2.54			2.74	2.65			2.69	2.73		
		Basic Literacy and Numeracy	2.66	2.33			2.71	2.68			3.85	2.59		
8.	Social skills and Responsibility	Social Sciences	3.05	1.89	31.31	0.00*	3.22	1.90	55.94	0.00*	3.30	1.78	41.62	0.00*
		Health and Wellness Education	2.62	2.35			2.58	2.60			2.55	2.43		
		Basic Literacy and Numeracy	2.47	2.38			2.24	2.64			2.43	2.26		

* Significant at 0.05 level

Table 10 shows the results for relationships of the ALFs' perception levels on the attainment of learning outcomes in Enugu State. The table showed that there are significant differences in the attainment of different learning outcomes on Communication Skills, Knowledge Skills, Lifelong Learning and Information Management, Managerial and Entrepreneurial Skills, Professionalism, Values, Attitudes and Ethics, Psychomotor/Practical/Technical Skills, and Social Skills and Responsibility as perceived by ALFs from different clusters in 1st Term, 2nd Term and 3rd Term of 2022/2023 Session. The significant differences in the attainment of various learning outcomes could be due to variation in curriculum emphasis across terms, differences in facilitators' expertise and

ISSN: 978-2585-10-6 (PRINT)

approach, resource allocation and availability, changes in administrative focus and support, and variation in learner-cohort characteristics across terms. There is every likelihood that highly motivated learners may perform better in Lifelong Learning and Information Management, as they are more inclined to engage with self-directed learning tasks. On the other hand, there is no significant difference in the attainment of learning outcomes in subjects related to Critical Thinking and Scientific Approach among different clusters.

Conclusion

The rationale for using OBE in adult education stems from the global concern that traditional education often does not equip graduates with necessary life skills and workplace readiness. The concept of OBE, rooted in measurable outcomes, is highlighted as essential for ensuring adult learners develop competencies that contribute to their personal and professional success. The study emphasized that in Enugu State's adult literacy education programme (ALEP), there is a need to monitor educational outcomes rigorously, using OBE to create meaningful learning experiences aligned with NMEC's standards. The primary goal of the study was to evaluate ALFs' perceptions of adult learners' attainment of learning outcomes across various domains (cognitive, affective, and psychomotor). Therefore, the study investigated how these domains are utilized and perceived within the context of social sciences, health and wellness, and basic literacy and numeracy. The research questions addressed the distribution and levels of ALFs' perceptions concerning teaching and learning domains and attainment of learning outcomes. The study adopted a descriptive survey research design to collect quantitative data using a structured questionnaire, focusing on the three learning domains and the outcomes established by NMEC. The study sample was 400 ALFs from Enugu State's adult literacy centres, using a random sampling technique to represent 89.1% of the ALF population. Statistical analyses, including descriptive statistics and ANOVA, were used to answer the research questions and test the hypotheses. The results indicated various levels of ALFs' perceptions across the learning domains, with cognitive and psychomotor domains being notably emphasized. In terms of learning outcomes, the results revealed that adult learners exhibited strengths in certain domains (e.g., communication and knowledge skills) but may have weaknesses in areas like managerial and entrepreneurial skills.

Recommendations

Based on the findings of the study, the following recommendations were proffered:

1. ENSAME should advocate for a curriculum that directly ties learning outcomes to the actual needs of the adult learners, focusing on practical skills and knowledge that can directly benefit their daily lives. This can be done by encouraging a collaborative curriculum design approach that involves stakeholders such as ALFs, community leaders, and the learners themselves to ensure the relevance of educational content.
2. ENSAME should organize regular training sessions for ALFs focused on outcome-based education strategies, including techniques for setting measurable learning objectives, effective assessment methods, and learner-centred instructional approaches. The emphasis should be on the importance of continuous professional development to keep ALFs updated with new teaching methods and tools for more effective outcome-based education.
3. ALFs should conduct community awareness programmes to emphasize the importance of adult literacy programme and its benefits so as to encourage greater

ISSN: 978-2585-10-6 (PRINT)

participation and support from the community. Towards this end, local organizations should partner with government agencies to provide additional support and resources, ensuring the sustainability and scalability of the literacy programmes.

4. Adult education administrators should implement periodic assessment mechanisms that go beyond standardized testing, focusing on real-world application and skills. This can be done by setting up feedback loops where learners can share their educational experiences, enabling programme adjustments to meet evolving needs and improve outcomes continuously.
5. Enugu State Government should allocate more funding and resources towards adult literacy programmes to improve access and the quality of materials, infrastructure, and personnel. Also, policy adjustments should be encouraged to align with a learner-centred, outcome-based framework, helping to institutionalize these approaches at the state level.

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