



Determinants of Kinesthetic Learning Style of Adult Learners in Adult Literacy Centres in Calabar South Local Government Area of Cross Rivers, Nigeria

Ifeoma, F. Uzoagu (Ph.D)^{1*}, Ibanga, Philomena Aloysius¹

¹Department of Adult and Non-Formal Education, Faculty of Education, University of Port Harcourt

<p>Abstract: The study examined the determinants of kinesthetic learning style of adult learners in adult literacy centres in Calabar South Local Government Area of Cross Rivers State, Nigeria. The study was guided by five objectives and five research questions. The research design adopted was the descriptive survey design. The population of the study comprises 496 adult learners in 9 adult literacy centres in Calabar South Local Government Area. The 496 learners were sampled through a total sampling technique. The instrument for data collection was a validated self-developed questionnaire titled the determinants of kinesthetic learning style of adult learners in adult literacy centres (DKLSALALC) with a reliability index of 0.76. The data collected for the study were analyzed using the mean and standard deviation. The result of the study revealed that learners’ prior occupational experiences strongly influence their preference to kinesthetic learning style, facilitators’ of interactive instructional methods such as demonstrations, simulations and role-plays greatly enhance learners’ motivation; availability and proper use of instructional materials are vital in promoting kinesthetic learning; conducive physical learning environment that has adequate space, ventilation, lighting and flexible furniture, encourages learners’ engagement in movement-based and collaborative activities; and learners’ motivation and self-efficacy are also crucial for the kinesthetic learning preferences. Based on the findings, the researcher recommended several strategies, including linking activities to learners’ past occupations to enhance engagement and kinesthetic learning and utilizing instructional materials and local resources to support hand-on learning, particularly for government and coordinators.</p> <p>Keywords: Kinesthetic learning style, Adult learners, Adult literacy centres, Learning environment, Instructional materials.</p>	<p>Research Paper</p>
	<p>*Corresponding Author: <i>Ifeoma, F. Uzoagu (Ph.D)</i> Department of Adult and Non-Formal Education, Faculty of Education, University of Port Harcourt</p>
	<p>How to cite this paper: Ifeoma, F. Uzoagu & Ibanga, Philomena Aloysius (2026). Determinants of Kinesthetic Learning Style of Adult Learners in Adult Literacy Centres in Calabar South Local Government Area of Cross Rivers, Nigeria. <i>Middle East Res J. Humanities Soc. Sci.</i> 6(1): 20-29.</p>
	<p>Article History: Submit: 16.01.2026 Accepted: 13.02.2026 Published: 14.02.2026 </p>
<p>Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.</p>	

INTRODUCTION

Learning is the process of acquiring new knowledge, skills, values, attitudes and preferences through experience, study, practice or instruction, resulting in a relatively permanent change in understanding or capability, that enables better future performance and adaptation. It should be lifelong journey that should be enjoyable and based on personal interests. It is about internalizing information, building connections, understanding reality differently and applying what learned to solve problems and navigate the world. This has to do with the cognitive (knowledge), behavioural (skills/actions) and affective

(attitudes/beliefs) changes, driven by environmental, personal and social factor (Kendra, 2025).

Every individual learns differently. Technically, an individual learning style refers to preferential way in which the student absorbs, process, comprehends and retains information. A learning style is the way in which someone learns or processes information. The term can also encompass the ways a person chooses to organize information and to display their knowledge. Learners differ in abilities, backgrounds, motivation and environment. Educators must develop instructional approaches that address these variations in information perception, processing and retention.

VARK is an acronym that refers to the four learning style. VARK Model is a framework used to describe different learning styles which was developed by Fleming in the late 1980s. This categorized learners into four main categories based on their preferred learning methods. These are Visual (Images), Auditory (Sound), Reading/Writing (Text) and Kinesthetic (Hands-on). Other models expand this to include Logical (Patterns), Interpersonal (Solitary study). Understanding these styles helps educators tailor teaching and allows learners to use strategies that align with their strengths, capacity and improving efficiency.

In classroom settings, educators frequently observe that some students learn most effectively through diagrams and images, while others benefit from auditory explanations or hands-on activities. Recognizing these tendencies all for the development of balanced lessons incorporating visual aids, discussions, written assignments and experiential activities, thereby increasing the likelihood of engaging all learners, promoting inclusive and equitable educational practices. In literacy education, understanding and leveraging these styles, especially the kinesthetic learning style which emphasizes physical activity and hands-on learning can determine instructional success. The Kinesthetic approach is particularly relevant for adult learners.

Kinesthetic learning, also known as Tactile learning, is a learning style in which individuals learn best through physical activities such as touching or performing hands-on task. Kinesthetic learners are often described as touching, moving or performing hands-on activities, participation and physical engagement to understand and retain new information effectively. They tend to doodle a lot while listening. For kinesthetic learner, simple reading or listening to information may not be enough for full mastering and retaining of information. They learn more and better by engaging in hands-on experiences. Research from the national training laboratories suggests that learners retain up to 75% of information when actively participating in a task compared to only 10% through passive methods like reading or listening to lectures.

Kinesthetic adult learners process information by doing. It is not enough to tell them how something works. This type of adult learners need to put their hands on to experience. Adult and their ways of learning do not need much theory, but more of practical, because this is one of those learning styles that needs action to make information more meaningful and better mastery for the adult learner. This is one of those learning styles that need full participation (action) to make information stick. Kinesthetic learning which emphasizes learning by doing, touching and moving is a highly effective approach for community development. Allowing participants to acquire skills, build social cohesion and engage in practical, hand on project, by fostering direct interaction with the environment. Kinesthetic learning in

community contexts brings active engagement, a better understanding and retention on adult learners unlike passive listening. It utilizes experiential learning to teach skills by applying content directly to real-life situations which is a key component for community development particularly with adult learners. Kinesthetic apply skills such as gardening, assembling and repairing, which are community based, hands on project. It utilizes inclusive engagement to ensure that individuals with different learning preferences which might order wise disengage, are actively included in community improvements. By incorporating kinesthetic strategies such as active, hand-on participation etc. community leaders can create more engaging inclusive and effective community development projects that resonate with a wider range of people.

The key determinants of kinesthetic learning style are:

- i. Motivation to learn: A high level of motivation is a significant predictor, as adults often want to learn materials they can apply to real-life situations and problem-solving.
- ii. Prior experience: Adult enter educational environments with a wealth of life and work experiences. Their learning style is heavily influenced by how new information connects to these existing experiences and their desire for practical, real-world application.
- iii. Need for practical application: Kinesthetic learners need to put hands-on “the subject matter” to make information stick.
- iv. A preference for hands-on experiential activities determines their inclination for learning through movement, experimentation and first-hand experience.
- v. Physical and psychological variables: Individual physiological factors like health, energy level and overall physical comfort can influence a preference for a learning style that involves movement and physical activity.
- vi. Environment and context: Research suggests that environmental factors such as the structure of the learning environment play a role. The environment can shape preferences. The learning material itself can also influence the preference style, as some context naturally leads itself to a hands-on approach.
- vii. Personality and cognitive style: Personality traits and an individual’s natural mode of thinking, remembering and problem solving contribute to their preferred learning style. These are inherent preferences that are part of an individual’s cognitive diversity.

The facilitators that help adults to learn need a broad based knowledge as well as skills to handle the peculiar adult learning situation. The adult learning process needs specific methodology for successful facilitation. The purpose of any educational activity is to achieve a goal, whether for the ultimate aim of individual or collective development, growth and change, a good grasp of learning style is the key ingredient that makes for a positive learning atmosphere (Bakura, 2010).

Malcom Knowles popularized the theory of andragogy on the characteristics of the adult learner. Andragogy is the art and science of helping adults to learn or the study of educational theory and processes and technology that help adults to learn. It is basically an approach that recognizes the characteristics of the adult and appreciates the use of this knowledge in the handling of the educational situation, along with any teaching style use. This ensures that the adult is treated as such, with respect, and makes the learning process as devoid of avoidable trauma as much as possible. Adults are autonomous and self-directing and so have more say in what, where, how and with whom to learn from. This self-concept shifts from dependence to that of self-directedness.

Learning activities and approach must thus consider this situation and allow them to participate fully in the learning process right from the initial stage. The adult has a reservoir of experience to draw from. Over the years, the adult literacy learner has accumulated a vast amount of experience which becomes a rich resource and must be included in the teaching-learning process. This is why methods like Role play, Demonstration/Practice and other hands-on methods that allow them to share their life experience work better for them. Adults are goal-oriented and any learning must be well planned, with clear-cut goals that the adult should work towards. Adult learning is more of problem-oriented and any learning should be for immediate use rather than postponed. They must be accorded proper respect and treated as equals because they are intrinsically motivated.

Dunn and Dunn (1993) informed that when instruction is tailored to align with learners' preferences, learners tend to be more motivated, stay focused for longer periods and achieve higher level of comprehension. In classroom settings, educators frequently observe that some students learn most effectively through diagrams and images, some others benefit from auditory explanations or hands-on activities. Recognizing these tendencies allows for the development of balanced lessons incorporating visual aids, discussions, written assignments and experiential activities thereby increasing the likelihood of engaging all learners. As educational environments become increasingly multicultural and interdisciplinary, understanding diverse learning approaches is essential

for promoting inclusive and equitable educational practices.

Traditional teaching methods, auditory and visual, frequently fail many adult learner in literacy programmes. This misalignment fuels calls for inclusive approaches such as kinesthetic learning, which emphasizes hands-on participation. Kinesthetic learning connects literacy to real-life task, which is especially beneficial for adults and can transform disengagement into empowerment. Literacy is a process by which illiterate people become aware of their personal situation and learn to do something about improving it. In this process, learning to read, write and compute becomes a step towards achieving political, economic and cultural human rights. This in turn enables the people who have acquired the skills of literacy to be useful to themselves and play a role in making their world a better place to live. Literacy is also a catalyst for participation in social, cultural, political and economic activities and learning throughout life (Najmuddeen, 2015).

The skills of reading, writing and numeracy (computation) are most basic and most important programmes in adult education and national development. Without literacy, people cannot learn the useful information needed for survival and happiness throughout life. When a literacy programme is mixed with the teaching of other skill, which is useful either to the individual or the society, it is known as functional literacy.

Aderinoye in Najmuddeen (2015) itemized the following as some of the literacy activities: Traditional literacy, Cultural literacy, Civil literacy, Women literacy, Functional literacy and Critical literacy. All these are easy if they are taught properly with appropriate learning style or approach. Adult learners often have more defined learning goals and require immediate applicability of acquired skills. Kinesthetic learning addresses this need by anchoring abstract literacy concepts in tangible activities, thus increasing the learner's engagement and motivation. Many adult literacy programmes in rural and semi-urban communities in Cross River State fail to fully accommodate the realities of their target learners, most of whom are engaged in labour-intensive occupations like farming, petty trading and craftsmanship. For such learners, kinesthetic learning style that align with their daily routines can make learning more meaningful. For instance, using tailored measurements to teach numeracy or storytelling and role-play to enhance language skills can bridge the gap between literacy content and real-world application (Brookfield, 2013). Understanding the determinants of kinesthetic learning style among adult learners is therefore crucial in developing more inclusive, engaging and effective literacy education programmes in Cross River State.

The effectiveness of literacy instruction depends on facilitators adopting strategies aligning with adult learners preferred learning styles. Kinesthetic learning which emphasizes learning by doing, movement and hands-on engagement is particularly relevant for adults who bring rich experiences and prefer practical action-oriented approaches. Observations and reports from adult literacy centres in Cross River State suggest that most instructional practices remain predominantly teacher-centred, theoretical and auditory in nature. Many of the facilitators rely heavily on verbal explanations and rote learning with limited opportunities for learners to engage in practical demonstrations, manipulative use or physical participation in lessons. Consequently, adult learners who prefer kinesthetic learning may become disengaged, experience lower comprehension and drop-out of the literacy programmes due to unmet learning preferences. It is on this premise that this study sought to examine the determinants of kinesthetic learning style among adult learners in adult literacy centres in Calabar South Local Government Area of Cross River State, Nigeria.

Aim and Objectives of the Study

The study examined the determinants of kinesthetic learning style of adult learners in adult literacy centres in Calabar South Local Government Area of Cross River State. The objectives of the study are to:

- 1) Examine how adult learners' occupation prior hands-on experience determines their preferences for kinesthetic learning style in adult literacy centres in Calabar South Local Government Area.
- 2) Find out how instructional method used by facilitators determines adult learners' preference of kinesthetic learning style in adult literacy programme in Calabar South Local Government Area.
- 3) Determine if availability of learning materials determine kinesthetic learning style practices in adult literacy programmes in Calabar South Local Government Area.
- 4) Investigate how physical learning environment determines adult learners' engagement in kinesthetic learning activities in adult literacy programme in Calabar South Local Government Area.
- 5) Examine how learner motivation determines their preference for kinesthetic learning style in adult literacy programme in Calabar South Local Government Area.

Research Questions

- 1) How do adult learners' occupation prior hands-on experience determine their preferences for kinesthetic learning style in adult literacy

programme in Calabar South Local Government Area?

- 2) How do the instructional method used by facilitators determine adult learners' preference of kinesthetic learning style in adult literacy programme in Calabar South Local Government Area?
- 3) How do the availability of learning materials determine kinesthetic learning style practices in adult literacy programme in Calabar South Local Government Area?
- 4) Do physical learning environment determine adult learners' engagement in kinesthetic learning activities in adult literacy programme in Calabar South Local Government Area?
- 5) Do learners' motivation determine their preference for kinesthetic learning style in adult literacy programme in Calabar South Local Government Area?

METHODOLOGY

The study adopted a descriptive survey research design. This design is appropriate for this study, because it enables the researcher to systematically collect data from a representative sample of the adult learner population to identify the determinants of the kinesthetic learning style. According to Nwogu (2015), the descriptive survey design seeks to describe existing conclusions, perceptions and relationships among variables without influencing them. The descriptive survey design enables the researcher to gather detailed information from a large sample of adult learners across different literacy centres in Calabar South Local government Area, which enhances the finding.

The population of this study comprised four hundred and ninety-six (496) adult learners enrolled in nine (9) adult literacy learning centres in Calabar South Local Government Area of Cross River State, where different categories of adult learners are trained on functional literacy skills for socio-economic development.

The sample size for the study is four hundred and ninety-six (496), representing the total population of the study. The sampling technique adopted for the study is total or census sampling technique. This involves examining the entire population within the scope of study.

The instrument for data collection was developed by the researcher titled "Questionnaire on Determinants of Kinesthetic Learning Style in Adult Learners in Adult Literacy Centre (DKSALALC)". The questionnaire was divided into two sections, A and B. Section A solicited data on demographic features of the adult learners while section B contain statement items

drawn from the various research questions. The questionnaire consisted of sixty (60) items designed on modified four-point likert scale with the following response options: Strongly Agree, Agree, Disagree and Strongly Disagree.

In order to ascertain the validity of the instrument, two experts in the Department of Adult and Non-Formal Education, University of Port Harcourt validated the instrument. Their suggestions and corrections were duly considered and incorporated into the final drafting.

Reliability of the instrument was tested using Test-Retest method. This was done by administration of the instrument to twenty (20) adult learners in adult literacy centres who are not part of the sample of the study. Their responses were analyzed using the Pearson Product Moment Correlation. The reliability index of 0,76 was realized, attesting the reliability of the instrument.

The instrument was administered to the respondents by the researcher and two trained research assistants who were trained by the researcher on effective administration and collection of the instrument.

Specifically, four hundred and ninety-six copies of the questionnaire were distributed, four hundred and eighty copies were retrieved. However, sixteen (16) copies were not properly filled and were discarded. This left a total of four hundred and eighty (480) correctly filled, returned copies of the questionnaire which were analyzed for the study.

The data collected for the study were analyzed using mean statistic and standard deviation. The decision on the research questions was based on criterion mean of 2.5. For any item in the questionnaire to be accepted, it must score a mean weight of not less than 2.5. The response to the questionnaire items were weighted on four point scale of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). The mean for each item was obtained using the total sum of the product of responses and their weight mean divided by the total number of respondents.

RESULTS

Research Question One: How do adult learners' occupation prior hands-on experience determine their preferences for kinesthetic learning style?

Table 1: Mean Analysis on how Adult Learners' Occupation Prior Hands-On-Experience Determine their Preferences for Kinesthetic Learning Style

S/N	Statements	Adult Learners N= 480		
		\bar{x}	SD	Decision
1	Your work experience has made you more comfortable with learning activities that involve movement or demonstration.	2.95	0.82	Agree
2	Your job experience makes it easier for you to understand lessons that involve practical demonstrations.	2.78	0.97	Agree
3	You relate learning tasks to you previous hands-on work experience to understand new concepts better.	2.74	1.14	Agree
4	You prefer facilitators who use experiential or practice-based teaching methods similar to what you experienced at work.	3.06	0.97	Agree
5	Your occupational background has trained you to focus more on tactile and physical learning approaches.	2.77	0.83	Agree
6	You easily connect classroom learning with real-life situations because of your prior practical job experience.	3.05	0.53	Agree
7	The skills and experiences you gained from your former occupation influence your preference for kinesthetic learning activities such as role-plays, simulations, or manual tasks	3.00	0.97	Agree
8	You learn faster when the learning environment allows you to replicate work-related physical activities.	3.08	0.82	Agree
	Grand Mean	2.93		Agree

Table 1 reveals that items 1-8 recorded mean values ranging from 2.74 to 3.08. The corresponding standard deviations ranged from 0.53 to 1.14. This shows a generally consistent agreement among respondents, with slight variations in opinion. The highest mean score ($\bar{x} = 3.08$) was recorded on item 8. This suggests that learners with practical work experience learn more effectively when instructional activities incorporate physical engagement similar to their occupational experiences. This finding highlights the importance of

experiential and hands-on teaching approaches in adult education.

Items 4 and 6 had mean scores of $\bar{x} = 3.06$ and $\bar{x} = 3.05$. These scores reinforce the idea that adult learners benefit from instructional strategies that relate classroom content to their previous work contexts. The lowest mean score ($\bar{x} = 2.74$) was obtained on item 3. This still indicated agree, suggesting that most adult learners make connections between past and current learning experiences. However, this practice may vary

depending on individual cognitive styles and the relevance of their former occupations to current learning content. The grand mean score was 2.93. This implies that adult learners' occupational experiences play a significant role in shaping their preference for kinesthetic learning approaches in adult literacy centers.

Research Question Two: How do the instructional methods used by facilitators determine adult learners' preference of kinesthetic learning style?

Table 2: Mean Analysis on how Instructional Methods Used by Facilitators Determine Adult Learners' Preference of Kinesthetic Learning Style

S/N	Statements	Adult Learners = 480		
		\bar{x}	SD	Decision
9	My facilitator frequently uses practical demonstrations to explain lessons during class	2.80	0.84	Agree
10	You understand lessons better when the facilitator uses hands-on activities.	2.96	0.77	Agree
11	Your facilitator incorporates role-playing, modeling, or simulations in the teaching process.	3.27	0.86	Agree
12	The teaching methods used make it easy for you to participate physically in learning tasks.	3.08	0.77	Agree
13	You prefer lessons where you can manipulate learning materials or tools during instruction.	2.98	0.89	Agree
14	Your facilitator often organizes group activities that involve movement and physical engagement.	3.24	0.78	Agree
15	Your facilitator's use of real-life practice sessions helps me retain what I learn.	2.91	0.74	Agree
16	You become more motivated when the facilitator involve in the demonstration process instead of lecture-only methods.	3.31	0.82	Agree
	Grand Mean	3.07		Agree

Table 2 shows that items 9-16 recorded mean scores above 2.50, which indicates a very significant influence across all the statements. Item 16 recorded the highest mean score of 3.31, suggesting that learners are more engaged and motivated when facilitators use active, demonstration-based teaching approaches rather than traditional lecture methods. In the same vein, item 11 had a mean of 3.27, followed by item 14 with a mean of 3.24. These results suggest that adult learners place a very strong on participatory and experiential instructional approaches that facilitate movement, practice, and collaboration. Items 10 and 15 have mean scores of ($\bar{x} = 2.96$) and ($\bar{x} = 2.91$), indicating that learners find these strategies effective for comprehension and retention. The relatively high standard deviations, ranging between 0.74

and 0.89, show some variability in learners' responses, though the overall trend remains positive.

The grand mean of 3.07 further confirms that the facilitators' instructional methods significantly influence adult learners' preference for kinesthetic learning. These findings suggest that interactive, practice-based, and experiential teaching methods play a crucial role in shaping preferences in literacy centers.

Research Question Three: How do the availability of learning material and instructional resources determine kinesthetic learning style practices in adult literacy centers in in Cross River State, Nigeria?

Table 3: Mean Analysis of Extent to which Availability of Learning Materials and Instructional Resources Determine Kinesthetic Learning Style Practices in Adult Literacy Centers

S/N	Statements	Adult Learners N= 480		
		\bar{x}	SD	Decision
17	The availability of instructional resources encourages you to engage in practical learning tasks.	2.89	1.02	Agree
18	Your facilitator provides real objects or tools that help you learn by doing.	3.17	0.87	Agree
19	Learning aids such as charts, models, and manipulatives are regularly used during lessons in your adult literacy centers	3.03	0.80	Agree
20	Access to locally made instructional materials enhances your participation in physical learning activities	3.13	0.90	Agree
21	The presence of functional learning equipment encourages interactive and practical lessons in your center	3.08	0.89	Agree
22	You learn better when there are materials you can touch, move, or manipulate during instruction.	3.11	0.88	Agree
23	The availability of instructional resources helps you to practice what you have learned immediately.	3.09	0.93	Agree

S/N	Statements	Adult Learners N= 480		
		\bar{x}	SD	Decision
24	Your literacy center provides enough materials to support group projects and demonstrations.	3.13	0.90	Agree
	Grand Mean	3.08		Agree

Table 3 revealed items 17-24 recorded mean scores above the criterion mean of 2.50. This implies that respondents agreed that learning materials and instructional resources significantly influence kinesthetic learning practices. Item 18 got the highest mean score of 3.17. This shows that adult learners find real, tangible learning materials essential in facilitating hands-on experiences and practical engagement. Items 20 and 24 have mean scores of 3.13, indicating that the use of locally sourced and adequate materials enhance learners' active participation, collaboration, and involvement in kinesthetic learning tasks. Item 22 had a mean score of ($\bar{x} = 3.11$) while item 21 had a mean score of ($\bar{x} = 3.08$). These scores highlight the importance of tactile and manipulable resources in sustaining learner engagement and retention. Items 23 and 17, with mean scores of ($\bar{x} = 3.09$) and ($\bar{x} = 2.89$), further affirm that accessible instructional resources enable adult learners to

apply theoretical knowledge through practice. The standard deviations, which range between 0.80 and 1.02, indicated moderate variability among respondents' views but a consistent overall agreement. The grand mean of 3.08 further confirms that the availability and accessibility of adequate instructional materials and resources play a vital role in promoting kinesthetic learning activities among adult learners in the study area. The result of this table implies that adequate availability and utilization of instructional materials and resources are crucial determinants of effective kinesthetic learning style practices in adult literacy centers across Cross River State.

Research Question Four: How do the physical learning environment determine adult learners' engagement in kinesthetic learning activities?

Table 4: Mean Analysis on how Physical Learning Environment Determine Adult Learners' Engagement in Kinesthetic Learning Activities

S/N	Statements	Adult Learners N= 480		
		\bar{x}	SD	Decision
25	The classroom space in your literacy centre allows free movement during learning activities.	2.95	0.82	Agree
26	A well-arranged learning environment encourages you to participate in hands-on activities.	2.78	0.97	Agree
27	The seating arrangement in your center supports group work and physical interaction.	2.74	1.13	Agree
28	The availability of open space enhances your ability to engage in practical learning activities.	3.07	0.97	Agree
29	The physical condition of the classroom (furniture, layout, cleanliness) supports active participation in learning by doing in your center	2.77	0.83	Agree
39	The presence of flexible and movable furniture enhances your participation in demonstration-based learning.	3.05	0.53	Agree
31	Good ventilation and lighting in the classroom increase your motivation for physical learning tasks.	3.00	0.96	Agree
32	You are more engaged in lessons when the learning environment is comfortable and spacious.	3.08	0.82	Agree
	Grand Mean	2.93		Agree

Table 4 findings revealed a grand mean score of 2.93, indicating that respondents agreed to a high extent that the physical learning environment significantly influences their engagement in kinesthetic learning activities. This implies that a conducive and well-structured physical environment fosters adult learners' participation in practical, movement-oriented learning experiences. Item 32 had the highest mean score ($\bar{x} = 3.08$), showing that space and comfort are vital in enhancing learners' active participation. Items 28 and 30 had mean scores of ($\bar{x} = 3.07$) and ($\bar{x} = 3.05$), respectively. These revealed that the availability of physical mobility and adaptable classroom arrangements

are crucial factors for effective kinesthetic engagement. Items 31, 25, and 27 with mean scores of ($\bar{x} = 3.00$), ($\bar{x} = 2.95$), and ($\bar{x} = 2.78$) further affirm the importance of environmental design in supporting hands-on learning.

The findings suggested that adult learners in literacy centres in Cross River State perceive the physical learning environment as a key determinant of their involvement in kinesthetic learning activities. A well-ventilated, adequately spaced, and flexible learning environment encourages collaboration, experimentation, and practical learning, which are central to kinesthetic learning styles. This finding highlights the importance of

literacy facilitators and programme planners prioritizing the improvement of physical facilities to foster experiential and participatory learning among adult learners.

Research Question Five: How do learners' motivation and self –efficacy determines their preference for kinesthetic learning style?

Table 5: Mean Analysis of on how Learners' Motivation and Self –Efficacy Determines their Preference for Kinesthetic Learning Style

S/N	Statements	Adult Learners N= 480		
		\bar{x}	SD	Decision
33	You feel motivated to participate in learning activities that allow you to move and practice what I learn.	2.98	0.88	Agree
34	Your confidence in performing tasks improves when you engage in hands-on learning activities.	3.03	0.84	Agree
35	You prefer kinesthetic learning methods because they make you feel more capable of mastering new skills.	3.34	0.90	Agree
36	Your interest in lessons increases when you can handle materials or perform demonstrations.	3.14	0.83	Agree
37	You believe you learn best when you can practice tasks rather than just listen or observe.	3.05	0.95	Agree
38	When you successfully complete a hands-on activity, it motivates you to learn more.	3.25	0.81	Agree
39	Your level of confidence determines how actively you participate in kinesthetic learning experiences.	2.89	0.75	Agree
40	You feel more competent when learning involves physical participation and experimentation.	3.03	0.84	Agree
	Grand Mean	3.09		Agree

Table 5 revealed that items 33-40 gave mean scores that ranged from 2.89 to 3.34, indicating a consistently strong level of agreement among respondents. Item 35 had the highest mean score of ($\bar{x} = 3.34$), indicating that adult learners are more motivated and confident when engaging in learning activities that allow them to practice and master new tasks through physical involvement. Item 38 also had a mean score of ($\bar{x} = 3.25$) while item 36 had a mean score of ($\bar{x} = 3.14$), suggesting that practical engagement not only boosts motivation but also enhances sustained interest in learning.

Also, items 34 and 40 had mean scores of ($\bar{x} = 3.03$), both of which imply that learners' self-efficacy is positively linked with kinesthetic learning environments. Items 33 and 39 had the lowest mean scores of ($\bar{x} = 2.89$) respectively, but still fall within the high extent category. This result shows the pervasive influence of self-belief and motivation on engagement in physical, practice-based learning. With a grand mean score of 3.09, the result reveals that respondents generally agreed to a high extent that motivation and self-efficacy significantly influence their preference for kinesthetic learning. The results indicated that motivation and self-efficacy are critical determinants of adult learners' preference for a kinesthetic learning style. Learners are more likely to participate actively, maintain interest, and achieve better learning outcomes when they perceive themselves as capable. Physical, hands-on experiences further support this preference. This underscores the importance of designing adult literacy programmes that integrate practical and experiential learning strategies. Such

approaches help sustain learners' motivation and boost their confidence in mastering new skills.

DISCUSSION OF FINDINGS

The study establishes that adult learners' previous occupational and practical experiences are significant determinants of their preference for kinesthetic learning styles in adult literacy centres. Individuals with practical work backgrounds strongly prefer activities involving physical participation, demonstration, and movement. Therefore, experiential instruction is essential for comprehension and retention among these learners, as replicating familiar physical activities anchors their learning. The study identified prior work experience as a primary factor influencing adult learners' preferred learning styles, with these individuals effectively relating classroom activities to their professional backgrounds and showing a preference for practical, hands-on instruction. Consistent mean scores indicate that previous exposure to tactile work enhances the assimilation of knowledge through kinesthetic methods.

Sisselman-Borgia (2017) and Morris (2020) found that experiential learning strategies in adult education programmes improve satisfaction, retention, and skill transfer to workplace tasks. These findings align with the current study, where respondents indicated learning improves when performing activities simulating real workplace practices. Facilitators should adopt strategies such as simulations and role-playing to promote physical engagement for kinesthetic learners,

emphasizing the value of integrating occupational experiences into curricula.

The study found that participatory instructional methods involving physical activity, such as demonstrations and group tasks, directly shape adult learners' preference for kinesthetic learning and effectively engage their chosen learning modalities. The findings underscore the significance of interactive instructional techniques for maintaining motivation and engagement. Facilitators who incorporate role-play, simulation, and movement-based activities into literacy instruction effectively address kinesthetic learners' preferences, resulting in improved participation and achievement.

The study indicated that adult learners prefer lessons involving the manipulation of materials and real-life practice. Interactive, hands-on teaching methods are therefore essential for supporting kinesthetic preferences and enhancing adult education. The findings revealed that the availability of relevant learning materials and instructional resources significantly influences the implementation of kinesthetic learning practices in adult literacy centres. Access to these resources enhances engagement in hands-on activities and strengthens learners' kinesthetic preferences.

Access to locally produced and sufficient learning materials for group tasks and demonstrations directly enhances learners' collaboration, engagement, and physical participation.

The study demonstrates that adequate instructional resources directly enable effective experiential and hands-on learning in adult literacy programmes by fostering kinesthetic engagement.

The study found that the physical learning environment is a significant factor in promoting adult learners' engagement in kinesthetic activities, establishing that conducive environments are prerequisites for experiential learning.

Adewuyi and Olatunji (2022) provide supporting evidence that classroom environment spaciousness, lighting, and movable furniture enhance participation in kinesthetic activities, affirming the study's main argument. Similarly, Obi and Okafor (2021) show that environmental comfort directly promotes kinesthetic engagement.

Okwudili and Udo (2020) found that open classroom space and practical tools notably improve learners' manual task performance, confirming the study's finding that conducive environments foster kinesthetic activities. Nzeneri (2019) also stresses that adult learners require movement-friendly environments, as poorly structured spaces inhibit experiential participation, reinforcing the main thesis. Ajayi and

Onyekwere (2023) observed in their study on adult literacy centres in Rivers State that learners in well-organized, ventilated, and clean environments displayed more enthusiasm and persistence in physical learning activities than those in overcrowded or poorly lit classrooms. Their study reinforces the present research finding that good ventilation and lighting increase motivation for physical learning tasks. Similarly, Kolawole and Ibrahim (2021) highlighted that adult education environments designed to support group work, interaction, and mobility lead to improved learning outcomes and sustained learner engagement.

The findings indicate that learners' motivation and self-efficacy are key determinants of their preference for kinesthetic learning. Higher motivation and confidence arise when instruction involves active participation, directly linking motivation and self-belief to the main argument that kinesthetic learning environments foster these outcomes. The study confirms that mastery experiences and successful performance in hands-on activities motivate learners to persist in their studies. Learners' confidence levels directly influence their engagement in kinesthetic experiences. Adult literacy programmes should intentionally incorporate hands-on, experiential, and task-based learning strategies to strengthen confidence, sustain motivation, and enhance practical skill acquisition.

CONCLUSION

This study concluded that kinesthetic learning among adult learners in Calabar South Local Government Area of Cross River State is determined by their prior occupational experience, instructional methods, access to learning resources, the physical learning environment, and individual motivation and self-efficacy. Implementing experiential, hands-on, and participatory instructional strategies in adult literacy programmes is critical for improving learner engagement, skill development, and sustained educational achievement.

RECOMMENDATIONS

1. Adult literacy facilitators should link activities to learners' past occupations to boost engagement and kinesthetic learning.
2. Facilitators should use participatory methods like demonstrations, role-plays, and simulations to encourage active learning and sustain interest.
3. Government and coordinators should provide and use instructional materials and local resources to support hands-on learning.
4. Learning centres should be spacious, well-ventilated, and flexible to support movement, collaboration, and physical participation.
5. Adult literacy programmes should use motivational strategies such as recognition and mentorship to build learners' confidence and kinesthetic preferences.

REFERENCES

- Adewuyi, T. & Olatunji, K. (2022). Learning environment and learners' participation in adult literacy programmes in South-West Nigeria. *Journal of Educational Research and Development*, 17(2), 45-58.
- Ajayi, F. & Onyekwere, E. (2023). Environmental factors and learners' engagement in adult literacy centres in Rivers State. *International Journal of Adult Education Studies*, 9(1), 112-126.
- Ajayi, I. A. (2017). Utilization of instructional materials as correlates of students' academic performance in secondary schools in Ekiti State, Nigeria. *International Journal of Education and Practice*, 5(5), 103-110.
- Aserinoye, R. (2007). *Literacy education in Nigeria*. Ibadan: University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Brookfield, S. D. (2023). *The skillfull Teacher: On Technique, Trust and Responsiveness in The Classroom*. Jossey-Base.
- Dunn, R. & Dunn, K. (1992). *Teaching secondary students through their individual learning styles: Practical approaches for grades 7-12*. Allyn & Bacon..
- Fleming, N. N. (2021). *Teaching and learning styles: VARK strategies*. Christchurch, New Zealand: Neil Fleming.
- Kendra, C. (2025). *Everything psychology*. <https://www.everywellmind.com>
- Knowles, M. S. (1980). *The Modern Practice of Adult Education: From Pedagogy to Andragogy*. Cambridge Adult Education.
- Luberger, C. (2025). *The daly bell*. Simplik12.com/blog? https://www.simplik12.com/teaching_styles
- NMEC (2008). *National Framework for the Development and Implementation of Non-formal Education in Nigeria*. Abuja: National Commission for Mass Literacy, Adult and Non-formal Education.
- Nworgu, B. G. (2015). *Educational research: Basic issues and methodology* (3rd edn.). Nsukka, Enugu: University Trust Publishers.
- Nzeneri, I. S. (2019). *Adult education and the learning environment: Implications for practice*. University of Port Harcourt Press.
- Obi, C. E. & Okafor, J. (2021). Impact of classroom environment on adult learners' motivation and participation in practical learning activities in Anambra State. *Nigerian Journal of Adult and Non-Formal Education*, 15(4), 55-70.
- Okwudili, P. & Udo, E. (2020). Influence of classroom design on experiential learning outcomes among adult vocational trainees in Nigeria. *Journal of Technical and Adult Education*, 5(2), 32-46.
- Omolewa, M. (2008). Adult literacy in Nigeria: The journey so far. *Adult Education and Development*, 71, 45-52.
- Sisselman-Borgia, A. G. (2017). *Innovations in experiential learning for adult learners*. ERIC. <https://files.eric.ed.gov/fulltext/EJ1188377.pdf>
- UNESCO (2016). *Global Education Monitoring Report 2016: Education for people and planet*. Paris: UNESCO.