

IMPACT OF INSTRUCTIONAL MATERIALS ON ACADEMIC PERFORMANCE ADULT LEARNERS IN MASALLACI NATIONAL MODEL ADULT EDUCATION CENTER, SHAHUCI, KANO STATE

AUWALU HALILU PhD AND ABBA MUHAMMAD TUKUR

Department of Adult Education & Community Services

Bayero University Kano, Nigeria

E_Mail: halilluauwal@gmail.com

Abstract

The study examined the impact of instructional materials on academic achievement of adult learners in Masallaci National Model Adult Education Center, Shahuci, Kano State. The objectives of the study are to identify the available instructional materials, determine the impact of instructional materials on academic performance of adult learners, and to examine the factors promoting the use of Instructional Materials in Masallaci National Model Adult Education Center, Shahuci, Kano State. Mixed design. Pre-test and post-test research design was adopted for the study. The population of the study is 2,600 adult learners. Simple random samplings technique was used for the selection of the sample of 335 adult learners in line with Krejcie and Morgan. The instruments for data collection were questionnaire and achievement test. Instrument was taken to the supervisor and experts in adult education, education and special education, the instrument there after was corrected and validated and the researcher used test-re-test methods the scores obtained from the two different administration process were entered into SPSS and correlated to obtained reliability coefficients of 0.69 and 0.70 respectively for the two instruments. Data collected were analyzed using simple percentage, frequency counts, mean and standard deviation. The findings were that the instructional materials available in the center include pictures, models. Instructional materials are very effective on the academic achievement of adult learners in Masallaci National Model Adult Education Center, Shahuci, Kano State. That the nature of the subject matter during lesson, nature of the objectives to be attained and high number of learners involved during lesson are the factors promoting the use of instructional materials in the center. The study recommend that instructional materials should be provided in adult education centers especially videos, audios and audio-visuals. The subject matter and the lesson objectives should always be written in a clearer way to enhance the effective selection of appropriate instructional materials. The number of learners in each class should be regulated to a controllable size so as to enhance the effectiveness in the utilization of the instructional materials in the center.

Keywords: Instructional Materials, Academic Achievement, Adult Learners

Introduction

Instructional materials are relevant to aid adult learners in comprehending intended learning content, ultimately enhancing their academic achievement in adult education centers worldwide. This significance is underpinned by Leohard's (1999) definition of instructional materials as tools providing realistic imagery and experiential substitutes, enriching diverse curricular experiences. Facilitating effective learning for adult learners involves bringing them into direct contact with real-world scenarios that resonate with their immediate concerns, as advocated by Mkpa (1989). Mkpa emphasizes the use of real-life objects or their representations in instructional settings to create a meaningful learning environment. These materials, whether actual or substitutes, serve a common purpose: enabling facilitators to effectively convey intended messages for learners to receive, understand, retain, and apply the acquired knowledge, thus aligning with overall educational objectives. Various classifications delineate instructional materials based on sensory appeal, categorizing them as audio-aids, visual aids, or audio-visual aids. While some materials may pose challenges in procurement due to cost or availability, resourceful educators often improvise

alternatives. The undeniable importance of instructional materials in teaching and learning significantly enhances the learning experience, leading to improved performance among adult learners in education centers worldwide. These materials act as conduits through which knowledge, skills, attitudes, ideas, beliefs, and values are transmitted from facilitators to learners, fostering understanding during and after instructional sessions, as affirmed by Akanbi (2000). Akanbi views instructional materials as tools enriching the teaching-learning processes and thereby contributing to enhanced learning outcomes and academic achievement.

The academic achievement of adult learners is intertwined with how facilitators use instructional materials to impact the curriculum content and help adult learners better understand, gain interest, and retain what they've learned. There has been substantial literature showcasing the indispensable role of materials in curriculum implementation, as observed in studies such as Adebule and Ayoola (2015). These studies assert that instructional materials increase learning rates and academic achievement, save facilitators' time and effort, increase learners' interest, and facilitate retention of learned content. Additionally, Akinfe, Olofinniyi, and Fashiku (2012) state that instructional materials in the teaching process reduce stress for both facilitators and adult learners.

In the facilitation process, generating adult learners' interest is crucial for effective learning. The use of instructional materials is important for arousing interest in the teaching-learning process and promoting the academic achievement of adult learners. Richard (1981) found that individuals typically remember 10% of what they read, 50% of what they see and hear, and over 70% of what they hear, see, and do. An old Chinese proverb echoes the same sentiment: 'I hear and forget. I see and remember. I do and I understand.'

For an improved teaching process leading to better adult learner performance, facilitators should organize various materials to make learning easy, enjoyable, and stable, facilitating better understanding and practical application of knowledge by adult learners. As Goethe (2013) said, 'knowing is not enough; we must apply, willing is not enough; we must do.' According to Ibrahim (2000), effectively using instructional materials requires previewing the material, preparing the environment, and ensuring the audience is prepared and motivated, utilizing rationale at the beginning, middle, or end of the lesson.

The effectiveness of employing appropriate instructional materials in teaching and learning among adult learners depends significantly on the quality of the instructor. To provide quality education and enhance adult learner performance, employing more competent, experienced, and qualified adult facilitators is imperative. The overarching goal of good instructional materials is to induce and support the learning process, leading to improved learning performance by affecting changes in the knowledge, attitudes, skills, and practices of adult learners. Integrating instructional materials in adult education centers would significantly enhance teaching, learning, and ultimately the performance of adult learners.

An adult learner is a mature student acquiring new knowledge and skills, developing new attitudes after reaching mature intellectual, physical, and social development (Brown, 1998). The term also describes any person socially recognized as an adult

involved in systematic learning, be it formal education, informal learning, or corporate-sponsored learning, as a full-time or part-time learner. An adult learner or student has completed the initial cycle of continuous education. If a full-time student, they typically have experienced a period of full-time employment before returning to study; if part-time, they will be employed during the study period (UNESCO, 1992). Illinois State University describes an adult learner as a non-traditional student, independent and employed full-time, with dependents or experiencing life changes such as death or divorce, wishing to complete a degree or other educational offering to enhance their personal and/or professional lives.

In Kano state, the use of instructional materials remains a pivotal factor in the academic achievement of adult learners, as observed by Kabeer (2016). Adult literacy in Kano State is recognized as a non-formal means of acquiring knowledge and updating skills. However, in adult classes, learning processes often incorporate the use of instructional materials. While many adult literacies lack measurement procedures to assess the relevance of instructional materials used in literacy programs, it is evident that the positivity of instructional materials is observed, albeit the extent of such achievement remains inadequately assessed. Against this backdrop, this study aims to evaluate the effect of instructional materials on the academic achievement of adult learners at the Masallaci National Model Adult Education Center in Shahuci, Kano State.

Statement of the Problem

Adult learners often encounter various challenges that impact their performance and successful completion of studies, largely due to inadequate usage of instructional materials in their education. Specifically, many adult learners within adult learning centers face difficulties in their learning activities, resulting in diminished academic performance. At the Masallaci National Model Adult Education Centers in Shahuci, Kano State, adult learners grapple with issues such as understanding study content, lack of motivation before, during, and after class, diminished interest in learning, and struggles with retaining knowledge. Consequently, there is a pressing need for research aimed at identifying the impact of instructional materials on the academic performance of adult learners in this setting. The effective use of instructional materials is pivotal in adult education as it significantly aids learners in improving their academic achievements. This study thus delved into examining the impact of instructional materials on the academic achievement of adult learners at the Masallaci National Model Adult Education Center in Shahuci, Kano State.

Objectives of the Study

The objectives of this research are as follows:

- i. To identify the available instructional materials in Masallaci National Model Adult Education Center, Shahuci, Kano State
- ii. To determine the impact of instructional materials on academic achievement of adult learners in Masallaci National Model Adult Education Center, Shahuci, Kano State
- iii. To examine the factors promoting use of instructional materials in Masallaci National Model Adult Education Center, Shahuci, Kano State.

Methodology

The study was conducted at Masallaci National Model Adult Education Center in Shahuci, Kano State, focusing on the impact of instructional materials on the academic achievement of adult learners. The research utilized a mixed design to examine the achievement levels of adult learners. The study population comprised all adult learners at Masallaci National Model Adult Education Center in Shahuci, Kano State, which was estimated to be 2,600 individuals during the 2018/2019 Academic Session, as statistically analyzed by the Center. A sample size of 335 adult learners was selected from this total population based on the suggestion by Krejcie and Morgan (1970). To assess the available instructional materials and factors promoting their use in enhancing the academic achievement of adult learners, a self-designed questionnaire labeled QAAIMAFPUIM was employed. The collected data underwent analysis using various statistical methods including simple percentage, frequency count, mean, standard deviation, and a 2-tailed analysis of mean, standard deviation, and standard error.

Results and Discussion

Research Question One:

What are the Available Instructional Materials in Masallaci National Model Adult Education Center, Shahuci, Kano state?

Table 1: Available Instructional Materials in Masallaci National Model Adult Education Center

Instructional materials	Available		Not Available	
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
Pictures	330	100	0	0
Models	201	60.9	129	39.1
Charts	221	67	109	33
Curved letters	147	44.5	183	55.5
Videos	201	60.9	129	39.1
Audios	201	60.9	129	39.1
Audio-visual	201	60.9	129	39.1
Diagrams	330	100	0	0
Flip chart	0	0	330	100

The table demonstrates that pictures are abundantly available in the center, showing a 100% availability. Additionally, models are present at 60.9%, charts at 67%, curved letters at 44.5%, videos, audio, and audio-visual aids at 60.9% each, and diagrams at a frequency of 330. However, the flip chart shows 0 frequency, indicating a 100% unavailability. These findings reveal a range of available instructional materials in the center, facilitating adult learners in achieving their stated learning objectives during lessons.

Research Question Two:

What is the impact of Instructional Materials on Academic Achievement of Adult Learners in Masallaci National Model Adult Education Center, Shahuci, Kano State?

Table 2: Impact of Instructional Materials on Academic Achievement of Adult Learners in Masallaci National Model Adult Education Center

	N	Mean	Std. Deviation	Std. Error
Experimental Group	164	16.0061	3.08713	.16994
Control Group	166	11.3894	3.17724	.17490

Table 3 depicts the impact of instructional materials on the Academic Achievement of Adult Learners in Masallaci National Model Adult Education Centre, Shahuci, Kano State. The mean scores of the two groups (experimental and control) are 16.0061 and 11.3894, respectively. These values indicate a notable difference between the mean scores of learners taught with instructional materials and those taught without the materials. This difference signifies that adult learners taught with instructional materials performed better than those taught without such materials.

Table 3: Impact of Instructional Materials on Academic Achievement of Adult Learners in Masallaci National Model Adult Education Center

	T	df	Sig. (2-Mean tailed)	Difference
Experimental Group	94.186	329	.000	16.00606
Control Group	65.119	329	.000	11.38939

Table 4 displays the impact of instructional materials on the Academic Achievement of Adult Learners in Masallaci National Model Adult Education Centre, Shahuci, Kano State, utilizing the t-test. The results indicate significant differences between the two groups, with notably different t-values of 94.186 and 65.119, favoring the experimental group. The obtained p-value, being less than the 0.05 level of significance, confirms a significant difference between the two groups.

Research Question Three:

What are the factors promoting use of instructional materials in Masallaci National Model Adult Education Center, Shahuci, Kano State?

Table 4: Factors Promoting use of Instructional Materials in Masallaci National Model Adult Education Center, Shahuci, Kano State

Factors promoting use of Instructional Materials in Masallaci National Model Adult Education Center, Shahuci, Kano State	SA		A		DA		SD		X̄	Sdvt
	F	%	F	%	F	%	F	%		
Nature of the subject matter	143	43.3	125	37.9	36	10.9	26	7.9	3.1667	.9123
Nature of the objectives to be attained during lesson	142	43	131	39.7	35	10.6	22	6.7	3.1909	.8769
Availability of materials	158	47.9	83	25.2	40	12.1	49	14.8	3.0606	.9927
High Number of learners involved during lesson	211	63.9	73	22.1	30	9.1	16	4.8	3.4515	.8500
Grand Mean									3.0842	.0939

Table 4 presents the factors promoting the use of Instructional Materials in Masallaci National Model Adult Education Center, Shahuci, Kano State. The table highlights that respondents agreed on several factors favoring the utilization of Instructional Materials during lessons, as indicated by their mean scores exceeding the grand mean score of 3.0842. Specifically, the respondents agreed on the nature of the subject matter during lessons (3.1667), the nature of objectives to be attained during lessons (3.1909), and the involvement of a high number of learners during lessons (3.4515). Conversely, the respondents disagreed on the role of material availability as a factor promoting the use of instructional materials in the center, with the mean score for this statement falling below the grand mean of 3.0842. The analysis establishes that the nature of the subject matter, the objectives to be attained during lessons, the availability of instructional materials, and the involvement of a high number of learners during lessons significantly contribute to the promotion of instructional materials' use in the center.

Summary of the Findings

The following are the summary of the findings of this study:

1. The Instructional materials available in the center are pictures, models, drawings, chats, curved letters, curved numeric, and cheque samples in Masallachi National Model Adult Education Center Shahuci, Kano state.,
2. Instructional materials are very effective on the Academic Achievement of Adult Learners in Masallaci National Model Adult Education Center, Shahuci, Kano State.
3. The nature of the subject matter during lesson, nature of the objectives to be attained and high number of learners involved during lesson are the factors that promote the use of Instructional Materials in the center.

Discussion of the Findings

Teaching is a social activity, and engaging in this process is essential when instructing adult learners. Both the facilitator and adult learners should actively participate for improved performance. Instructional materials play a crucial role in the facilitation process, enhancing the performance of adult learners in education centers. Some scholars emphasize the necessity of providing instructional materials within literacy centers to enhance the academic performance of adult learners. These materials encompass textbooks, films, primers, jingles, etc. Provision of necessary instructional materials enables adult learners to gain a better understanding of academic concepts and engage in practical experiments.

The research aimed to assess the impact of instructional materials on the academic achievement of adult learners at Masallaci National Model Adult Education Center, Shahuci, Kano State. The researcher derived three major findings based on the collected and analyzed data.

The initial finding of this research, detailing the available instructional materials in the center (such as pictures, models, drawings, charts, curved letters, curved numerals, and cheque samples), aligns with Maina's (2010) recommendations within literacy centers. Maina emphasized the necessity of providing instructional materials—comprising textbooks, films, primers, jingles, etc.—to enhance the academic achievements of adult learners. Access to such materials enables adult learners to gain a better understanding of academic concepts and acquire practical experimentation skills. The absence of videos, audios, and audio-visual materials coincides with findings by scholars like Oyedum (2000), highlighting underutilization of these resources by teachers in the center.

The finding of this research which stated that instructional materials are very effective on the Academic Achievement of Adult Learners in Masallaci National Model Adult Education Center, Shahuci, Kano State is in line with the finding of Adeogun (2001), which stated that there is a strong positive effect between use of instructional materials and academic achievement of adult learners. With instructional materials, adult learners perform tremendously in their learning processes. Adult learners can understand the content of the topic brought to them if the facilitator properly utilizes instructional materials in teaching them. Literacy centers that possess more Instructional Materials performed better than centers that have less Instructional Materials. Student's performance is affected by the quality and quantity of instructional materials. This implies that the center that possesses adequate learning materials such as textbooks, charts, pictures, real objects for adult learners to see, hear and experiment with, stands a better chance of performing well in its learning processes than poorly equipped ones. Also in line with this finding, the research by Chonjo (1994) who opined that the performance of adult learners could be attributed to adequate instructional materials that are in adult education centers. He recommends that in order to provide better performance, the availability of sufficient quality instructional materials is very important. He stresses that performance of adult learners is linked with the role of instructional materials with students' academic performance in literacy centers. Instructional materials play a great role in adult learner's performance. This is verified clearly when these materials stimulate, encourage and make learners understand the subject matters. However, these learning

materials are used to clarify nonverbal symbols and promote interaction among the learners and their subject facilitators. Due to these advantages, learners enjoy the lesson so that they participate fully. The utilization of instructional materials make learners performed effectively in the learning process, hence ending with quality education that enables them to suit in the current society in relation to technological changes. This research findings also corresponds with the finding of Oshadumi, (2003) who carried out a similar research titled: “Impact of Instructional Materials on Students Academic Achievement in Agricultural Science at secondary Schools in Okene LGA, Kogi State”. The results of his study shows that about 70% of the respondents made use of the instructional materials effectively which had positive impact on their academic achievement in agricultural science in Okene LGA. Research conducted by some researchers like Oyedun, (2000), supported this work by pointing out that about 80% of the respondents in his work did not make use of the Instructional Materials appropriately which had negative effects on their performance in Geography in Secondary Schools in the school.

Also, in support of the effectiveness of instructional materials in teaching as discovered by this research work is Uyagu (2009) who conducted a research on the effects of Instructional Materials’ Usage and Teachers’ Quality on Students’ Academic Performance in Science in Senior Secondary Schools in Zaria LGA in Kaduna State”. The findings reveal that students perform better when appropriate and improvised Materials were made available and utilized in teaching science and teachers that possess good qualifications enhanced students’ performance in science.

Moreover, a research conducted by Olayinka (2016) strongly supported the finding of this research by discovering that there was a significant difference in the pre-test and post-test of students in the experimental group. The study also found that gender effect was not statistically significant in social studies. The study concluded those students who were thought with instructional material performed better than those taught without. Hyland (2003) states that “one of the most important advantages of using Instructional Materials, is that it increases learner’s performance and reflects positively on their learning process.” Nunan (1997) believes that “exposing learners to Instructional Materials is indispensable, because of the rich knowledge input they provide. Exposing learners to such knowledge forms will enable them to cope with genuine interaction, whether it is inside or outside the classroom.” Therefore, the finding of this research clearly supported the above assertion made by previous researchers.

Likewise, researchers like Adebule and Ayoola (2015) strongly opined that teaching and learning process without the use of instructional materials may lead to poor academic achievement. This is shown in their research finding which stated that the use of Instructional Materials is very essential and makes teaching and learning processes more practically oriented which leads to better performance of adult learners while studying in any adult education center.

Conclusion and Recommendation

Conclusion

The available instructional materials in the center encompass pictures, models, drawings, charts, curved letters, curved numerals, and cheque samples. The research concluded that these instructional materials significantly impact the academic achievement of adult learners. Furthermore, factors promoting the use of instructional materials in the center include the nature of the subject matter, objectives, and the substantial number of learners engaged during lessons. In conclusion, the utilization of instructional materials holds immense significance, fostering practicality in teaching and learning processes, thereby enhancing the performance of adult learners in any adult education center. These findings find robust support from various research studies emphasizing the positive effects of utilizing instructional materials in teaching adult learners.

Recommendations

Based on the findings, the researcher makes the following recommendations:

1. More instructional materials should be provided in adult education centers especially videos, audios and audio-visuals.
2. The Subject matter and the lesson objectives should always be written in a clearer way to enhance the effective selection of appropriate instructional materials.
3. The number of learners in each class should be regulated to a controllable size so as to enhance the effectiveness in the utilization of the instructional materials in the center.

References

- Adebule and Ayoola (2015). Impact of Instructional Materials on Students' Academic Performance in Mathematics in Secondary Schools in Ekiti State, Nigeria. *Research Journal of Educational Studies and Review*, **2** (1): 1-4.
- Adeogun, A. A. (2001). The principal and the financial management of public secondary schools in Osu State. *Journal of Educational System and Development*, **5** (1): 1 – 10.
- Babanzara, U. H. (2014). Use of Native Language in Literacy teaching and adult learners academic Achievement in Kano State. A M.Ed. Dissertation submitted to the School of Postgraduate studies Bayero University, Kano.
- Brown, B. (1998). *Technology enhance learning environment. Encyclopedia of terminology for educational communications and technology*, New York, NY: Springer.
- Chonjo, P. N. (1994). The quality of Education in Tanzania primary schools: an assessment of physical facilities and teaching learning materials. *UTAFITI (new series)*, **1** (1): 36 – 47.
- DVV International. Retrieved August 29, 2019 from https://www.dvvinternational.de/fileadmin/files/Inhalte_Bilder_und_Dokumente/Micr
- E. Akinfe, O. E. Olofinniyi, C. O. Fashiku, (2012). "Teachers' quality as correlates of students academic performance in biology in senior secondary schools of Ondo State, Nigeria," *Online Journal of Education Research*, **1** (6): 108-114.
- Hyland K. (2003). Genre-based pedagogies: A social response to process. *A journal of second language writing*. **12** (Issue 1).
- Ibrahim, S.A. (2000). Instructional Materials. *Journal – Teachers Periscope of NUT, Kogi State Wing*, **1** (2): 27-29.
- Literacy Watch Committee of Nepal Bulletin No. 9 April 1999 Special Issue on Role of Community Learning Center for the Promotion of Literacy and Quality of Life
- Maina, M.J. (2010). Strategies Employed by Secondary School Principals to Improve Academic Performance in Embu West District. Kenyatta University. Retrieved April 25, 2018 from <http://irlibrary.ku.ac.ke/bitstream/handle/123456789/930/Mwaura%2C%20James%20Maina.pdf?sequence=3>
- Nunan, D. (1997). Strategy training in the language classroom: An Empirical investigation. *Relc Journal*. **28**: 56-81. 10.1177/003368829702800204.
- NMEC, (2017). Policy guidelines for mass literacy, adult & non-formal education in Nigeria. Yliam press Ltd. Abeokuta Stret, Area 8, Garki-Abuja, Nigeria.
- Olayinka, A.R.B. 2016. Effects of Instructional Materials on Secondary Schools Students Academic Achievement in Social Studies in Ekiti State, Nigeria. *World Journal of Education*, **6** (1): 32-39
- Oshadumi, J.A. (2003). Impact of Instructional Materials on Students' Academic Achievement in Agricultural Science at Secondary Schools in Okene LGA, Kogi State, Unpublished M.Sc. (ED) thesis, University of Ado Ekiti, (UNAD), Nigeria.
- Oyedun, O.S. (2000). Effects of Instructional Materials on Students Performance in Geography in Secondary Schools in Ilorin South LGA of Kwara State. Unpublished PGDE Project, UNAD.
- Richard, R. (2000). *The way we were: The myths and realities of Americas student achievement*. Economic Policy Institute/acs - VT 2000.