

Equipping Adult Learners with Basic Literacy Skills for Cognitive Sustainability

Blessing Anyikwa

Department of Adult Education, Faculty of Education University of Lagos, Nigeria
banyikwa@unilag.edu.ng

Yinusa Oyekunle

Department of Adult Education, Faculty of Education, University of Lagos, Nigeria
yoyekunle@unilag.edu.ng

Abstract

The non-literate adult citizens in Nigeria are often faced with the inability to apply mental intelligence in their lifestyles which is reducing their worth and relevance in the 21st century literate society. The study therefore, seeks to equip adult learners with basic literacy skills for cognitive sustainability in Lagos state, Nigeria. Four research questions were raised and answered; and four hypotheses were tested to guide the study. The study adopted descriptive survey research design. The instruments adopted for the study were Key Informant Interview (KII) and a Questionnaire. A 20-item questionnaire titled “Adult Learners’ Basic Literacy Skills Questionnaire”, (ALBLSQ) was developed by the researchers. The instrument was validated using content and face validity according to the standard approved by the National Mass Education Commission in Nigeria, and the State Agency for Mass Education in Lagos state, Nigeria (NMEC/NOGALSS). A total of one hundred and eighty (180) questionnaires were administered purposively to adult learners across the six NMEC/NOGALSS literacy centers in Lagos state, and one hundred and forty-five (145) were retrieved. The reliability of the instrument was confirmed using a test retest procedure, which gave a correlation coefficient of 0.87. The data was presented using frequency distribution tables, percentages and Bar Charts. The data was analyzed using Spearman Rank Order Correlation Coefficient and T-test statistical tools to test the hypotheses at 0.05 significance level. The study revealed that a significant difference exists between the performance of adult learners before intervention and the performance of adult learners after intervention of the adult basic literacy programme amongst others. The study concluded and recommended that the curriculum of the adult basic literacy should be designed to have a combination of English and mother tongue language as medium of instruction in order to aid cognitive development among adult learners, inter alia.

Keywords: Adult learners, basic literacy skills, non-literates, cognitive sustainability

INTRODUCTION

Literacy has become one of the most important ingredients for people to acquire in the 21st century given the spate of technological advancement and innovations, as well as the need for people to raise their living conditions. Adult basic literacy in its simplest form is the ability of people to be able to simply read, write and compute simple arithmetic. It is the ability of an individual to identify, understand, interpret, create, communicate and compute using printed and written materials for his/her

own development (UNESCO, 2016). It is the right of every human being as recommended by the Education for All (EFA, 2000). It is becoming increasingly difficult for non-literate adult citizens in Nigeria to survive, given their inability to apply mental or cognitive intelligence in their lifestyles and various occupations, which is limiting their business transactions with others, reducing their worth and relevance in the 21st century literate society (Afolabi, and Mwakapenda, 2014).

As a developing country, Nigeria is trying to catch up with the pace of global development and as such, the society is getting more habitable for the literate people, while the non-literates are striving hard to cope with the changes. Literacy which may come as either basic, post or functional literacy may be an avenue to bridge the gap. However, the non-literate citizens who may have undergone adult basic literacy programme may relapse quickly into illiteracy given their lack of continuity to post-literacy level, and most importantly, their inability to sustain learning cognitively at the basic literacy level (Nzeneri, 2010). This may result to decline in their various living conditions, such as trading activities, communications, social relationships and poor application of basic knowledge to day-to-day activities in their environment and the society at large.

Cognitive intelligence is a vital aspect of basic literacy skills (reading, writing, and arithmetic) required for non-literate adults to understand, retain and apply whatever form of literacy acquired in their everyday lives. Cognition refers to capabilities including memory, thinking and reasoning, spatial processing, problem solving, language, and perception (Styles, 2005). As a matter of fact, cognition is one of the domains of learning which involves knowledge and the development of intellectual skills required to make learning useful for personal development. Bloom in Forehand (2005), identified six levels of cognitive domains as recall, comprehension, synthesis, analysis, application and evaluation as the indices that make up cognitive intelligence. This is therefore, considered the benchmark to properly design any curriculum content for adult basic literacy. However, when implemented, would bring about cognitive

sustainability of the basic literacy to be acquired by the adult learners.

Cognitive sustainability is therefore, the ability of the adult learners to continue to understand, reflect, organize, examine and apply what they have learnt for personal improvement and community at large (Isha and Rani, 2011). It is a continuous process of knowledge retention and application of basic literacy acquired by the adult learners to improve their living conditions. According to Akinyemi, Allan, Owolabi, Akinyemi, Ogbole, Ajani, and Kalaria (2014), cognitive sustainability is to help adult learners through mental representation and understanding, without affecting the long term sustainability of knowledge acquisition. Though, this may not be an end in itself without proper assessment. It is imperative that an assessment of adult basic curriculum content is done to determine the suitability on the learners to recall, comprehend, analyze etc., whilst exposing them to basic literacy skills. Assessment in this regard will enable basic literacy programmes clearly evaluate and highlight areas of the curriculum content adult learners really need. Baro and Keboh (2012) maintained that, assessment of adult basic literacy is imperative in the achievement of the goals of the programme and that of the learners. He stated further that, in recent times, we talk about computer literacy, technological literacy, environmental literacy, and so on, assessment must be carried out to determine how these different literacy programmes can be contextualized to meet the diverse needs of the adult learners while ensuring that the cognitive learning can be sustained towards greater development.

Equipping adult learners with cognitive sustainability could be critical to stimulating their mental intelligence and make learning

useful for posterity. In the words of Mahatma Ghandi, as quoted by Mukalel (1997), he says, "If I learn carpentry from an illiterate carpenter, only I know how to do work, but if I learn from a literate carpenter, my thoughts will be stimulated". Ability to apply learning to everyday life goes along with reflective thinking and reasoning to raise one's standard of living in line with the modern day society. However, to equip adult learners with the required skills, it is important they are self-motivated and see literacy programmes as an avenue to improve their knowledge and skills to raise their living conditions.

Adult learners often see literacy programme as a waste of time given the herculean task ahead of them in terms of family responsibilities and need to survive daily, (Desjardins, & Warnke, 2012; Kolawole, 2011). Kolawole further asserted that adults most especially in the remote part of the country often believed adult literacy programme is synonymous to formal education and are of the opinion that they do not possess the cognitive capability to learn that much or that far; and that their children will enroll in this kind of education. Low self-confidence, problem of facilitators, funding for adequate literacy materials, center location, language of instruction, effective time for literacy activities and so on, have been identified as impediments to successful adult basic literacy programme delivery in Nigeria, (Aderinoye, 2020; Kolawole, 2011).

It is no surprise that the basic literacy of adult citizens in African society generally is treated as secondary issue given the fact that the provision of the basic literacy needs of adults to survive and adapt are still not within their reach. Nigerian non-literate adults are susceptible to various life issues ranging from inability to read

and write effectively, inadequate numeracy levels, poor application of basic knowledge for cognitive competence, seclusion and oppression from the dynamic nature of the literate environment. In spite of the understanding of the importance of adult basic literacy for nation building, the non-literate population is still increasingly oppressed cognitively. Youth and adult citizens who experience these challenges usually live in trepidation and with little or no relevance to the modern society. In the light of this threat and scribbling scourge, this study sets out to equip adult learners with basic literacy skills for cognitive sustainability in Lagos state, Nigeria.

The purpose of this study generally is to equip adult learners with basic literacy skills for cognitive sustainability. Specifically, the study will; (1) Examine the perception of adult learners towards adult basic literacy skills for cognitive development; (2) Determine adult basic literacy needs, content/curriculum for cognitive sustainability; (3) Find out if gender determine the level of cognitive sustainability of adult learners; (4) Ascertain if tribe play a role in cognitive sustainability of adult learners; (5) Investigate the appropriate language of instruction to aid adult learners' cognitive development;

METHODS

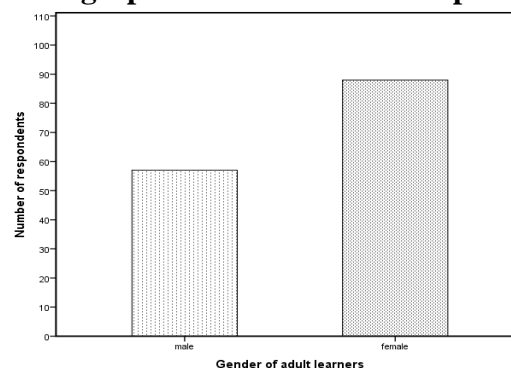
The study adopted a mixed method using the descriptive survey and quasi-experimental. The study population covered all adult learners in the Non-Governmental Association for Literacy Support Services (NOGALSS) literacy centers in Lagos State, Nigeria. The sample for the study was purposively selected as NOGALSS had six functional adult basic literacy centers at the time of this research study. The literacy centers were situated in Ikorodu, Oworoshoki,

Akoka, Agboyi 1 & 2 and Festac covering three zones (Lagos Central, West and East respectively) in Lagos state. A total of one hundred and eighty (180) adult learners started the programme with 30 learners per center, however, one hundred and forty-five (145) ended the programme and were all part of the research. Participation in the study was voluntary and hence, a written informed consent/assent was obtained from all participants. Permission to conduct the study was also sorted for and obtained from relevant offices connected with the learners in the center used for the study before the commencement. The instrument adopted for the study was the Key Informant Interview (KII) and a Questionnaire. A 20-item questionnaire titled “Adult Learners’ Basic Literacy Skills Questionnaire”, (ALBLSQ) was developed by the researchers adapted from the State Agency for Mass Education examinations for basic literacy learners. The questions covered items in all the key component areas covered in the curriculum and content in English and Numeracy. The instrument was validated using content and face validity according to the standard approved by the National Mass Education Commission in Nigeria (NMEC), and the State Agency for Mass Education (SAME) in Lagos state, Nigeria. The reliability of the instrument was confirmed using a test retest procedure, which gave a correlation coefficient of 0.87. The data was presented using frequency distribution tables, percentages, and Bar Charts. The hypotheses were analyzed using Spearman Rank Order Correlation Coefficient and T-test at 0.05 significance level. The content implementation consisted of 2-hour intervention sessions, using the REFLECT Approach and the Eclectic teaching method for three times, face-to-face contact in a week for six months with

refresher courses at 2, 4, and 6 month intervals. The intervention was Adult basic skills content taught to learners by trained facilitators who are experts in key components of the intervention (reading, writing and numeracy skills). Each session had a facilitator of learner ratio of approximately 1:30 maximum and 1:15 minimum. Intervention sessions took place between September 2018 and March 2019.

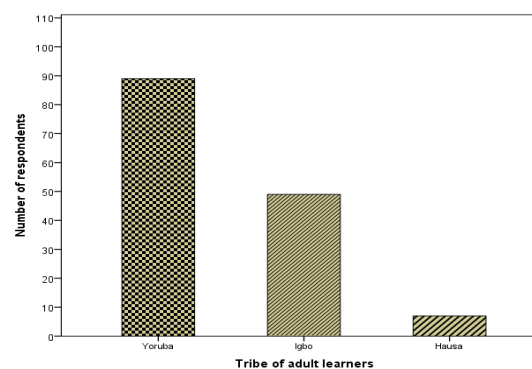
RESULTS

Demographic Information of Respondents



Picture 1. Gender of Respondents

The picture 1 shows that 57(39.3%) of the total respondents were male while 88(60.7%) of the total respondents were female. This implies that majority of the respondents were female.



Picture 2: Tribe of Respondents

Picture 2 shows that 89(61.4%) of the total respondents are Yoruba, 49(33.8%) of the respondents are Igbo, and 7(4.8%) of the total respondents are Hausa. This implies that majority of the respondents are Yoruba.

⊕ **Table 1: Perception**

s/n	Items	No change	Little change	A lot of improvement	Total
1.	The adult basic literacy programme has improved my calculation skills.	39 (26.9%)	66 (45.5%)	40 (27.6%)	145 (100%)
2.	It has improved my interpersonal relationship.	13 (9.0%)	83 (57.2%)	49 (33.8%)	145 (100%)
3.	It has improved my knowledge in pronunciation and identification of words.	25 (17.2%)	55 (37.9%)	65 (44.8%)	145 (100%)
4.	It has helped me in keeping adequate records of my business transactions.	24 (16.6%)	69 (47.6%)	52 (35.9%)	145 (100%)
5.	I now feel that I can adequately go further with my education.	25 (17.2%)	46 (31.7%)	74 (51.0%)	145 (100%)
6.	My self-confidence is heightened now that I can write some words and read them as well.	21 (14.5%)	79 (54.5%)	45 (31.0%)	145 (100%)
7.	The method used to teach us had made me remember and use the knowledge within my community.	46 (31.7%)	62 (42.8%)	37 (25.5%)	145 (100%)
8.	In my day-to-day activity, I can now use what I have learnt to make sentences.	28 (19.3%)	38 (26.2%)	79 (54.5%)	145 (100%)

Source: Field Survey, 2019. □

Do adult learners perceive adult basic literacy skills as relevant for cognitive development?

Information on Table 1 revealed that 39(26.9%) of the total participants stated that the adult basic literacy programme received has not improved their calculation skills, 66(45.5%) said little change, and 40(27.6%) said a lot of improvement. Likewise, 13(9.0%) participants said that the literacy programme received has not improved their interpersonal relationship, 83(57.2%) said little change, while 49(33.8%) said a lot of improvement. More so, 25(17.2%) participants are of the opinion that it has not improved their knowledge in pronunciation and identification of words, 55(37.9%) said little change and 65(44.8%) said a lot of improvement. In addition, 24(16.6%) said that the literacy programme received has not helped them in keeping adequate records of their business transactions, 69(47.6%) said little change, and 52(35.9%) said a lot of improvement. Also, 25(17.2%) of the total participants said they did not feel they can adequately go further with their education,

46(31.7%) said little change while 74(51.0%) said a lot of improvement.

Consequently, 21(14.5%) participants said that their self-confidence has not changed since they can't write some words and read them as well, 79(54.5%) said little change and 45(31.0%) said a lot of improvement. Besides, 46(31.7%) said that the method used to teach them at the literacy programme has not made them to remember and use the knowledge within their community, 62(42.8%) said little change, and 37(25.5%) said a lot of improvement. Finally, 28(19.3%) of the total participants said they cannot use what they have learnt in the literacy programme to make sentences in their day to day activity, 38(26.2%) said they can do it little, while 79(54.5%) said they can make sentences and a lot more now. Result from the analysis above suggests that adult learners perceived adult basic literacy skills as relevant for cognitive development.

What are the adult basic literacy needs and content/curriculum for cognitive sustainability?

Table 2: Content and Needs

s/n	Items	SA	A	D	SD	Total
9.	I can now spell simple words	33 (22.8%)	50 (34.5%)	53 (36.6%)	09 (6.2%)	145 (100%)
10.	I can read simple sentences	56 (38.6%)	72 (49.7%)	53 (36.6%)	13 (9.0%)	145 (100%)
11.	The teaching has helped my ability to do addition better.	39 (26.9%)	70 (48.3%)	32 (22.1%)	04 (2.8%)	145 (100%)
12.	It has helped my business because I can now make sales and I know how to add and subtract the change.	41 (28.3%)	47 (32.4%)	56 (38.6%)	01 (0.7%)	145 (100%)
13.	It has helped me feel fulfilled that I can have opportunity to be learned.	30 (20.7%)	80 (55.2%)	28 (19.3%)	07 (4.8%)	145 (100%)
14.	I can now identify letters and make meaning out of them.	47 (32.4%)	36 (24.8%)	47 (32.4%)	15 (10.3%)	145 (100%)
15.	I can now gradually write the sentences I have constructed.	35 (24.1%)	66 (45.5%)	23 (15.9%)	21 (14.5%)	145 (100%)
16.	Sometimes, I feel the content is too high for my level.	12 (8.3%)	35 (24.1%)	37 (25.5%)	61 (42.1%)	145 (100%)
17.	The teachers explain the content to my understanding.	31 (21.4%)	50 (34.5%)	47 (32.4%)	33 (22.8%)	145 (100%)

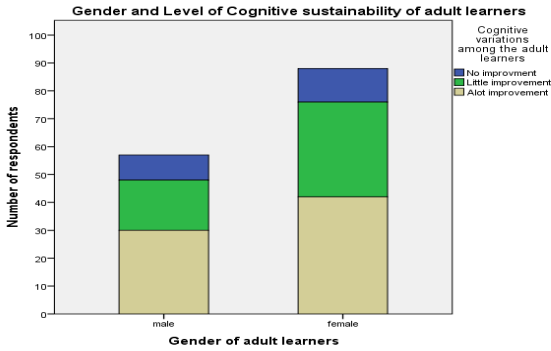
Source: Field Survey, 2019

Information on Table 2 indicated that 33(22.8%) of the total participants strongly agree that they can now spell simple words, 50(34.5%) agree, 53(36.6%) disagree, while 09(6.2%) strongly disagree to the statement. Equally, 56(38.6%) participants strongly agree that they can read simple sentences, 72(49.7%) agree, 53(36.6%) disagree and 13(9.0%) strongly disagree. Moreover, 39(26.9%) participants strongly agree that the teaching has helped their ability to do addition better, 70(48.3%) agree, 32(22.1%) disagree and 04(2.8%) strongly disagree. In addition, 41(28.3%) of the respondents strongly agree that it has helped their business grow because they can now make sales and they know how to add and subtract the change, 47(32.4%) participants agree, 56(38.6%) disagree, while 01(0.7%) strongly disagree. Similarly, 30(20.7%) strongly agree that it has helped them feel fulfilled and that they now have opportunity to be learned, 80(55.2%) participants agree, 28(19.3%) disagree, while 07(4.8%) strongly disagree.

Furthermore, 47(32.4%) participants strongly agree that they can now identify letters and make meaning out of them, 36(24.8%) agree, 47(32.4%) disagree and 15(10.3%) strongly disagree. Subsequently, 35(24.1%) of the respondents strongly agree that they can now gradually write the sentences they have constructed, 66(45.5%) participants agree, 23(15.9%) disagree, while 21(14.5%) strongly disagree. Correspondingly, 12(8.3%) strongly agree that sometimes, they feel the content is too high for their level, 35(24.1%) participants agree, 37(25.5%) disagree, while 61(42.1%) strongly disagree. Finally, 31(21.4%) strongly agree that the teachers explain the content to their understanding, 50(34.5%) participants agree, 47(32.4%) disagree, while 61(42.1%) strongly disagree.

From the analysis shown above, it is indicated that the adult basic literacy content/curriculum meet the need of adult learners and help them to be cognitively sustained.

How does gender determine the level of cognitive sustainability of adult learners?



Picture 3. Gender and Level of Cognitive Sustainability of Adult Learners

Information on Picture 3 (Stacked Bar Chart) revealed that for male, 30(51.7%) of the

respondents had a lot of improvement when it comes to cognitive sustainability, 18(31.0%) respondents had little improvement and 10(17.2%) respondents did not improve in terms of cognitive sustainability. For female, 43(49.4%) respondents had a lot of improvement, 34(39.1%) respondents had little improvement, and 10(11.5%) respondents had no improvement cognitively.

The implication of this result is that both male and female respondent’s improved

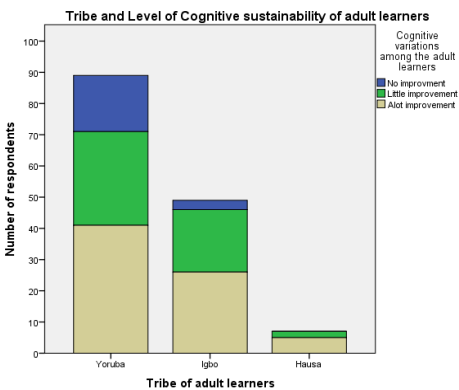
To determine whether gender determine the level of cognitive sustainability, mean difference of the group is considered in Table 3.

Table 3. Gender and the Level of Cognitive Sustainability

	Gender of adult learners	N	Mean	Std. Deviation	Mean Difference	Std. Error Mean
Cognitive variations among the adult learners	Male	57	2.37	.747	0.03	.099
	Female	88	2.34	.709		.076

The Table 3 shows a mean difference of 0.03 between male and female which implies that gender does not determine the level of cognitive sustainability of adult learners.

How can tribe play a role in cognitive sustainability of adult learners?



Picture 4 Tribe and Level of Cognitive Sustainability of Adult Learners

Information on picture 4 showed that for Yoruba tribe, 41(46.6%) of the respondents had a lot of improvement when it comes to cognitive sustainability, 30(34.1%) respondents had little improvement and 17(19.3%) respondents did not improve in terms of cognitive sustainability. For Igbo tribe, 25(51.0%) respondents had a lot of improvement, 20(40.8%) respondents had little improvement, and 4(8.2%) respondents had no improvement cognitively. For Hausa tribe, 5(71.4%) respondents had a lot of improvement, while 2(28.6%) respondents had little improvement cognitively. To determine if tribe plays a role in cognitive sustainability, the mean difference among the groups will be considered in table 4.

Table 4. Tribe and the Level of Cognitive Sustainability

	Tribe of adult learners	N	Mean	Std. Deviation	Mean Difference	Std. Error Mean
Cognitive variations among the adult learners	Yoruba	89	2.26	.776	0.21	.082
	Igbo	49	2.47	.616		.088
	Hausa	07				

The Table 4 shows a mean difference of 0.21 among the tribe (Yoruba, Igbo and Hausa) which implies that tribe does not determine the

level of cognitive sustainability of adult learners.

Is there an appropriate language of instruction to aid adult learners' cognitive development?

Table 5: Language of Instruction

s/n	Items	Yes	No	Total
18.	The facilitators used Yoruba in the teaching.	105 (72.4%)	40 (27.6%)	145 (100%)
19.	We prefer the use of mother tongue as the accepted language of instruction.	100 (69.0%)	45 (31.0%)	145 (100%)
20.	Yoruba and English were used which help us understand better.	117 (80.7%)	28 (19.3%)	145 (100%)

Source: Field Survey, 2019.

Information on Table 5 indicated that 105(72.4%) of the total participants said Yes, the facilitators used Yoruba in the teaching them while, 40(27.6%) said No to the statement. Equally, 100(69.0%) of the total participants said Yes, they prefer the use mother tongue as the accepted language of instruction, while, 45(31.0%) said No, to the statement. Lastly, 117(80.7%) participants said Yes, Yoruba and English were used which help us understand better, and 28(19.3%) said No, to the statement. It can be suggested from the analysis that the use of mother tongue to support English as a language of instruction does enhance adult learners cognitive development.

Hypotheses Testing

Relationship between perception and cognitive sustainability of adult learners

This is a non-parametric correlation. The correlation coefficient is 0.018. This implies that there is a weak positive relationship between perception of adult learners and cognitive variations among adult learners. Since the p-value 0.833 is greater than the level of significance of 0.05, the null hypothesis will not be rejected. This implies that the relationship between perception of adult learners and cognitive variations among adult learners is statistically not significant. This means that the way adult learners perceived basic literacy skills have no relationship with its relevance for cognitive sustainability, as shown in table 6 below.

Table 6. Relationship between perception and cognitive sustainability of adult learners

			Perception of the adult learners	Cognitive variations among the adult learners
Spearman's rho	Perception of the adult learners	Correlation Coefficient	1.000	.018
		Sig. (2-tailed)	.	.833
		N	145	145
	Cognitive variations among the adult learners	Correlation Coefficient	.018	1.000
		Sig. (2-tailed)	.833	.
		N	145	145

Relationship between gender and cognitive sustainability of adult learners

From the analysis in table 8, the *t-value* = 0.223 with the *degree of freedom* (*df*) = 143, and the *p-value* = 0.824 which is greater than 0.005 level of significance. This implies that the result is not significant. Therefore, the null hypothesis

which states that there is no significance difference between gender and cognitive sustainability of adult learners is accepted while the alternate hypothesis is rejected. It then means that gender does not determine the level of cognitive sustainability of adult learners, as shown in table 7.

Table 7. Relationship between gender and cognitive sustainability of adult learners

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Cognitive variations among the adult learners	.420	.518	.223	143	.824	.028	.123	-216	.271
			.221	115.196	.826	.028	.125	-219	.274

Relationship between tribe and cognitive sustainability of adult learners

From the analysis above, the *t-value* = -1.638 with the *degree of freedom* (*df*) = 136, and the *p-value* = 0.104 which is greater than 0.005 level of significance. This implies that the result is not significant. Therefore, the null hypothesis

which states that there is no significance difference between tribe and cognitive sustainability of adult learners is accepted while the alternate hypothesis is rejected. It then means that tribe does not determine the level of cognitive sustainability of adult learners, as shown in table 8.

Table 8. Relationship between tribe and cognitive sustainability of adult learners

		Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Cognitive variations among the adult learners	Equal variances assumed	4.377	.038	-1.638	136	.104	-.211	.129	-.466	.044	
	Equal variances not assumed			-1.751	119.050	.083	-.211	.120	-.450	.028	

The difference between the performance of adult learners before intervention and performance of adult learners after intervention of the literacy programme

The mean score is 33.957 with a standard error of 1.618. The calculated *t* value is -20.988 with 144 as degree of freedom. Since the *p*-value is 0.000, which is less than the level of

significance of 0.005, therefore, the result is significant. This means that the null hypothesis is rejected while the alternate hypothesis which states that there is a significant difference between the performance of adult learners before intervention and the performance of adult learners after intervention of the adult basic literacy programme is accepted.

Table 9. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Percentage scores of adult learners before intervention of the literacy programme	44.08	145	10.392	.863
	Percentage scores of adult learners after intervention of the literacy programme	78.03	145	16.159	1.342

Table 10. Paired Samples Test

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Percentage scores of adult learners before intervention of the literacy programme - Percentage scores of adult learners after intervention of the literacy programme	-33.957	19.482	1.618	-37.155	-30.759	-20.988	144	.000

The difference between language of instruction and cognitive sustainability of adult learners

From the analysis above, the *t-value* = -1.148 with the *degree of freedom* (*df*) = 122, and the *p-value* = 0.253 which is greater than 0.005.

DISCUSSION

Findings from the study showed that adult learners performance improved tremendously after the intervention of adult basic literacy programme (Table 9 & 10). Before the intervention programme, adult learners perceived adult basic literacy skills as not related for cognitive development, however, after the intervention programme, their performance improved having being able to use the basic literacy skills to sustain learning cognitively. This is to say that adult learners exposure to adult basic literacy programme with the right methodology and language of instruction enhanced their learning cognitively. Finding from research hypothesis one revealed that there is no significant relationship between perception of basic literacy skills and cognitive variations among adult learners. This means that the way adult learners perceived adult basic literacy skills does not have any relationship with sustaining learning cognitively. However, with appropriate adult basic literacy intervention programme, sustaining learning cognitively can be ensured. This result support the findings of Nzeneri, (2010) in which he reported that no significant relationship exists between basic literacy skills and sustaining learning intervention. He stated further that the quick relapsed of adult learners into illiteracy showed that sustaining learning cognitively is an herculean task irrespective of level of significance. This implies that the result is not

significant. Therefore, the null hypothesis which states that there is no significance difference between language of instruction and cognitive sustainability of adult learners is accepted while the alternate hypothesis is rejected.

The literacy skills acquired during such programme. Finding from research hypothesis two showed that gender does not determine the level of cognitive sustainability of adult learners. This result contradicts the findings of Kolawole, (2011) who argued that gender as prove to be a major determinant of learning among adult learners. An average African woman has so much responsibilities on her shoulder. She is the mother, chef, cleaner, counsellor, guidance, worker, and equally a learner. To argue that all these activities and responsibilities will not affect her in a basic adult literacy programme may be completely baseless.

Similarly, finding from research hypothesis three revealed that tribe does not determine the level of cognitive sustainability of adult learners. The finding totally negates the finding of Aderinoye, (2020) claiming that in the African setting comprising different tribes like Nigeria, some tribes are more educationally inclined than others which could play a major factor in a typical adult teaching and learning programme.

Furthermore, finding of research hypothesis four revealed that there is a significant difference between the performance of adult learners before intervention and the performance of adult learners after intervention of the adult basic literacy programme. Proper assessment of literacy programme before intervention is carried out is bound to have a significant effect on the beneficiaries (Baro et al). This finding was in support of the finding of the study.

Finally, the finding of research hypothesis five indicates that there is no significance difference between language of instruction and cognitive sustainability of adult learners. It then means that language of instruction can enhance cognitive sustainability of adult learners. In line with the finding of the study, Asiyanbola and Ademilokun (2015) stated that literacy can best be learned and sustained by adults through a highly contextual, even individualized programme. He stressed further that specific language of instruction is one of such individualized instruction that can aid learning.

CONCLUSION

From the foregoing, it is evident that if no concerted efforts are made to ensure that the curriculum of adult basic literacy is reviewed and re-design to meet the learning needs of adult learners, cognitive sustainability of the body of knowledge acquired will be difficult for the learners. The whole essence of engaging adult learners in basic literacy programme will therefore be defeated. Most importantly, the study confirmed that language of instruction is pivotal to sustain learning cognitively as adult learners can easily relate learning in their local language and apply it to their day-to-day lifestyles. The pre and post intervention outcome show that the adult learners had sufficient evidence of cognitive sustainability through their ability to recall, show comprehension, synthesize, analyze, apply and evaluate content/curriculum intervention. For effective result oriented adult education programme, the agencies and stakeholders must tailor programmes to the needs of learners to help its sustainability in the 21st century. Based on the findings of the study, the following are therefore, recommended: (1) The National Mass Agency for Adult and Non-formal Education

(NMEC) in Nigeria should ensure that the curriculum of the adult basic literacy be designed to have a combination of English and mother tongue language as medium of instruction in order to aid cognitive understanding among adult learners; (2) A proper needs assessment should be carried out by the adult education agencies including NMEC so as to design the curriculum to deeply meet the cognitive intelligence of adult learners which will in turn enhance their cognitive sustainability in the 21st century literate society; (3) Constant awareness and enlightenment programmes be organized for the general citizens by NMEC as the umbrella body to champion the importance of literacy programmes on the citizens' educational development and relevance in the present society; (4) Training and re-training programmes should organized for facilitators and stakeholder on modern or up to date content for adult learners for all round sustainability.

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