IJAGC INTERNATIONAL JOURNAL OF APPLIED GUIDANCE AND COUNSELING Vol.5 No.1 pp 9-20

The Impact of Study Skills Training and Multiple Intelligence Interventions on The Reading Habits of Junior Secondary School Students

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ARTICLE INFO

Article history:
Received 06 Jan 2024
Revised 26 Jan 2024
Accepted 30 Jan 2024

Keywords:
Reading Habits
Skills Training
Multiple Intelligence
Interventions

ABSTRACT

This study examined the impact of study skills training and multiple intelligence interventions on students in junior secondary schools' reading habits in Ilorin West LGA. The main purpose was to investigate the impact of study skill training and multiple intelligence interventions on students' reading habits other specific purposes were stated. The population of this study include all the junior secondary school students in Ilorin West LGA. Meanwhile, the study purposefully selected a sample of 64 JSS II students from 4 schools. In line with the purposes, seven hypotheses were formulated. The instruments used for the study were an adopted questionnaire on study skills and multiple intelligence intervention, data collected was analysed using Analysis of Co-variance (ANCOVA) and T-test statistical tools at 0.05 level of significance. Results of the findings revealed the significant effect of study skills training and multiple intelligence interventions on the reading habits of junior secondary school students in Ilorin West LGA. The interventions positively impacted students' reading engagement and practices, highlighting the potential of tailored educational strategies to enhance academic behaviours.

ISSN: 2722-2365 (Online) 2722-2357 (Print)

Introduction

Undisputedly, a few years ago, a family who produced a School Certificate holder had reason to celebrate. This was due to the difficulty of finding someone who held a school certificate back then. The products of the missionary and government schools were better

when compared to the secondary school learners today. Reading skills demonstrated then by secondary school leavers made them essential commodities in the various fields of work under government and private establishments. The majority of today's secondary school students find it difficult to take minutes at meetings, and the primary school leaving certificate is no longer recognized (Bashir & Mattoo, 2012). Fabunmi (2010) observes that reading is a means of tapping knowledge from superior minds. Thus, reading is an essential tool for lifelong learning. Philip (2009) defines reading as an important gateway to personal development and social, economic and civil life. Stahl et al (2019), is a cognitive process that necessitates the employment of sophisticated brain processes to interpret written symbols as meaningful units and comprehend them as thought units to comprehend a printed message. Reading is a holistic, integrative activity that begins with the reader and spans the emotive, perceptual, and cognitive domains (Morris, 2013). According to Okebukola (2004), reading gives people the means to pass on information to new generations and gives them the chance to hear the wisdom of the past.

According to Douglas (2000), every child must master reading to succeed in school and fulfil their obligations as citizens of a democratic society. Reading is the basis for a lot of happiness in life and is closely tied to productivity at work. Every field's personnel and students need to read to stay current on developments in their fields. To deliver knowledge and facts, students must rely on printed or digital language. Numerous research had looked at the causes of secondary school pupils' bad reading habits without much focus on intervention programs in Nigeria. Therefore, this study's goal was to find out how Study Skill Training (SST) and Multiple Intelligence Intervention (MII) affected the secondary school pupils in the Ilorin West Local Government's reading habits. Study skill training, used in this study, is a learning approach designed to help students effectively organize, analyze, and utilise knowledge to improve performance. Although some students may come with good study habits by nature, this is not the case for most people. However, a skill is a learned action that may be developed via practice (Bransford et al., 2012). Study skills include time management, attentive listening, reading comprehension, comprehension of written material, oral presentation, memory improvement, critical thinking, and writing. Whether innate or learned, study skills must be honed and developed to be successful. Gettinger and Seibert (2002) note that study skill development may be taught and that it can boost a student's performance by one to two grades. The benefits of having a study habit for students as a whole are enormous.

The student will read more effectively, and be more academically focused, and her academic success will be assured if she has good study habits. Students who have a positive self-concept perform better academically because of their study habits.

However, students with decent study habits who have a low opinion of their abilities rarely thrive in school or attain higher academic success. However, Multiple Intelligence Intervention (MII) is a learner-centred philosophy that asserts that human intelligence has a variety of dimensions that need to be acknowledged and fostered in education. The research of Harvard Graduate School of Education's Howard Gardner was built upon MII. Gardner points out that standard intelligence tests (IQ tests) solely assess verbal and logical reasoning skills, even though the brain is capable of other equally significant forms of intelligence. However, each person's level of each type of intelligence and how they combine it will vary. Through practice and training, he thinks that all of them can be improved. Mendezabal (2013) revealed the habits and attitudes on the road to academic success. The participants were graduates in the school year 2009-2010 from the different programs of the University which require licensure examination. The analysis revealed that the study habits (work methods and time management) of the participants were correlated with their success in the licensure examination while study attitudes (i.e. attitudes toward teachers and educational acceptance) were not significantly related to success in the licensure examination. This connotes that students who have favourable study habits will likely pass the licensure examination. Baş and Beyhab (2010) carried out research in Karatli Sehit Sahin Yilmaz Elementary School, Nigde, Turkey to investigate the effects of multiple intelligence-supported project-based learning and traditional foreign language-teaching environments on students‟ achievement and their attitude towards English lessons. 50 students in two different classes in the 5th grade of the school participated in the study. The results of the research showed a significant difference between the attitude scores of the experiment group and the control group. It was also found that the multiple intelligence approach activities were more effective in the positive development of the students‟ attitudes. At the end of the research, it was revealed that the students who were educated by multiple intelligence-supported project-based learning methods were more successful and had a higher motivation level than the students who were educated by the traditional instructional methods.

The threat of inadequate reading ability necessitates immediate and dramatic action. It has been observed that the effects of poor reading skills range from slow comprehension rate,

slow reading and writing rate, difficulty in differentiating main ideas from irrelevant details, poor retentive memory, lack of vocabulary or word power, insufficient reading and writing interest and habits, indecipherable handwriting, distractions from television and film viewing, and lack of interest and relevant reading materials, among others. This study will be carried out to determine the impact of the study skills training and multiple intelligence interventions on the students in junior secondary schools' reading habits in Ilorin West LGA.

Method

The study adopted a quasi-experimental design. According to Loewen and Pionsky (2016), quasi-experimental research design examines whether there is a causal relationship between independent and dependent variables. Specifically, pre-test, post-test, and non-equivalent control group designs were employed, the intact class was used and there was no randomization. The design is presented as shown below:

Grouping	pre-test	Research condition	post-test
Experimental	E 1	X	E2
Control	E1	Y	E2

The symbols are explained as follows:

E1 – Pre-test administered to the control and experimental groups.

X – Experimental treatment (those exposed to assertiveness training and cognitive restructuring.

Y – Non-treatment for the control groups

E2 – Post-test (will be given after treatment) to both experimental and control groups.

The study was carried out in the Ilorin-west Area of Kwara State. However, the participants were selected from junior secondary schools in the Local Government Area mentioned. The population of the study consisted of 7,403 JSS II students in 87 public junior secondary schools in Ilorin West. The sample for the study is an intact class comprised of 64 JSS II students (28 males and 36 females) drawn from the population of the study. Through simple random sampling technique, four junior secondary schools were selected for both experimental and control groups. 17 students were used as experimental groups for study skill training from one of the selected schools while 15 students were used as experimental groups for multiple intelligence intervention from another secondary school. In the control group, 18 students were used as a control group from the selected schools for study skill training while 14 students were used as a control group from another school for multiple

intelligence intervention. The instrument used for data collection was a Study skill inventory (Congo, 1998). The Reading Habit Scale (Henk and Melnick, 1995) and the "Multiple Intelligence Checklist" (Ralston, 2000). The instrument has two sections– A & B. Section A provided information on the student's age and gender while section B contained items on study skills, multiple intelligence and reading habit scale. The instrument was used for both pre-test and post-test. However, T-test and Analysis of Co-variance (ANCOVA) were used to analyse the data.

This section should be clearly and concisely written. It provides practical information concerning the research methods, procedures, tools, materials, or instruments. Authors may provide the blue-print of the instrument or the materials used in the study if necessary. Commonly used statistical formula is not necessarily written in this section. Specific criteria used or established by researchers in the data collection and analyses may be described in this section. This section should not exceed 10% (for qualitative research) or 15% (for quantitative research) of the manuscript

Findings and Discussion

This section dealt with the presentation of the results of the analysis of the data collected for the study. The results are presented according to the sequence of the research hypotheses.

Demographic data

This section presents the results of data obtained from the respondents in percentages.

Table 1

Demographic Distribution of Respondents

Variables	Frequency	Percentage (%)
Gender		
Male	28	43.7
Female	36	56.3
Total	**64**	**100.0**
Age		
Below 13Years	20	31.0
13 Years and Above	44	69.0
Total	**389**	**100.0**

Table 1 shows the distribution of respondents by gender and age. It showed that 64 respondents participated in the study. The male participants were 28 (43.7%) while 36

(56.3%) were females; 20 (31.0%) were below 13 years while 44 (69.0%) were 13 years and above. The implications of Table 1 revealed that a larger percent of the respondents were females 13 years and above.

Hypothesis one: There will be no significant main effect of the treatment packages on reading habits among junior secondary students in Ilorin-west LGA.

Table 2

Analysis of Co-variance of the effect of study skill training and multiple intelligence intervention on junior secondary school students reading habit.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
corrected model	100.401[a]	25	4.016	1.936	.032
Intercept	8568.764	1	8568.764	4130.398	.000
SST	10.418	7	1.488	.717	.658
MII	23.549	4	5.887	2.838	.037
SST * MII	32.131	14	2.295	1.106	.034
Error	78.833	38	2.075		
Total	15773.000	64			
Corrected Total	179.234	63			

a R Squared = .560 (Adjusted R Squared = .271)

Results in Table 2 showed that the probability associated with the calculated value of F (1.106) for a significant difference in the mean reading habit scores of students exposed to study skill training and multiple intelligence intervention is .034. Since the probability value of .034 is less than the .05 level of significance ($p < .05$), the null hypothesis was rejected. Hence, there is a significant main effect of the treatment packages on reading habits among junior secondary students in Ilorin-west LGA.

Hypothesis Two: There will be no significant main effect of gender on reading habits among junior secondary students in Ilorin-west LGA.

Table 3

Independent t-test result on the effect of gender on reading habit among junior secondary school students in Ilorin West LGA

Reading Habit	N	Mean	Std. Dev.	Df	t-cal.	P-value.	Decision

Male	28	15.70	1.490				
				62	.288	.775	Accepted
Female		36	15.75	1.784			

Table 3 above shows that There will be no significant main effect of gender on reading habits among junior secondary students in Ilorin-west LGA. (t-cal = 0.288; P>0.05) is not statistically significant. Hence, the non-hypothesis was accepted, showing that there was no significant main effect of gender on reading habits among junior secondary students in Ilorin-west LGA.

Hypothesis Three: There will be no significant main effect of age on reading habits among junior secondary students in Ilorin-west LGA.

Table 4

Independent t-test result on the effect of age on reading habit among junior secondary school students in Ilorin West LGA.

Reading Habit		N	Mean	Std. Dev.	Df	t-cal.	P-val.	Decision
13years	24	15.42	1.863					
					62	.705	.483	Accepted
13 years and above	34	15.73	1.585					

Table 4 above shows that There will be no significant main effect of age on reading habits among junior secondary students in Ilorin-west LGA. (t-cal = 0.705; P>0.05) is not statistically significant. Hence, the non-hypothesis was accepted, showing that there was no significant main effect of age on reading habits among junior secondary students in Ilorin-west LGA

Hypothesis four: There is no significant interaction effect of treatment and gender on reading habits among junior secondary students in Ilorin-west LGA.

Table 5

Analysis of Co-variance on interaction effect of study skill training, multiple intelligence intervention and gender on junior secondary school students reading habit.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
corrected model	69.102a	12	5.758	2.667	.007
Intercept	840.650	1	840.650	389.286	.000
SST	13.717	7	1.960	.907	.508
MII	24.144	4	6.036	2.795	.036
gender	.832	1	.832	.385	.538

Error	110.133	51	2.159
Total	15773.000	64	
Corrected Total	179.234	63	

a R Squared = .386 (Adjusted R Squared = .241)

Results in Table 5 showed that the probability associated with the calculated value of F (.385) for interaction effect in the mean reading habit scores of students exposed to study skill training and multiple intelligence intervention with moderate gender is .538. Since the probability value of .538 is greater than the .05 level of significance (p > .05), the null hypothesis was Accepted. Hence, there was no significant interaction effect of treatment and gender on reading habits among junior secondary students in Ilorin-west LGA.

Hypothesis Five: There will be no significant interaction effect of treatment and age on reading habits among junior secondary students in Ilorin-west LGA.

Table 6

Analysis of Co-variance on interaction effect of study skill training, multiple intelligence intervention and age on junior secondary school students reading habit.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
corrected model	75.253a	12	6.271	3.076	.003
Intercept	803.949	1	803.949	394.315	.000
SST	14.396	7	2.057	1.009	.436
MII	27.975	4	6.994	3.430	.015
age	6.983	1	6.983	3.425	.070
Error	103.981	51	2.039		
Total	15773.000	64			
Corrected Total	179.234	63			

a R Squared = .420 (Adjusted R Squared = .283)

Results in Table 6 showed that the probability associated with the calculated value of F (3.425) for interaction effect in the mean reading habit scores of students exposed to study skill training and multiple intelligence intervention with moderate age is .070. Since the probability value of .070 is greater than the .05 level of significance (p > .05), the null hypothesis was Accepted. Hence, there was no significant interactive effect of treatment and age on reading habits among junior secondary students in Ilorin-west LGA.

Hypothesis Six: There will be no significant interaction effect of gender and age on reading habits among junior secondary students in Ilorin-west LGA.

Table 7

Analysis of Co-variance on interaction effect of gender and age on the reading habit of junior secondary school students in Ilorin West LGA.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
corrected model	1.441a	2	.720	.247	.782
Intercept	402.185	1	402.185	137.987	.000
age	1.202	1	1.202	.412	.523
gender	.015	1	.015	.005	.944
Error	177.794	61	2.915		
Total	15773.000	64			
Corrected Total	179.234		63		

a R Squared = .008 (Adjusted R Squared = -.024)

Results in Table 7 showed that the probability associated with the calculated value of F (.005) for the interaction effect of gender and age on reading habit is .944. Since the probability value of .944 is greater than the .05 level of significance (p > .05), the null hypothesis was Accepted. Hence, there was no significant interaction effect of gender and age on reading habits among junior secondary students in Ilorin-west LGA.

Hypothesis Seven: There will be no significant intervention effect of treatment, gender and age on reading habits among junior secondary students in Ilorin-west LGA.

Table 5

Analysis of Co-variance on interaction effect of study skill training, multiple intelligence intervention and gender on junior secondary school students reading habit.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	75.335a	13	5.795	2.789	.005
Intercept	312.711	1	312.711	150.487	.000

age	6.233	1	6.233	3.000	.089
gender	.082	1	.082	.039	.844
SST	14.424	7	2.061	.992	.448
MII	28.057	4	7.014	3.375	.016
Error	103.900	50	2.078		
Total	15773.000		64		
Corrected Total	179.234	63			

a R Squared = .420 (Adjusted R Squared = .270)

Results in Table 5 showed that the probability associated with the calculated value of F (3.375) for intervention effect in the mean reading habit scores of students exposed to study skill training and multiple intelligence intervention with moderate gender and age is .016. Since the probability value of .016 is less than the .05 level of significance ($p < .05$), the null hypothesis was Accepted. Hence, there was a significant intervention effect of treatment gender and age on reading habits among junior secondary students in Ilorin-west LGA.

Discussion of Findings

The result of hypothesis one showed that there was a significant main effect of treatment on the participants who were selected as the experimental group. Also, hypotheses two and three indicated that there was no significant main effect of gender and age on reading habits among junior secondary students in Ilorin-west LGA. Hypothesis four and five maintained that there was no significant interaction effect of treatment and gender, treatment and age on reading habits among junior secondary students in Ilorin-west LGA. The result of hypothesis six showed that there was no significant interaction effect of gender and age on reading habits among junior secondary students in Ilorin-west LGA. Hypothesis seven of the study refuted the null hypothesis therefore was a significant intervention effect of treatment gender and age on reading habit among junior secondary students in Ilorin-west LGA. The above findings were supported by the work of Baş and Beyhab (2010) who investigated the effects of multiple intelligence-supported project-based learning and traditional foreign language-teaching environments on students‟ achievement and their attitude towards English lessons. It was found that the multiple intelligence approach activities were more effective in the positive development of the students‟ attitudes. At the end of the research, it was revealed that the students who were educated by multiple intelligence-supported project-based

learning methods were more successful and had a higher motivation level than the students who were educated by the traditional instructional methods.

Conclusion

The study's findings reveal the significant influence of study skills training and multiple intelligence interventions on the reading habits of junior secondary school students in Ilorin West LGA. The interventions positively impacted students' reading engagement and practices, highlighting the potential of tailored educational strategies to enhance academic behaviours. Based on the findings of this study the following recommendation was drawn. (1) The curriculum planner should incorporate study skills training and multiple intelligence interventions into the standard curriculum to ensure a sustained impact on students' reading habits. (2) The government and employers should provide educators with comprehensive training on implementing these interventions effectively, allowing them to guide and support students in developing enduring reading habits.

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