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Selected Affective Factors as Predictors of Achievement in Reading Comprehension among Students with Learning Disabilities in Ibadan, Oyo State, Nigeria

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Abstract
Reading comprehension is a core component of the English language curriculum in Nigerian schools, however, many students with learning disabilities experience difficulties with reading comprehension. This study, investigated selected affective factors namely, intrinsic reading motivation, extrinsic reading motivation and the use of self-regulated learning strategies as predictors of achievement in reading comprehension among secondary school students with learning disabilities in Ibadan, Oyo State, Nigeria. The study adopted a survey research design of the correlational type. The multi-stage procedure was utilized to select 110 students with learning disabilities in Senior Secondary Class One (SS 1) from three local government areas in Ibadan Metropolis. Participants were screened for the presence of learning disabilities using the Screening Checklist for Suspected Learning Disabilities (r=0.81), while data were collected using "The Motivations for Reading Questionnaire" (r = 0.86, and 0.93, for intrinsic reading motivation and extrinsic reading motivation respectively); the "Self-regulated Learning Scale" (r=0.76) and the "Students' Reading Comprehension Achievement Test" (r=0.75). Data collected was analysed using Pearson product moment statistics and Multiple Regression Analysis. The results revealed a significant relationship between achievement in reading comprehension and intrinsic reading motivation (r=.304, p(.001)<.05); extrinsic reading motivation (r=.384, p(.000)<.05); and self-regulated learning (r=.299, p(.002)<.05) respectively. This implies that intrinsic reading motivation, extrinsic reading motivation and self-regulated learning influenced the achievement in reading comprehension among students with learning disabilities. On the basis of the findings, recommendations were suggested which include that teachers should boost the reading motivation of secondary school students with learning disabilities and encourage them to become self-regulated learners.

Keywords: learning disabilities, reading comprehension, reading motivation, self-regulated learning strategies

Introduction

Reading comprehension is an important skill needed for effective learning and appears at the top of the continuum of core reading skills. Other reading skills necessary for success at school are vocabulary knowledge and development, fluency, decoding and word recognition and

then phonological awareness (Bos & Vaughn, 2006). Reading comprehension can be described as that element of the reading process that reveals the extent to which a learner is able to construct meaning from a given text, interact with the text, answer a variety of questions on the text and think critically about the text. Academic success relies mainly on a learner's ability to comprehend texts in content area subjects. However, some students with learning disabilities exhibit different degrees of difficulties with reading comprehension such as difficulties with connecting what is read with their experience, recalling factual and inferential information from text and making meaning from text read.

Failure to acquire the necessary reading skills leads to inability to comprehend texts, causing students' motivation in reading to decrease (Melekoglu & Wilkerson, 2013). With a lack of motivation to read, and as students make progress through school, the achievement gap between a student with learning disabilities and that of his or her peers without learning disabilities begins to widen. Hence, educators need to improve the reading skills of unmotivated readers who struggle with reading and writing. One way to achieve this would be by investigating into factors such as intrinsic motivation, extrinsic motivation and self-regulation, in order to find out whether they could predict achievement in reading comprehension among students with learning disabilities or not. The findings of a study of this kind would enable special educators to provide better instructional interventions for building reading motivation and self-regulated learning strategies among students with learning disabilities.

Reading motivation refers to values, goals, beliefs and dispositions for reading (Wigfield & Tonks, 2002). This can be either intrinsic or extrinsic motivation. The internal desire to perform a particular task is known as intrinsic motivation whilst the motivation that is promoted by factors external to the individual and unrelated to the task being performed is extrinsic motivation (Ormrod, 2006). Wang and Guthrie (2004) in their framework of reading motivation proposed eight components of intrinsic and extrinsic motivations. This framework indicated that intrinsic motivation has three underlying factors: curiosity (wanting to read on a specific topic due to interest); involvement (experiencing pleasure from reading); and challenge (gaining satisfaction from deciphering complex ideas). It also identified five underlying factors in the extrinsic motivation component as follows: competition (wanting to outdo others in the activity of reading); compliance (wanting to adhere to rules and instructions given), recognition for reading (wanting to receive recognition and gratification for success in reading, grades (expecting good academic evaluations for reading) and social (wanting to share reading and with one's social network) (Khan, Sani & Shaik-Abdullah, 2017).

Wigfield and Guthrie (1997) found that intrinsic motivation constructs such as challenge, curiosity and involvement correlated with students' amount and breadth of reading behaviours. Wang and Guthrie (2004) found that the intrinsic motivation of students positively correlated with their reading skill while there was a negative correlation between students', extrinsic motivation and their reading skill. Becker, McElvany and Kortenbruck (2010) examined 740 students in Grade 3 who were also assessed in Grades 4 and 6. It was found that whereas a positive relationship exists between intrinsic motivation and reading attainment there was a negative relationship between extrinsic motivation and reading attainment. Schaffner and

Schiefele (2016) found that intrinsic reading motivation before summer vacation had a positive correlation with both word and sentence comprehension after summer vacation when controlling for comprehension performance before summer vacation, whereas, extrinsic reading motivation did not significantly correlate with end-of-summer comprehension scores.

A study conducted by McGeown, Norgate and Warhuxst (2012) investigated whether there were differences between good readers and poor readers in the relationship between their levels of reading skill and intrinsic and extrinsic reading motivation. The finding revealed that a strong relationship exist between only extrinsic reading motivation and the reading skill among good readers. It was also found that among poor readers, both extrinsic and intrinsic did not correlate significantly with reading skill. There was also a close relationship between poor readers' intrinsic and extrinsic motivations. McGeown, Norgate and Warhuxst (2012) therefore submitted that reading motivation and reading skill may not be directly related to each other contrary to the claim made by some researchers.

Melekoglu and Wilkerson (2013) found that after an eighteen-week period of reading instruction in two elementary schools and one high school in a Midwest state of the United States of America, there was a remarkable improvement in motivation of adolescents without disabilities. In contrast, students with disabilities recorded a decline in their motivation scores. Alfaddai (2015) found that in comparison to students who were not motivated thirteen students from two schools in Saudi Arabia who received incentive-based learning obtained higher academic scores. Hence, Alfaddai (2015) concluded that extrinsic motivation led to improved academic performance.

Self-regulation is the process of setting standards and goals for oneself and engaging in behaviours and cognitive processes that lead to meeting the standards and accomplishing the goals (Ormrod, 2006). Graham and Berman (2012) reported that to address the academic learning difficulties of students with learning disabilities a combination of explicit instruction in metacognitive self-awareness, which underpins self-regulation, with strategies in reading, writing, mathematics and spelling is required. Ho (2004) examined self-regulated learning among 15-year-old students in Hong Kong in comparison with students in other countries that participated in the first cycle of PISA study. It was found that most of the self-regulated learning constructs were positively related to academic achievement in reading, mathematics and science domains in students in Hong Kong.

Studies involving the principles of self-regulated learning such as Antoniou and Souvignier (2007), Zentall and Lee (2009) and Mason (2013) have demonstrated that self-regulation is effective for improving reading comprehension of students. Parker's (2015) study involving fourteen 9th and 10th grade students revealed that teaching students self-regulatory reading techniques leads to improvement in the language functioning and reading comprehension abilities of high school students with language impairment. Similarly, Parker (2016) found that self--regulation contributed important variance to reading comprehension in addition to the variance accounted for by oral language comprehension and word recognition/decoding in adolescent learners. Self-regulation also had a moderate correlation with word recognition/decoding and a high correlation with oral language comprehension. Besides, it was

reported that the contribution made by self-regulation components to reading comprehension was higher for students with typical language/learning histories in comparison to students with language/learning difficulties. This discovery supports earlier findings that revealed that poor readers do not use active comprehension strategies when reading.

A study involving 75 students in the 4th grade was conducted by Cirino, Miciak, Gerst, Barnes, Vaughn, Child and Huston-Warren (2016). The findings revealed that similar to the pattern of relationships in related studies there were weak relationships among executive function, self-regulated learning and reading. Zhou and Wang (2019) revealed that positive correlations exist among academic achievement, self-regulation and motivated learning strategies for Chinese students. El-Adl and Alkharusi (2020) found significant positive relationships among self-regulated learning strategies, intrinsic and extrinsic motivation, task value, control of learning beliefs, self-efficacy and academic achievement.

Cosentino (2017) examined the effect of a self-regulation treatment on the reading comprehension, motivation for learning and self-efficacy perceptions of 6th grade students in the northeast United States. The finding did not show a statistically significant difference between students who participated in the instructional reading intervention focused on self-regulation strategies and those who did not. After eleven studies were reviewed by Chae (2019) it was indicated that the studies support the conclusion that reading comprehension strategies that has components of self-regulation were effective in enhancing reading comprehension among students with reading difficulties.

Based on the foregoing, there is need to conduct a study in the locale of the present study involving senior secondary school students with learning disabilities that will consider the three affective factors of interest and achievement in reading comprehension. This is because to the best of the researcher's knowledge only a few studies have been done in this area using participants with similar characteristics. This study therefore, set out to investigate the relationship between the independent variables (intrinsic reading motivation, extrinsic reading motivation and self-regulated learning) and achievement in reading comprehension among secondary school students with learning disabilities in Ibadan, Oyo State, Nigeria.

Null Hypotheses

Six null hypotheses were formulated to guide the conduct of the study and tested at 0.05 level of significance.

Ho_1: There is no significant relationship between intrinsic reading motivation constructs (reading challenge, reading curiosity, and reading involvement) and achievement in reading comprehension among students with learning disabilities.

Ho_2: There is no significant relationship between extrinsic reading motivation constructs (competition in reading, recognition for reading, reading for grade, social reasons for reading, and compliance) and achievement in reading comprehension among students with learning disabilities.

Ho_3: There is no significant relationship between self-regulated learning and achievement in reading comprehension among students with learning disabilities.

Ho_4: There is no significant relationship between intrinsic reading motivation, extrinsic reading motivation, self-regulated learning and achievement in reading comprehension among students with learning disabilities.

Ho_5: There is no significant joint contribution of intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning on the achievement in reading comprehension among students with learning disabilities.

Ho_6: There is no significant relative contribution of intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning on the achievement in reading comprehension among students with learning disabilities.

Methodology

The study adopted a correlational survey research design, with intrinsic reading motivation, extrinsic reading motivation and self-regulated learning as the independent variables and achievement in reading comprehension as the dependent variable. The multi-stage sampling procedure was employed in selecting the study sample. First, three of the eleven local government areas in the Ibadan Metropolis were randomly selected using the ballot method. Using the simple random sampling of the ballot method there was a selection of six secondary schools, both government and private owned schools, within the three local government areas of interest. The purposive sampling technique was adopted to select Senior Secondary I (SS 1) students for the study. The reason for the choice of SS I students is the fact that they have just transited from the junior secondary to the senior secondary school, so issues related with motivation to read and learn as well as the use of self-regulated learning strategies will be of paramount importance to them. So findings of the study will have implications for more teacher assistance with regards to training in motivational factors and in the use of self-regulated learning strategies among SS I students with learning disabilities. At the end of the screening procedure, one hundred and ten (110) SS 1 students comprising sixty-one males (55.5%) and forty-nine females (44.5%) who display the characteristics of learning disabilities as indicated through the screening instrument were selected for the study. In terms of the age of the participants, 67 participants are aged 11-15 years, representing 60.9% while 43 participants are aged 16-20 years, representing 39.1%. Aside using the

(i) Screening Checklist for Suspected Learning Disabilities, for the initial screening of participants, three other instruments were used in the study as follows:
(ii) The Motivations for Reading Questionnaire,
(iii) The Self-Regulated Learning Scale,
(iv) Students' Reading Comprehension Achievement Test (SRCAT).

(i) Screening Checklist for Suspected Learning Disabilities (An adapted version):

The Screening Checklist for Suspected Learning Disabilities developed by Herriot (2004) is a screening tool for learning disabilities. The original scale has 113 questions in all while the

adapted instrument used for this study contains 70 items, selected from thirteen sections: reading, written language, oral language, mathematics, social, memory deficits, attention deficits, executive functions, language processing, perceptual motor, phonological processing, visual-spatial processing and processing speed. Each item was assessed on a 4-point rating scale with 1 indicating "Almost Never", 2 "Sometimes", 3 "Often", and 4 "All the time". This means that rating which fall below the average received either 1 or 2 scores, while ratings above average received 3 or 4 scores. That is, the lowest scores will be 70 (70x1= 70). While the overall score for senior secondary school students who scored the highest on the rating the scale will be 280 (70 x 4 = 280). For the purpose of this study a score above 140 suggests the presence of learning disabilities. A pilot study was conducted using 50 students who were not part of the study sample. Data was subjected to statistical analysis using the Cronbach's alpha and a reliability coefficient of 0.81 was obtained by the researchers.

(ii) The Motivations for Reading Questionnaire: This instrument has three sections: Section A*:* Demographic Information. The items in Section A covered the participants' gender, age, department (science, arts, and commercial), name of school, local government area, class and status of school (private or public). Section B: Intrinsic Reading Motivation: This scale was adapted from the Motivations for Reading Questionnaire (MRQ), designed by Wigfield and Guthrie (1997). In line with the purpose of this study, the study made use of the reading motivation framework proposed by Wong and Guthrie (2004) which identified only eight components of reading motivation. Three constructs were selected from the intrinsic motivation section of the MRQ namely: Reading Challenge (5 items), Reading curiosity (6 items) and Reading involvement (6 items). Thus, there are seventeen (17) items in Section B. Participants rated agreement with each statement on a 4-point Likert scale as follows: "Very different from me" (score=1), "A little different from me" (score=2), "A little like me" (score=3) and "A lot like me" (score=4). Scores are computed for each construct by finding the average score across their respective items. The Intrinsic Reading Motivation Scale was pilot tested by the researcher and a coefficient reliability alpha of 0.86 was obtained. Examples of items in the test are: "I like hard, challenging books."; "If the project is interesting, I can read difficult material". Section C: Extrinsic Motivation: There were 27 questions in this section covering five constructs of the MRQ namely: competition in reading (6 items), Recognition for reading (5 items), Reading for grades (4 items), Social reasons for reading (7 items) and Compliance (5 items). Participants rated agreement with each statement on a 4-point Likert scale ranging from "Very different from me" (score=1) to "A lot like me" (score=4). The Extrinsic Reading Motivation Scale was pilot tested by the researcher and a coefficient reliability alpha of 0.93 was obtained.

(iii) The Self-Regulated Learning Scale: The researcher adapted the metacognitive self-regulation subscale in the Motivation Strategies for Learning Questionnaire (MSLQ) designed by Pintrich, Smith, Garcia and McKeachie (1993). This scale uses a 7-point Likert rating, however for the purpose of this study, participants were asked to rate their agreement with each of the 12 statements on a 4-point Likert scale as follows: 1 (not at all true of me), 2 (slightly true of me), 3

(Moderately true of me) and 4 (Very true of me). The self-regulated learning scale measures the strategies that students use to plan, monitor and regulate their learning. A pilot study was carried out by the researcher to ensure the reliability of the items. The Cronbach Alpha was used for the reliability analysis and a coefficient alpha of 0.76 was obtained for the self-regulated learning scale.

(iv) Students' Reading Comprehension Achievement Test (SRCAT): This test was constructed and validated to determine the students' achievement in reading comprehension. It has two reading passages. The first passage is a multiple-choice objective test with five items, three of the questions tested literal comprehension, while the remaining two questions tested vocabulary knowledge. Each item had five options (A to E) and was derived from the past SS I question papers in reading comprehension. Out of the eight questions in the second passage, two questions focused on inferential text comprehension, two questions focused on literal comprehension, and one tested grammatical aspects in the reading passage while three questions tested vocabulary knowledge. The validity of the SRCAT was obtained by subjecting it to the critique of secondary school teachers of English language and experts in test construction. Their suggestions were used to modify the test before the final production. The reliability of the test was got by administering it, twice at the interval of two weeks, on 30 students who did not participate in the study but share similar characteristics. A test-retest reliability coefficient of 0.75 was obtained.

Data Collection

The researcher obtained ethical approval from the Ethical Board of the Ministry of Education, Oyo State, before the commencement of the study. Students gave their written consent to participate in the study. Data was collected with the help of six trained research assistants. There was need to obtain prior permission from the school authorities in the six schools. This was done with the official letter collected from the Head of Department, Special Education, Faculty of Education, University of Ibadan. The English language teachers in the respective schools were also contacted to seek their support for the conduct of the study. The students were assured of the confidentiality of their responses. The administration of the instruments was done in a free and fair atmosphere and all questionnaires and achievement tests were collected on the spot after completion by the participants.

Data Analysis

The data collected was collated and analyzed using the Pearson product moment statistics and multiple regression analysis at 0.05 level of significance.

Results

Null Hypothesis 1: There is no significant relationship between intrinsic reading motivation constructs (reading challenge, reading curiosity, and reading involvement) and achievement in reading comprehension among students with learning disabilities.

Table 1: Pearson product moment correlation- showing the relationship between intrinsic reading motivation constructs and achievement in reading comprehension

	Mean	Std. Dev.	Achievement in reading comp.	Reading challenge	Reading curiosity	Reading involvement
Achievement in reading comp.	32.71	19.47	1			
Reading challenge	13.88	3.74	.280* (.003)	1		
Reading curiosity	17.00	4.79	.302* (.001)	.631* (.000)	1	
Reading involvement	16.19	4.70	.206* (.031)	.589* (.000)	.596* (.000)	1

*Significant at 0.05 level

Table 1 shows that there is a significant relationship between achievement in reading comprehension and reading challenge (r=.280, p(.003)<.05), reading curiosity (r=.302 p(.001)<.05) and reading involvement (r=.206, p(.031)<.05) respectively. The result indicates that reading curiosity is significantly related to achievement in reading comprehension more than reading challenge and reading involvement.

Null Hypothesis 2: There is no significant relationship between extrinsic reading motivation constructs (competition in reading, recognition for reading, reading for grade, social reasons for reading, and compliance) and achievement in reading comprehension among students with learning disabilities.

Table 2: Pearson Product Moment Correlation showing the relationship between extrinsic reading motivation constructs and achievement in reading comprehension

Variables	Mean	Std. Dev.	ARC	CR	RR	RG	SRR	C
ARC	32.71	19.47	1					
CR	17.91	4.90	.382* (.000)	1				
RR	14.53	4.08	.333* (.000)	.764* (.000)	1			
RG	11.45	3.28	.203* (.033)	.588* (.000)	.732* (.000)	1		
SRR	18.72	5.60	.296* (.002)	.581* (.000)	.598* (.000)	.621 (.000)	1	
C	14.44	4.38	.386*	.690*	.622*	.603*	.694*	1

	(.000)	(.000)	(.000)	(.000)`	(.000)`

* Significant at 0.05 level

Key: ARC = Achievement in Reading Comprehension, C = Competition in reading, RR = Recognition for reading, RG = Reading for grade, SRR = Social reasons for reading, C = Compliance

Table 2 shows that there is a significant relationship between achievement in reading comprehension and competition in reading (r=.382, p(.000)<.05), recognition for reading (r=.333, p(.000)<.05), reading for grade (r=.203), p(.033)<.05), social reasons for reading (r=.296, p(.002)<.05), and compliance (r=.386, p(.000)<.05) respectively. This implies that compliance has the highest level of relationship with reading comprehension in terms of sub-skills of extrinsic reading motivation.

Null Hypothesis 3: There is no significant relationship between self-regulated learning and achievement in reading comprehension among students with learning disabilities.

Table 3: Pearson Product Moment Correlation showing the relationship between self-regulated learning and achievement in reading comprehension

Variables	Mean	Std. Dev.	N	R	p-value	Remarks
Achievement in reading comprehension	32.71	19.46	110	.299*	.002	Sig.
Self-regulated learning	31.94	7.80				

* Significant at 0.05 level

Table 3 shows that there is a significant relationship between self-regulated learning and achievement in reading comprehension among students with learning disabilities (r=.299; n=110, p(.002)<.05). Hence, it could be deduced that self-regulated learning influenced the achievement in reading comprehension among students with learning disabilities in the study.

Null Hypothesis 4: There is no significant relationship between intrinsic reading motivation, extrinsic reading motivation, self-regulated learning and achievement in reading comprehension among students with learning disabilities.

Table 4: Pearson Product Moment Correlation -showing the relationship between intrinsic reading motivation, extrinsic reading motivation, self-regulated learning and achievement in reading comprehension

Variables	Mean ($\bar{x}$)	Std. Dev.	Achievement in reading Comp.	Intrinsic motivation	Extrinsic motivation	Self-regulated learning
Achievement in reading comprehension	32.72	19.47	1			
Intrinsic reading motivation	47.08	11.37	.304* (.001)	1		
Extrinsic reading motivation	77.05	18.90	.384* (.000)	.745* (.000)	1	
Self-regulated learning	31.95	7.80	.299* (.002)	.622* (.000)	.657* (.000)	1

* Significant at 0.05 level

Table 4 shows that there is a significant relationship between achievement in reading comprehension and intrinsic reading motivation (r=.304, p(.001)<.05), extrinsic reading motivation (r=.384, p(.000)<.05), and self-regulated learning (r=.299, p(.002)<.05) respectively. The results indicate that extrinsic reading motivation, followed by intrinsic reading motivation is significantly related to achievement in reading comprehension more than self-regulated learning.

Null Hypothesis 5: There is no significant joint contribution of intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning on the achievement in reading comprehension among students with learning disabilities.

Table 5: Summary of regression analysis showing the joint contribution of intrinsic reading motivation, extrinsic reading motivation and self-regulated learning on the achievement in reading comprehension

Multiple R=0.389
Multiple R^2=0.151
Multiple R2 (Adjusted)=0.127
Standard Error of Estimate=18.18650

Model		Sum of Square	Df	Mean Square	F	Sig.	Remark
1	Regression	6254.909	3	2084.970	6.304	0.001	Sig.
	Residual	35059.355	106	330.749			
	Total	41314.264	109				

Table 5 shows the joint contribution of the three independent variables (intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning) to the prediction of the dependent variable that is, achievement in reading comprehension. The table also shows a

coefficient of multiple correlation (R=.389 and a multiple R^2 of .151). This means that 15.1% of the variance was accounted for by three predictor variables when taken together. The significance of the composite contribution was tested at σ = 0.05. The table also shows that the analysis of variance for the regression yielded F-ratio of 6.304 (significant at 0.05 level). This implies that the joint contribution of the independent variables to the dependent variable was significant and that other variables not included in this model may have accounted for the remaining variance.

Null Hypothesis 6: There is no significant relative contribution of intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning on the achievement in reading comprehension among students with learning disabilities.

Table 6: Summary of regression analysis showing relative contribution of intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning on the achievement in reading comprehension

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta Contribution		
(Constant)	-.304	8.279		-.037	.971
Intrinsic reading motivation	.031	.238	.018	.131	.896
Extrinsic reading motivation	.329	.149	.319	2.208	.029
Self-regulated learning	.195	.307	.078	.636	.526

Table 6 reveals the relative contribution of the three independent variables to the dependent variable, expressed as beta weights, viz; intrinsic reading motivation (β = .018, p<.05), extrinsic reading motivation (β = .319, p<.05), and self-regulated learning (β=.078, p>.05). Hence, it could be deduced that extrinsic reading motivation was significant that is, it could independently and significantly predict reading comprehension achievement by students with learning disabilities in the study.

Discussion of Findings

Intrinsic reading motivation constructs (reading challenge, reading curiosity, and reading involvement) and achievement in reading comprehension among students with learning disabilities

The finding of hypothesis one showed that there exists a significant relationship between achievement in reading comprehension and each of the constructs of intrinsic reading motivation thus: reading challenge, reading curiosity and reading involvement respectively. The present finding is in consonance with the finding of Schaffner and Schiefele (2016) that revealed a positive relationship between intrinsic reading motivation and word and sentence comprehension. It was also found that reading curiosity is significantly related with achievement

in reading comprehension more than reading challenge and reading involvement. This finding may be attributed to the fact that senior secondary school I is a transition class. The SS I students are saddled with the issue of choice of favourite subjects hence they are prone to get more curious about different aspects of their subject areas. As a result of the adjustment demands of the senior school, SS I students are expected to ask questions in order to find out more about different subject areas. These are plausible reasons for their higher level of reading curiosity as obtained in this study than reading challenge and reading involvement.

Extrinsic reading motivation constructs (competition in reading, recognition for reading, reading for grade, social reasons for reading, and compliance) and achievement in reading comprehension among students with learning disabilities

The finding of hypothesis two revealed that there is a significant relationship between achievement in reading comprehension and each construct of extrinsic reading motivation: competition in reading, recognition for reading, reading for grade, social reasons for reading and compliance respectively. This finding contradicts the finding of Becker, McElvany and Kortenbruck (2010) which showed a negative relationship between extrinsic motivation and reading attainment. It was further found that compliance has the highest level of relationship with reading comprehension in terms of the sub-skills of extrinsic motivation. This implies that SS I students with learning disabilities do not read for the sake of reading but they read just for marks or because they will receive an external reward for reading. This finding simply demonstrates that students with learning disabilities are still unmotivated in reading and should be assisted to build their intrinsic reading motivation in particular.

Self-regulated learning and achievement in reading comprehension among students with learning disabilities

The finding of hypothesis three revealed that there is a significant relationship between self-regulated learning and achievement in reading comprehension among students with learning disabilities. This means that self-regulated learning influenced the achievement in reading comprehension among students with learning disabilities in the study. This finding disagrees with the finding by Cirino, Miciak, Gerst, Barnes, Vaughn, Child and Huston-Warren (2016) that weak relationships exist among executive function, self-regulated learning and reading. The present finding however, lends credence to the finding of Ho (2004) that indicated that self-regulated learning constructs positively correlated with academic achievement in reading comprehension domains in students in Hong Kong.

Relationship among intrinsic reading motivation, extrinsic reading motivation, self-regulated learning and achievement in reading comprehension among students with learning disabilities

The finding of hypothesis four revealed that a significant relationship exists among achievement in reading comprehension and intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning respectively. The results indicate that extrinsic reading

motivation, followed by intrinsic reading motivation is significantly related to achievement in reading comprehension more than self-regulated learning. This finding is in agreement with the finding of Parker (2015) on the relationship between self-regulated learning and reading comprehension among students with language impairment. The finding however contradicts the finding of Parker (2016) that the contribution made by self-regulation components to reading comprehension was higher for students with typical language/learning histories in comparison to poor readers. Hence, there is need to boost the level of self-regulatory skills possessed by students with learning disabilities.

Joint contribution of intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning on the achievement in reading comprehension among students with learning disabilities

The finding of hypothesis five revealed that the joint contribution of the independent variables to the dependent variable was significant. It was found that 15.1% of the variance was accounted for by three predictor variables when taken together and that other variables not included in this model may have accounted for the remaining variance. This finding lends support to the findings of Zhou and Wang (2019) and El-Adl and Alkharusi (2020) that reported significant relationships among students' academic achievement, self-regulated learning and motivation in learning.

Relative contribution of intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning on the achievement in reading comprehension among students with learning disabilities

The finding of hypothesis six revealed that extrinsic reading motivation could independently and significantly predict achievement in reading comprehension by students with learning disabilities in the study while the other two factors could not. The implication of this finding is that teachers should stress the need to enhance intrinsic reading motivation in particular, extrinsic reading motivation and self-regulated learning among students with learning disabilities for better reading comprehension achievement and overall academic achievement.

Conclusion

This study has provided insight into the relationships among intrinsic reading motivation, extrinsic reading motivation and self-regulated learning strategies and achievement in reading comprehension among students with learning disabilities in Ibadan, Oyo State. It was established that significant relationships exist between achievement in reading comprehension and each of the constructs of intrinsic and extrinsic reading motivations. Also, the study showed that a significant relationship exists among achievement in reading comprehension and intrinsic reading motivation, extrinsic reading motivation, and self-regulated learning respectively and

that only extrinsic reading motivation could independently and significantly predict achievement in reading comprehension by students with learning disabilities in the study while the other two factors could not.

Recommendations

On the basis of the findings the following recommendations are made.

1. There is need for special educators and reading specialists to organize trainings on the affective factors that affect the achievement in reading comprehension of students with learning disabilities such as intrinsic motivation, extrinsic motivation and self-regulation. This will improve the achievement in reading comprehension among students with learning disabilities and enhance their overall academic achievement.
2. Special teachers, regular teachers, school counsellors and parents should collaborate in the education of students with learning disabilities particularly in boosting the reading motivation and self-regulated learning strategies of secondary school students with learning disabilities.
3. Teachers should encourage secondary school students with learning disabilities to get committed to reading for the sake of intrinsic reading motivation reasons and not necessarily for extrinsic reading motivation reasons. This is because students with learning disabilities in this study demonstrated that they cherish the extrinsic reading motivation reasons more than the intrinsic reading motivation reasons. Therefore, they need more intensive training in how to improve their intrinsic reading motivation for better reading comprehension achievement.
4. To boost the level of self-regulatory learning strategies possessed by students with learning disabilities regular and special educators must teach them how to plan their reading, set goals, monitor comprehension, make predictions, summarize, questions the author, evaluate and review their reading.

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