

## **Special Educators' Perception of Teaching Mathematics to Slow Learners in Oyo Area of Oyo State**

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### ***Abstract***

*The paper investigated the perception of special educators regarding teaching mathematics to slow learners in Oyo area of Oyo State. The study employed survey research design and one research question was answered while three hypotheses were tested at 0.05 level of significance. The population of the study comprised all special educators in Oyo town out of which 50 educators were randomly selected for the study. The instrument used to elicit information was a self-designed questionnaire tagged "Slow Learners in Mathematics from Special Educators' View Questionnaire (SLMSEVQ) which has a Cronbach-Alpha value of 0.79. It was discovered that slow learners in mathematics can learn better and faster with little assistance from teacher, peers and parents. It was shown from the study that there was a significant difference in the perception of special educators based on gender and field of interest ( $N = 50$ ,  $df = 48$ ;  $t = 3.814$ ;  $p = .05$ ) and ( $N = 50$ ,  $df = 48$ ,  $t = 4.683$ ;  $p = .05$ ) respectively. There was also a significant difference in the perception of the special educators based on their years of teaching experience  $F(2,47) = 3.726$ ,  $p < 0.05$ ). It was concluded from the study that slow learners will learn Mathematics better and faster when they receive assistance from their teacher and are given opportunity of interacting with relevant instructional materials. It was recommended, among others, that no student should be stigmatised as slow learner and that slow learners should be given opportunity of learning mathematics at the class pace with little assistance from the teacher, peers and parents.*

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**Keywords:** *Mathematics, Slow learner, Special educator*

## Introduction

**M**athematics is an important subject in primary, secondary and some courses in tertiary institutions. It is a broad and unique field of knowledge that enables individuals to develop the mathematical potentials in them (Ochuha-chidiebere and Ezenwa, 2020). It is a subject that has diverse field of study and it forms an integral part in the national development. It is a subject that rids man of chaos and uncertainty, develops a person's ability for logical reasoning, critical and spatial thinking which establishes in him the necessary and practical communication skills in his life. It is an essential requirement in every field of intellectual endeavour and human development to cope with the challenges of life (Yousef, 2022). Odogwu (2015) describes Mathematics as an important subject in each and every country of the world because it makes one's life orderly and free of chaos. The central role of modern culture demands some basic understanding of mathematical concepts by all for effective living and livelihood. Everybody needs mathematics for one or different purposes depending on the orientation and perception of it by all individuals.

Learning disability is a subtle impairment in which an individual exhibit normal physical characteristic of an average individual. In the areas of social relational skills, an individual with learning disability could get along early unnoticed but when it gets to performing academic tasks, it is with much challenge. Slow learning is a learning disability which may be as a result of neurological malfunctioning and are correlated with basic psychological process (Todaro and Miles, 2019). Oyinloye (2020) described the issues of academic performance of students with learning disabilities as frustrating in the society which thus gives a lot of concern to the stakeholders. Children have a very limited attention span and they get restless if they have to focus for too long. What the teacher is saying may not even register after a point and children drift into wonderland which makes many reveres to them as slow learners. Mushtaq, Khan, Roohi and Ghori (2022) claimed that slow learners are those children who are limited in intelligence. Slow learners don't have the capacity to concentrate for long periods. In Mathematics instruction, slow learners tend to forget things until they continuously keep practicing the concepts that were taught in class. Slow learners are not special from every other learner in the class. They just take some time to grasp concepts and need individualized attention without which they feel lost (Mukunthan, 2013; AbdulGafoor and Kurukkan, 2015).

Edward (2021) stated multi-characteristics of slow learners as short attention span, unable to retain learning task and tend to learn slowly. Velasquez (2020) considered that learning speed of slow learners are mostly affected by previous learning and lack of proper background of the lesson they are exposed to. Impartial anticipation also makes some people to believe they are slow learners. Mindset and beliefs have great impact on learning which caused lack of focus resulting to slow learning (Ayu, Dassy and Mai, 2017; Mustaq, Khan, Roohi and Ghori, 2022). Paul (2016) expressed that the term slow learning in mathematics is used for those students who have learning difficulties in mathematics. These students want to revise mathematics, but due to absence of learning capacity, they do not pick up quickly.

The teaching strategies that can be used to tackle the emotional factors that are the cause of low academic performance of slow learners according to research study conducted by Paul (2016) suggested that the organisation of group discussions and group activities,

encouraging and praising slow learners whenever they make attempt to participate and reacting politely to their responses if they are incorrect can help a lot to enhance the academic performance of slow learners. In addition breaking down difficult tasks into simpler ones allow the slow learners to learn the concept step by step. According to Chauhan (2011) the teacher must use appreciation even on smallest performance in order to eradicate the fear of failure and utilize extrinsic and intrinsic motivation to restore self confidence in slow learners. Farooq, et al. (2011) in a research study discussed that the basic reading and writing skills of slow learners can be enhanced by practice and drill method, that is more and more reading in the class and more work assigned for written practices can improve their performance.

### **Purpose of the Study**

The purpose of this study is to seek the concept of special educators on the notion of slow learning as a learning ability and their advice on how slow learners in Mathematics can be assisted to learn better with additional assistance from the teacher, peers and parents. It is also to bring to the understanding of the public that learning disability is a manageable disability.

### **Research Question**

This research question was generated for the study:

1. To what extent can students with learning disability (slow learners in Mathematics) be handled at the secondary schools?

### **Hypotheses**

- (1) There is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on gender.
- (2) There is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on the educators' field of interest.
- (3) There is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on educators' years of teaching experience.

### **Methodology**

The research adopted survey research design where questionnaire was used to elicit information from the respondents. The population was made up of all special educators in the four local government areas in Oyo town. Simple random sampling technique was adopted for selecting seven special educators from Emmanuel Alayande University of Education, Oyo, twenty- three special educators from Federal College of Education Special, Oyo and ten

special educators from Durbar Special School, Oyo making a total of fifty respondents. The questionnaire was the only instrument for data collection and it was designed in likert form. The questionnaire titled Slow Learners in Mathematics from Special Educators' View Questionnaire (SLMSEVQ) was designed by the researchers and it was divided into two sections. The first section contained the demographic information about the respondents based on their gender, years of teaching experience and their field of interest. The second section contained 15 items to seek special educators' opinion on the subject in focus. The respondents were required to indicate their level of agreement and disagreement with each of the items in the questionnaire. The instrument was validated by experts in special education and mathematics education and necessary corrections were done before administering it to some special educators outside the study zone and their responses were collated and subjected to cronbach-alpha reliability to determine the internal consistency of the instrument and  $r$  was calculated to be 0.79. The research question was answered using descriptive statistics of mean and standard deviations. The t-test and Analysis of Variance (ANOVA) were used to test the hypotheses at 0.05 level of significance.

## Results

**Table 1:** Socio-demographic information of the Respondents

Variable	Frequency	Percentage (%)
<b>Gender</b>		
Male	30	40.00
Female	20	60.00
<b>Total</b>	<b>50</b>	<b>100.0</b>
<b>Field of interest</b>		
Science	16	32.00
Arts/Social science	34	68.00
<b>Total</b>	<b>50</b>	<b>100.0</b>
<b>Years of teaching experience</b>		
Less than 10yrs	10	20.00
10 – 20yrs	25	50.00
20 yrs and above	15	30.00
<b>Total</b>	<b>50</b>	<b>100.0</b>

It can be shown from the table above that 40.00% of the respondents were male while 60.00% were female. The table reveals that 32.00% of the respondents' field of interest were science while 68.00% of them had interest in arts/social science. 20.00% of the respondents have taught for less than 10 years, 50.00% have taught for 10-20 years while 30.00% have taught for 20 years and above.

**Research Question 1:** To what extent can students with learning disability (slow learners in Mathematics) be handled at the secondary school.

**Table 2:** Table of the extent that students with learning disability (slow learners in Mathematics) can be handled at the secondary schools

S/N	ITEM	SA	A	SD	D	N	X	Decision
1	Slow learners are students with special needs	15	25	02	08	50	2.98	Accepted
2	The difficulty level of mathematics and difficulty grasping speed slow some students down	34	06	05	05	50	3.24	Accepted
3	Students that are naturally slow in learning can perform well in mathematics with little assistance	19	23	03	05	50	3.22	Accepted
4	Slow learners should not be allowed to study Mathematics	05	16	22	07	50	2.20	Rejected
5	Mathematics teachers should assist slow learners by giving them more attention in mathematics class	33	09	05	03	50	3.19	Accepted
6	Slow learners in mathematics should be sent to a special school	07	05	18	20	50	1.98	Rejected
7	Availability of mathematical teaching aids will assist slow learners to learn better and faster	25	14	05	06	50	3.12	Accepted
8	Lack of self confidence and poor classroom management slows some students down	30	12	04	04	50	3.18	Accepted
9	The use of mathematical games and parental involvement will assist slow learners to learn faster	20	12	08	10	50	3.22	Accepted
10	Slow learners in mathematics should be taught by special needs educators and not by mathematics educators	18	12	10	10	50	2.32	Rejected
11	Slow learners should be allowed to complete mathematics task at their own pace	12	18	09	11	50	2.85	Accepted
12	Slow learners in mathematics should always be paired with fast learners	20	18	07	05	50	3.29	Accepted
13	No student should be termed as slow learners	07	05	18	20	50	3.34	Rejected
14	Extra moral class organized for slow learners can assist them to improve and learn mathematics better and faster	27	10	06	07	50	3.22	Accepted
15	Slow learners should not be punished for being slow	20	15	08	07	50	3.13	Accepted
<b>Grand Mean</b>							<b>3.01</b>	<b>Accepted</b>

Table 2 shows the extent that students with learning disability (slow learners in Mathematics) can be handled at the secondary schools. The table shows that slow learners are students with special needs ( $M= 2.98$ ); the difficulty level of Mathematics and the difficulty grasping speed slow some students down ( $M= 3.24$ ); students that are naturally slow in learning can perform well in Mathematics with little assistance ( $M= 3.22$ ); Mathematics teachers should assist slow learners by giving them more attention in Mathematic class ( $M= 3.19$ ); availability of mathematical teaching aids will assist slow learners to learn better and faster ( $M= 3.12$ ); lack of self confidence and poor classroom management slow some students down ( $M= 3.18$ ); the use of mathematical games and parental involvement will assist slow learners to learn faster ( $M=3.22$ ); slow learners should be allowed to complete Mathematics task at their own pace ( $M= 2.85$ ); slow learners in Mathematics should always be paired with fast learners ( $M=3.29$ ); extra moral class

organised for slow learners can assist them to improve and learn Mathematics better and faster ( $M= 3.22$ ); slow learners should not be punished for been slow ( $M=3.13$ ) are the acceptability level of the extent to which slow learners in Mathematics can be handled in secondary schools. .

### Hypotheses Testing

Three hypotheses were formulated for this study.

**Ho1:** There is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on gender.

**Table 3:** Independence sample t-test Analysis of special educators' perceptions in teaching students with learning disability (slow learners in Mathematics) based on gender

Special Educators' Perceptions of slow learners in Mathematics	N	Mean	SD	Df	T	Sig.	Remarks
Male	30	27.34	5.39	48	3.814	.000	Sig
Female	20	23.75	3.95				

*Significants level of 0.05*

Table 3 reveals a p-value (0.000) is less the alpha value of (0.05) level of significance at df (48). Since the p-value observed is less than alpha value, it means the difference is significant. It was observed that male special educators has high perception than female special educators with a mean of 27.34 and standard deviation of 5.39. Therefore, the null hypothesis which states that there is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on gender was rejected.

**Ho2:** There is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on the educators' field of interest.

**Table 4:** T-test Analysis of special educators' perceptions of special educators in teaching students with learning disability (slow learners in Mathematics) based on the educators' field of interest

Special Educators' Perceptions of slow learners in Mathematics	N	Mean	SD	Df	T	Sig.	Remarks
Science	16	26.39	4.76	48	4.683	.002	Sig
Arts/Social science	34	23.46	3.90				

*Significants level of 0.05*

Table 4 reveals a p-value (0.002) is less than the alpha value of (0.05) level of significance at df (48). Since the p-value observed is less than alpha value, it means the difference is significant. It was observed that Science special educators has high perception than their Arts/Social science special educators counterparts with a mean of 26.39 and standard deviation of 4.76. Therefore, the null hypothesis which states that there is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on the educators' field of interest was rejected.

**Ho3:** There is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on educators' years of teaching experience.

**Table 5:** Analysis of Variance of the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on educators' years of teaching experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	328.882	2	164.441	3.726	.000
Within Groups	3879.833	47	20.748		
<b>Total</b>	<b>4208.716</b>	<b>50</b>			

Table 5 indicates the summary of analysis of variance of the perception of special educators on teaching mathematics to slow learners based on years of teaching experience. The F value obtained was 3.726 with the associated probability value of (0.000) which is less than 0.05 level of significance in favour of the special educators that have taught for more than 20 years. It therefore means that the result was significant and the null hypothesis that there is no significant difference in the perception of special educators in teaching students with learning disability (slow learners in Mathematics) based on educators' years of teaching experience was rejected.

## Discussion

The results reveal that slow learners students are students with special needs and that the difficulty level of mathematics as well as difficulty in speedy grasping of some mathematical concepts make some students to be slow but that these learners can perform better with little assistance from their teacher, peers and their parents. This finding is in line with Gafoor and Kurukkan (2015) that lack of relevant perquisites and difficulty in speedy grasping of concepts and more numbers in the class cause difficulty in mathematics. The study also identified that the availability of teaching aids and the use of mathematical games will assist slow learners to learn better and faster. The study shows that slow learners might not necessarily be sent to special school but their interaction with special educator can assist them to learn faster than interacting with mathematics educators. The study pinpoint that

slow learners should not be punished for been slow but be given extra attention through extra mural class and building of self confidence. This is in line with Mustaq ,Khan, Roohi and Ghori (2022) that improper classroom management, non-co-operative parental attitude and lack of self confidence affects the academic performance of slow learners. The result of the hypotheses revealed a significant difference in the perception of the educators on teaching students with learning disability (slow learner in Mathematics) based on gender, field of interest and years of teaching experience. This might be as a result that people has diverse opinion to issues irrespective of their gender, area of field of interest and years of teaching experience.

### **Conclusion**

It could be concluded from the study that slow learners can learn mathematics better and faster if they receive some assistance from their teacher, peers, parents and availability of relevant instructional materials. It can also be concluded that the educators' perception on teaching of students with learning disability of slow learning in Mathematics cannot be based on either gender, area of their field of interest, or their years of teaching experience as they articulated diverse opinion.

### **Recommendations**

Based on the findings, the following recommendations were made:

1. No student should be stigmatised for being slow as slow learning is a learning ability that can easily be managed.
2. Slow learners in Mathematics should be given opportunity of learning Mathematics at their own pace.
3. Slow learners in Mathematics should be allowed to learn a concept perfectly before moving to another one. Before beginning to teach a fresh batch of concepts to slow learners in Mathematics, it is good to keep revising the basic concepts until they are confident enough to proceed further.
4. Slow learners in Mathematics should be given adequate assistance by their teachers, peers and their parents.
5. Government should provide instructional aides to schools to assist slow learners to learn faster and move with the class pace.

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