

ASSESSMENT OF CLASSROOM BEHAVIOURS ON MATHEMATICS SELF EFFICACY AMONG SELECTED PRIMARY SCHOOL PUPILS IN OKITIPUPA TOWN

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Abstract

This study investigates the influence of classroom behaviours on Mathematics Self -Efficacy among Primary School Pupils in Okitipupa Town. The participants in the study comprised 160 primary school pupils (78 male and 82 female). The following instrument were used in the study: Classroom Behaviours Assessment Scale (CBAS) and Mathematics Self - Efficacy Rating Scale (MSERS), all instruments were administered to the participants. Two research questions were raised and two research hypotheses were equally generated to guide the study. The research design was descriptive survey, data generated were analyzed using both descriptive and inferential statistics. There was a significant influence of classroom behaviours on Mathematics Self Efficacy among the participants. Similarly, there was a significant influence of classroom behaviours on Mathematics Self Efficacy across Gender among participants. The following recommendations based on findings of the study were made: Teachers should be trained to intervene on negative classroom behaviours and also to reinforce positive classroom behaviours.

Keywords: Classroom Behavior, Self-Efficacy and Mathematics

Introduction

Behaviour is a fundamental trait in human life and it is required for meaningful co existence when it is favorably disposed. Adetola (2022) explains that behaviours are reactions or dispositions as expressed in manners of individuals in responding to both internal or external stimuli, he further emphasized the need for behavioural understanding especially in our school environments as this would encourage effective understanding capable of promoting positive changes in our classroom and by extension our society.

Kate (2021) describes Classroom Behaviors as those interactions and attitudes being displayed by both learners and teachers within a learning environment. He further submitted that positive classroom behaviours significantly influenced academic performance, foster social relationships, boost self esteem as well as self Efficacy. Anderson (2021) classified classroom behaviours into positive and negative behaviours, he listed the positive behaviors to include: Respect, Attention, Self Discipline, Collaboration, Emphaty, Self Motivation among others and Negative behaviour as: Defiance, Distraction, Bullying, Aggression, Disrespect and so on.

Self-Efficacy, is a concept originally introduced by the renowned psychologist Albert Bandura, he describes it as encompassing an individual's confidence and belief in their capacity to accomplish a particular task or attain a desired outcome, when applied to the realm of mathematics hence Mathematics self-efficacy denotes a learner's perception of their own competence in comprehending and actively engaging with mathematical challenges. The formation and cultivation of self-efficacy in solving a multitude of interconnected problems in

Mathematics extends beyond the mere act of calculations but confidence and competence in ability are major factors.

According to Arslan (2020) understanding these factors that influence Mathematics Self efficacy among young learners is crucial, hence fostering effective Mathematics abilities on individuals can unlock a multitude of opportunities and allowing learners to access a wider range of educational resources as well as connecting with global communities and enhance their overall problem-solving skills. Moreover, as Mathematics continues to gain prominence in various sectors such as business, technology and academia, ability to assume competence and confidence in solving Mathematical problems equips young learners with a competitive edge in ideal society, thereby empowering them to contribute to the nation's socio-economic development.

Orogbemi (2021) submitted that effective instructional practices played a pivotal role in instilling a sense of confidence within learners, employing strategies that scaffold motivation thereby provide appropriate outcomes, he further emphasizes that effective instructional practices are significant in teacher-pupil interactions which is characterized by constructive feedback, encouragement, and opportunities for meaningful dialogue.

According to Muyideen (2021) the classroom setting itself plays a significant role, as it should be designed to inspire motivation and create a sense of safety, belonging, and enabling pupils to take risks and enhance their competence as well as confidence without fear of judgment. By understanding and addressing these various elements, educators can help pupils develop and enhance their Mathematics self-efficacy, ultimately fostering a lifelong love for learning and the acquisition of valuable Mathematics problem solving skills.

Understanding the influence of classroom behaviors on Mathematics self-efficacy is of paramount importance for educators and policymakers in Nigeria because it holds the key to informing effective instructional strategies and support mechanisms that can significantly enhance pupils' confidence in Mathematics.

Awolokun (2021) asserted that ability of teachers to train young learners on rudiments of problem solving using appropriate models is closely tied to their Mathematics self-efficacy, which in turn affects their motivation, perseverance, and overall achievement in the subject. According to Pajare (2020), Classroom dynamics and behaviours play a pivotal role in shaping learners's belief about their Mathematics capabilities and effective teaching methods including engaging and interactive activities that focus on the needs of individual can boost learner's confidence and encourage active participation. Additionally, adopting appropriate feedback strategies, such as constructive criticism and praise, can help learners identify areas for improvement while also recognizing their progress, thus fostering a positive learning environment. The overall classroom environment, characterized by a supportive and encouraging atmosphere is crucial for nurturing learners' belief in their Mathematics skills, as it enhances a sense of belonging thereby reduces anxiety as well as promoting risk-taking. Due attention to the aforementioned factors would empower young learners to navigate the complexities of mathematics self efficacy among young learners and this would facilitate growth and success in becoming confident and competent in Mathematics.

Purpose of the Study

The purpose of this study is:

1. Assess classroom behaviors on Mathematics self-efficacy among the participants.
2. Investigate classroom behaviors on Mathematics self-efficacy across gender among the participants.

Research Questions

The following research questions were raised to guide the study:

1. Is there any significant influence of classroom behaviors on Mathematics self-efficacy among participants?
2. Is there any significant influence of classroom behaviors on Mathematics self-efficacy across gender among participants?

Research Hypotheses

The following hypotheses were formulated and were tested at 0.05 level of significance:

1. There is no significant influence of classroom behaviors on Mathematics self-efficacy among participants.
2. There is no significant influence of Classroom Behaviors on Mathematics Self Efficacy among participants across Gender.

Methodology

The study adopted a descriptive survey design. The population of the study comprises all primary school pupils in Okitipupa Town. Multi - stage sampling technique was adopted for the sampling, Okitipupa was stratified into two strata using the two major cultural composition. Idepe and Okitipupa, one cultural composition was randomly selected and two schools were randomly selected in the selected cultural composition, primary five was purposively selected because of their advanced level in primary school and 80 participants were randomly selected in each of the selected classes from the randomly selected schools totaling 160 (78 male and 82 female). The mean age of the participants was 10 years. The researcher developed the following instruments: Class Behaviours Assessment Rating Scale (CBARS) and Mathematics Self Efficacy Rating Scale (MSERS) all instruments were validated using test retest method after three weeks interval, reliability coefficient of 0.87 was obtained after correlation. The validated instrument was administered to the participants.

Hypothesis One :1. There is no significant influence of classroom behaviors on Mathematics self-efficacy among participants.

Table 1

t-test analysis of classroom behaviors and Mathematics Self-Efficacy.

| Variab le | N | X | SD | Df | Tcal | Tcri t | Decisi on |
|---------------------------|-----|--------|-------|-----|-------|--------|--------------------------|
| Classroom behaviour | 160 | 24.20 | 3.400 | 158 | 2.091 | 1.984 | Ho ₁ Rejected |
| Mathematics Self efficacy | | 19.600 | 2.900 | | | | |

P<0.05; df=158; t-crit=1.984 t-cal=2.091

Table 1 shows the mean score, standard deviation, the t calculated and t tabulated from the probability level 0.05 as recorded. The table reveals that the calculated “t” value (t-cal=2.091) is greater than the t critical (t-critical=1.984 given 158 degrees of freedom at 0.05 level of significance.

Hence, the null hypothesis which says that there is no significant difference in classroom behaviors and Mathematics self-efficacy is rejected and the alternative hypothesis is accepted. Therefore, there is a significant influence of classroom behaviours and Mathematics self-efficacy among participants.

Hypothesis 2

There is no significant influence of classroom behaviours on Mathematics self-efficacy among participants across gender.

Table 2

t-test Analysis of Classroom Behaviors on Mathematics Self-Efficacy among Participants Across Gender

| Gender | N | X | SD | Df | tcal | tcrit | Decision |
|---------------|---|------|-----|----|------|-------|--------------------------|
| Male | 7 | 24.6 | 3.4 | 15 | 2.01 | 1.98 | Ho ₂ Rejected |
| | 8 | 0 | 0 | | | | |
| Self efficacy | 8 | 20.2 | 3.8 | 2 | | | |

$P < 0.05$, $df = 158$; $t\text{-crit} = 1.984$; $t\text{-cal} = 2.011$

Table 2 shows that the mean score standard deviation, the t calculated and t-critical from the probability level 0.05 as recorded. The table reveals that the calculated “t” value ($t\text{-cal} = 2.011$) is greater than the “t” critical ($t\text{-critical} = 1.984$) given 158 degrees of freedom at 0.05 level of significance hence, the null hypothesis which says there is no significant influence of classroom behaviours on Mathematics self-efficacy among participants across gender is rejected, therefore, there is a significant influence of classroom behaviours on Mathematics self-efficacy among participants across gender.

Discussion of Findings

Hypothesis one states that “There is no significant influence of classroom behaviours on Mathematics self-efficacy among participants”. The results show that there is a significant influence of classroom behaviours on Mathematics self-efficacy among participants. The calculated “t” value ($t\text{-cal} = 2.091$) is greater than the critical, “t critical ($t\text{-crit} = 1.984$) given 158 degrees of freedom at 0.05 level of significance. These findings aligned with submission of Orogbemi (2021) who submitted that effective instructional practices played a pivotal role in instilling a sense of confidence in learners.

The findings further corroborated the findings of Awolokun (2021) who asserted that the development of problem-solving abilities among pupils is closely tied to Mathematics self-efficacy which in turn affects their motivation, perseverance and overall achievement in the subject. However, the findings disagreed with the assertion of Muyideen (2019) who asserted no significant influence of classroom behaviors on Mathematics self-efficacy among participants.

Hypothesis two states that “there is no significant influence of classroom behaviors on Mathematics self-efficacy among participants across gender. The findings revealed a significant influence of classroom behaviors on Mathematics self-efficacy across gender among participants with evidence of higher mean scores among the male, these findings concurred to the submission

of Anderson (2021) that females manifest lower maladjusted behaviours compared to the male counterparts in classroom learning, this findings also agreed with the recommendation of Arslan (2020) who recommended that there is need to foster Mathematics self-efficacy among young learners especially among the females, he further concluded that classroom behaviours are fundamental in achieving Mathematics self-efficacy among young learners. The assertion of Pajare (2020) which states that classroom behaviours have positive impact on Mathematics self-efficacy and capable of enhancing Mathematics Self Efficacy also corroborated the findings of this study.

References

- Adetola, D.D. (2016). Self-efficacy in Mathematics among Nigerian students: A longitudinal study. *African Journal of Educational Psychology*, 8(3), 127-140.
- Anderson, M. M. (2021): Dynamism of Affective traits on academic Performance among young learners. *Education Research Quarterly*, 43(3), 408-426.
- Arlan, R.T. (2020). Factors influencing Mathematics self-efficacy among young learners. *Journal of Science Education* 6(2), 45-62.
- Awolokun, A. T. (2021). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 58, 1-25.
- Kate, B. S. (2021). Classroom environments and their impact on Mathematics self-efficacy: A study among Indonesian primary school pupils. *International Journal of Educational Research*, 98, 124-136.
- Muyideen, A. G. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Orogbemi, D. S. (2021). Exploring the Relationship between Classroom Behaviors and Mathematics Self-Efficacy: *Journal of Educational Contexts*, 7(2), 65-82.
- Pajare I. L (2020). Classroom behaviors and their effects on Achievement in mathematics A case study of children in rural areas of Ondo state. *Journal of Applied Educational Studies*, 15(2), 78-93.
- Pajare, I.L (2022). An Overview of Social Cognitive Theory and the Concept of Self-Efficacy. *Educational Psychology Review*, 14(2), 17-34.