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RELATIONSHIP BETWEEN CLASS SIZE AND LEARNERS' ACADEMIC PERFORMANCE OF PUBLIC SECONDARY SCHOOLS IN NTUNGAMO DISTRICT, UGANDA

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ABSTRACT

This study investigated the Relationship between Class Size and Learner's Academic Performance of Public Secondary Schools in Ntungamo District. The study aimed to offer a deeper understanding of how class size can affect learner's academic performance. The target population was 7588, including 7182 learners, 396 teachers and 10 Head Teachers. Cross-sectional research design was used for the study. The study employed mixed method approach. Using purposive sampling, 10 schools and 10 head teachers were chosen among from them. Simple random sampling was used to obtain 350 learners and 20 teachers. Questionnaires and interview schedules were the tools utilized to gather the data from the study. Cronbach's alpha was used to assess the liability of the study instruments for quantitative data whereas recording was utilized for qualitative data. The analysis included both correlation and regression techniques to determine the strength of the relationships between teachers' working conditions and student performance, allowing for the identification of significant predictors of academic achievement. The findings revealed strong positive correlations between class size showed the most significant correlation ($r = 0.76$, $p = 0.000$). The regression analysis indicated that the model accounted for 74.1% of the variance in academic performance ($R^2 = 0.741$), When considering standardized coefficients, class size had the greatest relative impact on student outcomes (Beta = 0.276). also, class size plays a critical role in shaping students' academic performance. Improving these fan actors can lead to better teaching effectiveness and enhanced student learning. The findings recommended that educational policymakers should focus on emphasising appropriate class sizes to improve both teacher well-being and student success.

Keywords: Class Size and Learner's Academic Performance, Uganda

INTRODUCTION

Teachers' performance is a crucial factor that enhances school effectiveness. Critically, it is an antecedent of the success of educational reforms and school

effectiveness because teacher's commitment results in extra effort to achieve school vision and goals. It is stated that teachers' empowerment is one of the most effective ways to enhance teachers' commitment (Muhammad & Hussain, 2020).

In Uganda, the working condition is still questioned by number of researchers around the country even teachers always argue about large of students in aclass however much the government does a lot to make them feel satisfied, teachers feel it's not up to their standard.

Teachers' dissatisfaction is asserted to be the most important real factor that leads to an increase in the number of teacher's turnoff from the teaching profession indicating that the working condition is not fair. Tschannen-Moran and Hoy, (1998) asserted that, teacher's dissatisfaction is being conducted all over the world but not only that the number of teachers who are leaving teaching is becoming very high but also the lack of satisfaction related to poor productivity academically. In relation to this, poor work conditions brings about an increase in teachers turn over, creates psychological trauma and absenteeism (Troman & Woods, 2000).

Performance is the result and work behavior that has been achieved in order to complete the tasks and responsibilities that have been given within a certain period of time (Fisher, et al., 1993). Sinha (2001) stated that teacher's performance is depending on the willingness and also the openness of the teacher himself on doing their job. He also stated that by having this willingness and openness of the teachers in doing their job, it could increase the employees' productivity which also leads to the performance. Thus according to Sinambela (2012) teacher performance is defined as his ability to perform specific skills.

Teachers' performance is the accumulated result of the skills, efforts and abilities of all the teachers as contributed in institutional improved productivity leading towards its goal achievement. Improved school performance indicates the efforts towards goal achievement while requiring more efforts in terms of improved performance (Ellinger et al, 2003). Teacher performance is among the critical factors that contribute significantly in schools success.

These schools have led to poor teacher attendance rates, tardy reporting, and a high percentage of instructors who fail to carry out all of their professional responsibilities, and in the end failing to accomplish their responsibilities as necessary.

In Ntungamo District, the teaching learning environment is not conducive due to large number of students in a class which affects teacher's ability to deliver expected outcomes. This trend affects the performance of the students negatively. In support of this perspective, Leblebici (2012) asserts that the workplace conditions determine a level of teacher's motivation, subsequent performance, productivity, and creativity. There are many factors that influence academic performance but

understanding the factors that contribute to the development of quality education is critical. Teachers who are dissatisfied with their jobs and working under harsh environment will not be committed or productive (Roberto, et al, 2019). On the basis of the circumstances bedeviling the working conditions of teachers in secondary schools in Ntungamo District, teacher's determination in the teaching learning process is discouraging. Therefore, this study examined the relationship between class size and learner 's academic performance in public secondary schools of Ntungamo District.

Literature review

The Relationship between Class Size and Learner's Academic Performance in Public Secondary Schools.

Class size refers to the total number of students in a certain class or educational environment. It is a measurement of the quantity of people enrolled in or taking part in a certain course, class, or academic program. Class size is not standardized; it varies widely based on the country or location, the educational level, and the particular policies and goals of a school or institution. Class size rules or recommendations may vary throughout educational systems and institutions.

The size of the class can have a big impact on the educational process and results. Benefits like more teacher-student connection, more individualized attention, and possibly even better academic performance are frequently linked to smaller class sizes. Smaller class sizes may present more opportunity for engagement, active participation, and deep connections between students and teachers. On the other hand, higher class numbers could provide problems because it can be harder to provide each student with individualized attention. Less time may be available for teachers to attend to the needs of every student in larger classrooms, and there may be less opportunities for pupils to speak with the teacher face-to-face.

The subject content, teaching strategies, educational level, and other variables can all affect the appropriate class size. Education administrators, academics, and politicians frequently examine and debate how class size affects learning results in order to make informed choices on how best to allocate resources and implement instructional strategies. Since class size has been linked to academic performance, it is frequently discussed in the educational literature as having an impact on student accomplishment and feelings as well as on administration, quality, and school budgets (Adimonyemma, Akachukwu, & Igboabuchi, 2018). According to Uhrain (2016), class sizes grow along with the number of students attending a school, which affects student performance. There are different class sizes that have an impact on classroom management and instruction because it has long been believed that the number of students in a class influences the academic performance of the students, the teacher's management of the classroom, and the

teacher's instructional methods (Uhrain, 2016).

Global variances in educational systems, cultural values, economic realities, and educational policies can lead to considerable variations in class sizes. The following are some broad observations regarding class sizes around the globe: Maintaining smaller class sizes is frequently prioritized in wealthy nations, particularly in basic education. Individualized learning, student engagement, and teacher-student interactions are thought to be improved by smaller class sizes. But there can be differences even in developed nations. For example, compared to public schools, private schools could have smaller class sizes.

In developing nations, class sizes might differ significantly. Larger class sizes can occasionally result from resource limitations, especially in public schools. It can be difficult to give each student individualized attention in larger courses due to a lack of resources, crammed schedules, and a teacher shortage. However, Nordic nations with strong educational systems—like Finland—are frequently mentioned. Particularly Finland is renowned for emphasizing a student-centric approach and having comparatively small class sizes.
In Asian nations, there can be wide variations in class sizes. While some nations, such as South Korea and Japan, prioritize the quality of their teachers and their methods of instruction, they nevertheless have relatively large class sizes. In contrast, class sizes in certain private Asian schools could be smaller. Class sizes in the Middle East might differ, much like in Asia. Certain affluent Gulf nations allocate significant resources to education, resulting in reduced class sizes, whilst other nations may encounter difficulties associated with high class sizes.

In African nations, variables including population density, resource accessibility, and governmental regulations affect class sizes. Sometimes, too many students in a classroom can be a problem for schools. Class size is one element that affects educational quality, but it is not the only one. Important responsibilities are also played by other elements like infrastructure, curriculum, socioeconomic situations, and the caliber of the teachers. Furthermore, continuing studies and policy debates on education may result in modifications to how various regions handle class sizes.

Class sizes in Uganda vary greatly depending on a number of variables, including whether the student attends a public or private school, where they live, and what resources are available. Compared to rural public schools, urban or private schools may typically have smaller class sizes. Class sizes in Uganda are significantly influenced by resource limits, as they are in many underdeveloped nations. Larger classes are the result of limited budget, especially in public schools. Class sizes in Uganda are also influenced by government activities and

education regulations. The dynamics of class size may be impacted by government initiatives to increase access to education. There are instances when schools experience difficulties because of packed classrooms, particularly in places with high population density. It is more challenging for teachers to give each student individualized attention in large class sizes. Reducing class sizes is a factor in Ugandan efforts to raise the quality of education. Better learning outcomes and student-teacher relationships are frequently linked to smaller class sizes.

Class sizes in secondary schools in the Ntungamo District are representative of the country as a whole. However, because those institutions lack the resources to support smaller class sizes, class size poses a danger to the quality of services that they provide. Essentially, teachers have little to no control over class size and it is not an administrative decision. The attitude of secondary school pupils toward learning has been greatly impacted by large class numbers, with the largest effects being seen in the areas of involvement, motivation, attentiveness, and punctuality. There is a risk to the requirement for more active engagement and student-centered learning approaches. Teachers are forced to teach even when they know they cannot be effective due to the normalcy of classroom overcrowding. Ineffective student control, inadequate planning and assessment, the inability to accommodate students' unique characteristics, and increased teacher strain are difficulties that educators must deal with.

Methodology

Research Design

Research design, according to Sileyew (2019), entails gathering data from a sample of respondents who share comparable features about the same variables. The study adopted cross-sectional research design as it captures data at a single point in time, which allows researchers to a brief overview of a particular phenomenon in a specific population (Culliford & Bradbury, 2020). Cross sectional design gathered information to draw conclusions about a population of interest at a particular moment describes as snapshot of the stated population about which they gather data. Cross sectional design was used because the researcher wants to collect data across a big number of respondents at particular time. The design often allows researchers to compare different groups such as age groups, ethnicities, or any other categorizations in a population at the same time (Bryman, 2016). While cross-sectional studies cannot determine causation, they can identify associations or relationships between variables where participants don't have to commit to multiple sessions or prolonged periods of data collection since data is collected at one time point (Bloomfield & Fisher, 2019).

The population comprised of 10 head teachers, 396 teachers, and 7182 students from 10 public secondary schools in

Ntungamo District represented by the letters of the alphabet from A, B, C, D, E, F, G, H, I and J

The sample size for this study was determined using Solvens's (1960) formula. This was used to enable the researcher sample the population with a lot of desired level of precision. The sample will be drawn from the target population of 7588

Table 1. Sample Size

School	Head Teachers		Teachers		students		**Total Sample**
	Population	Sample	Population	Sample	Population	Sample	
A	1	1	36	2	680	33	**36**
B	1	1	29	2	400	20	**23**
C	1	1	65	3	1420	69	**73**
D	1	1	34	2	564	28	**31**
E	1	1	23	1	520	25	**27**
F	1	1	34	2	650	32	**35**
G	1	1	49	2	920	45	**48**
H	1	1	22	1	460	22	**24**
I	1	1	55	3	738	36	**40**
J	1	1	49	2	830	40	**43**
Total	10	10	396	20	7182	350	**380**

Source: Primary Data (Researcher, 2024)

Instruments for Data Collection

Data collection is the planned, methodical process of obtaining and assessing relevant variable data in order to answer specific research questions, test hypotheses, and assess findings (Pandey & Pandey, 2021). The main techniques for gathering data according to Mazhar, Anjum, Anwar, and Khan (2021) are: schedules, questionnaires, interviews, observation, and surveys. Observations, surveys, questionnaires, checklists, and interviews are a few of the tools used in data collection (Young et al., 2018). The questionnaire and the interview guide was used to gather data for this study.

The Questionnaire

Questionnaire was used for the collection of quantitative data. Mazhar et al. (2021) define a questionnaire as a prepared list of questions given to several responders. Open-ended and closed-ended questions are the two main categories (Cheung, 2021). In order to collect statistics, open-ended and closed-ended questionnaires are utilized in qualitative and quantitative research, respectively (Ahmad et al., 2019). However, some researchers also quantify the responses while the data is being analyzed (Kyngäs, 2021). Based on a 4-point Likert

scale, the self-administered questionnaire (SAQ) will be used, with suitable options provided for each component. It used questions with closed-ended answers. The researcher was able to cover the respondents swiftly and affordably if they use closed-ended questions (Krosnick, 2018).

Interview Guide

The second instrument to be used is Interview to collect qualitative data**.** Interviews are a qualitative research approach that Jain (2021) proposes is used to gather primary data by interviewing one or more people about their thoughts, experiences, or viewpoints on a certain topic or subject matter. Interviewer prejudice and mistakes, according to Jain, can be prevented by employing an interview guide and streamlining the interview procedure. According to Low, Saks, and Allsop (2019), there are three primary categories of interviews: semi-structured, unstructured, and structured. The study aims to gather qualitative data from 10 head teachers of government-aided secondary schools in Ntungamo District through in-person interviews using a semi-structured interview guide.

Results of the study

Descriptive Statistics on Class Size and Learner's Academic Performance in Public Secondary Schools

This section presents items on Class Size and Learner's Academic Performance. Respondents were requested to indicate the extent to which you exhibit feelings here under in using the scale where, 1 = Strongly disagree, 2 = Disagree, 3 = Agree and 4 = Strongly agree. And the results are presented in the table below,

TABLE 2: Descriptive statistics on class size and learner's academic performance

	Mean	SD
the size of your current class is large enough to facilitate learning	1.27	0.94
Teacher's ability to provide individual attention change based on class size?	3.45	0.89
Class size influences student engagement in the classroom?	3.66	0.77
I find it challenging to meet the needs of all students in larger classes?	3.75	0.85
Student behavior differ between small and large classes?	3.67	0.93
I enjoy lessons better when students are not many in my class.	3.87	0,72
Students in small classes perform better than those in large classes.	3.84	0.57
I find it difficult to mark students' assignments in large classes.	3.98	0.97
The size of my class is an encouraging factor to my teaching.	2.31	0.99
It is easy for me to give Individual attention to students during my lessons in smaller classes.	3.21	.064
I am able to regularly mark my students' assignments in smaller classes.	3.76	0.73

Large student population in my class always make class management and control difficult.	3.78	0.88

Class size significantly affects both teaching and learning, as reflected in the data. Teachers largely disagree that their current class sizes facilitate effective learning, with a mean of 1.27 and a standard deviation (SD) of 0.94. The challenges of large classes are further highlighted by a mean of 3.75 (SD = 0.85) for the difficulty in meeting all students' needs and 3.98 (SD = 0.97) for the challenges in marking assignments. On the other hand, smaller classes enable more personalized support, as shown by a mean of 3.21 (SD = 0.64) for giving individual attention and 3.76 (SD = 0.73) for the ability to regularly mark assignments. These numbers reveal the strain placed on teachers in larger classrooms and emphasize how smaller class sizes allow for more focused and effective teaching.

The emotional toll of large classes on teachers is also evident in the responses. Teachers strongly agree that they enjoy teaching more when class sizes are smaller, with a mean of 3.87 (SD = 0.72). However, larger class sizes are less motivating, as seen in the low mean of 2.31 (SD = 0.99) for class size being an encouraging factor for teaching. Managing student behavior is another notable challenge in larger classes, with a mean of 3.67 (SD = 0.93), while maintaining control in such settings is also difficult, reflected by a mean of 3.78 (SD = 0.88). These findings highlight the link between class size and teacher satisfaction, suggesting that addressing class size concerns is essential for maintaining teacher morale and enthusiasm.

Student outcomes are also closely tied to class size. Teachers strongly believe that students in smaller classes perform better, with a mean of 3.84 (SD = 0.57), and are more engaged in lessons, as shown by a mean of 3.66 (SD = 0.77). Teachers also note that large classes make it harder to manage engagement and behavior, creating a less conducive environment for learning. Given these challenges, education systems should prioritize policies aimed at reducing class sizes or providing additional resources for teachers in large classrooms. Doing so can enhance teaching efficiency, improve student performance, and foster a more positive educational experience for both teachers and learner.

There is a relationship between class size and learners' academic performance in in government aided secondary Schools.

The findings revealed that the first null hypothesis (H_0) to the effect that there is no significant relationship between class size and learners' academic performance in government aided secondary Schools in government aided secondary schools was rejected and alternative hypothesis accepted meaning that when the class size is sufficient for learners, their academic performance increases and the reverse is

true. This was supported by one of the head teachers who said that "*learners study and learn well in a conducive environment where they are well spaced and teachers find it easy to make them learn*". These findings were in agreement with previous scholars (Adimonyemma, Akachukwu, & Igboabuchi, 2018). who emphasized that the subject content, teaching strategies, educational level, and other variables can all affect the appropriate class size. Education administrators, academics, and politicians frequently examine and debate how class size affects learning results in order to make informed choices on how best to allocate resources and implement instructional strategies. Since class size has been linked to academic performance, it is frequently discussed in the educational literature as having an impact on student accomplishment and feelings as well as on administration, quality, and school budgets Also, the findings were in agreement with the findings of Uhrain (2016), who emphasized that class sizes grow along with the number of students attending a school, which affects student performance. There are different class sizes that have an impact on classroom management and instruction because it has long been believed that the number of students in a class influences the academic performance of the students, the teacher's management of the classroom, and the teacher's instructional methods (Uhrain, 2016).

Conclusion

The study revealed clear connections between class size and learners' academic performance in government-aided secondary schools. Adequate classroom space provides a conducive environment for learning, where students can engage better, and teachers can manage their classes more effectively. When classrooms are overcrowded, it becomes challenging for teachers to give individual attention to students, which affects their overall performance. On the other hand, class sizes with sufficient space promote better interaction, focus, and productivity, leading to improved academic results. This highlights the importance of investing in infrastructure that supports a conducive learning atmosphere.

Recommendations

Based on the findings, it is recommended that education administrators and policymakers prioritize maintaining appropriate class sizes in government-aided secondary schools. Overcrowded classrooms hinder effective teaching and learning, making it difficult for teachers to give individual attention to students. To address this, schools should invest in building more classrooms and recruiting additional teachers to ensure an optimal student-teacher ratio. Adequate spacing within classrooms not only promotes better interaction between students and teachers but also fosters a more focused and productive learning environment.

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