
**THE IMPACT OF TEACHER'S TEACHING EXPERIENCE AND ACADEMIC PERFORMANCE IN
MATHEMATICS IN SELECTED SCHOOLS OF KATABI TOWN COUNCIL.**

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ABSTRACT

This study investigated the influence of teachers' teaching experience on the academic performance of private and public secondary school students in Mathematics in Katabi Town Council. The study adopted descriptive research design. Study population comprised all the selected Secondary Schools in Katabi Town Council. A sample of the selected schools was drawn from the population through the process of simple random sampling technique, made up the selected schools in Katabi Town council. An inventory schedule was the instrument used for data collection. Questionnaires, 20 questionnaires per school were administered. 388 (97%) questionnaires were returned. Their responses were analyzed through content analysis. The regression analysis and t-test were used to test hypotheses generated for the study at 0.05 alpha levels. Findings reveal that teachers' teaching experience has significantly influenced students' academic performance in Mathematics as measured by their performance in the Uganda Certificate of Examination and as perceived by the respondents. Schools having more teachers with above 10 years teaching experience achieved better results than schools having more teachers with 10 years and below teaching experience

Key words: **teacher's, teaching, academic performance and mathematics**

Background of the study

This examine changed into carried out in Katabi city Council located in important Uganda in decided on secondary faculties. Katabi city Council has 50 secondary faculties. The average number of years of experience of instructors in Katabi town Council from 2017 to 2019 was 14.5. inside the 2019 faculty year, the years of experience declined by a full yr. and persisted to say no (Anthony et al., 2023). the percentage of teachers with a grasp's diploma or better fluctuated, with a leap of almost four% from the 2016 school yr. to the 2017 school 12 months (Isaiah & Alex, 2023). A 1% drop from the 2017-2018 college years to the 2018 college year after

which a boom of 3.1% between the 2018 faculty 12 months and the 2019 faculty 12 months (Mark et al., 2023).

The diploma to which the relationship among pupil academic performance and trainer schooling level and revel in is affected by school room trainer behaviors has not been sufficiently investigated in preceding studies (Godfrey et al., 2023). Many studies have proven a hyperlink between the effect of trainer behaviors inside the study room on student fulfillment (Kanyerere & Muhammed, 2023). This hyperlink has additionally been determined inside the issue of science (Walberg, 1986; wise & Okey, 1983).

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Amongst trainer behaviors which have been proven to lead to excessive scholar success are efficient lecture room management abilities, systematic teaching approaches, offering clean teaching dreams, and the use of strengthen organizers (Anthony et al., 2023). As Wenglinsky (2002) has cautioned, a instructor cannot be determined to be certified by checking his or her schooling level, years of revel in, or teaching certificates. teachers have an effect on students through their interactions with them, in particular inside the school room. As a result, even though critical, trainer education stage and enjoy most effective constitute a part of the potential to control the lecture room successfully and to sell pupil achievement (Christopher et al., 2022).

Problem Statement

An examination of ways instructor traits has an effect on scholar achievement in technological know-how is critical as effects have the ability to provide insights into the importance of hiring and growing certified instructors who are higher able to help students reap in technological know-how, in addition to direct the emphases of ongoing trainer in-services training

Specific Objectives of the study

- To find out the distribution of teachers on the basis of teaching experience in the selected secondary schools in Katabi Town Council.
- To find out the level of students' academic performance in the selected secondary schools in Katabi Town Council.
- To examine the relationship between teacher's years of experience and students' academic performance in the selected secondary schools in Katabi Town Council.

(Emmanuel et al., 2023). A common observation of the college gadget in Katabi city Council, Katabi city council Kampala could show a huge range of young instructors with few years of coaching enjoy. A lot of these teachers seem to lack a great deal-wished enjoy that could result in powerful coaching and getting to know in schools in terms of coaching method (Richard et al., 2023). As a result, teaching has a tendency to performed in abstract even as getting to know is perhaps by way of rote reminiscence. The problem of this examines changed into to determine the effect of teacher's teaching enjoy and educational performance in arithmetic in decided on schools of Katabi metropolis Council (Victoria et al., 2023). By means of improving our expertise in those areas, administrators, researchers, and policymakers turned into to better understand which teacher traits have the best effect on student science success (Anthony et al., 2023). This changed into additionally enabling researchers and policymakers to design more effective intervention packages to influence teacher conduct and hence, the want and requirement for this research file.

Research questions

- How are teachers distributed on the basis of teaching experience in the selected schools in Katabi Town Council?
- What is the level of students' academic performance in the selected secondary schools in Katabi Town Council?
- What is the relationship between teacher's years of experience and students' academic performance in the selected secondary school in Katabi Town Council?

Methodology**Research design**

In this study, descriptive cross-sectional design was used because it brings the researcher closure to the respondents and provided an interface for interaction. This thus helped the study to get out the social reality. A cross sectional survey was used to provide information on the situation in the selected schools in Katabi town council at a given time frame. A qualitative approach was used to achieve depth and detail information. That is through direct quotations and careful description. It also allows a researcher to identify issues from the perspective of participants and understand the meanings and interpretations that they give.

Population of study

The study population, which is the total number of a defined class of people, objects, places or events selected according to their relevance to the research situation. The target population of this study was Head Teachers, Board members, Local leaders, Parents, Teachers and

Students of the selected secondary schools. These personalities merit selection in this study due to the crucial role they play in the management of schools. The students are part of the population as their performance is a key indicator of school progress. Some of the head teachers of the secondary schools were interviewed personally. Some teachers, especially those who are concerned with behavior and academics were given some questionnaire to answer and some were interviewed together with their Head teachers.

Sample size and sampling techniques**Sample size**

Sampling was done in Katabi town council and the sampled schools. For all the sampled schools, there was one Head teacher, teachers, one Bog member, one Parents' representative; one Local government representative and the rest were students.

The formula is as shown below;

$$n_0 =$$

Where;

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no is the sample size

Z is the level of significance to be used

e is the desired level of precision to be used

p is the estimated proportion is 0.5 since it is unknown and q is (1-p) which also results into 0.5.

The schools selected were partly ordinary level schools while others were ordinary and advanced level schools. This was to enable easy comparison of results and helped to eliminate extraneous variables such as environment and facilities

Sampling technique

Purposive sampling technique was used to select the secondary schools for the study. The

Head teachers and the Board members were default respondents as their schools purposively selected. Respondents were systematically selected from the individual schools.

All respondents in respective schools had equal opportunity to be picked popularly known as simple random sampling. Specifically, a raffle approach was used where all schools in the district were written in small pieces of paper and each picked at random until the desired number was reached.

Research instruments

Questionnaires

This research instrument used to include semi-structured questionnaires where pre-coded answers was administered to the respondents. The questionnaire was used because it was practical, also large amounts of information was collected from a large number of people in a short period of time and in a relatively cost effective way, was carried out by the researcher or by a number of people with limited affect to its validity and reliability, the results of the questionnaires we're quickly and easily quantified by either a researcher or through the use of a software package, analyzed more 'scientifically' and objectively than other forms of research, when data was identified, it was used to compare and contrast other research and was used to measure change. The method applied on students and teachers.

Data analysis

Data processing was done using descriptive words. A lot of care, skill and diligence was put into consideration to identify the relevant data. Data was edited to eliminate any incomplete questions and qualitatively analyzed using quick impression which was done by summarizing the key findings in form of tables, frequencies and percentages using SPSS (Nelson et al., 2022).

RESULTS

Table 1: Teacher's years of experience in the selected public and private secondary schools in Katabi town council

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		Frequency percent	Percent	Valid	Cumulative percent
Valid	Below 5 Years	124	32.0	32.0	32.0
	Between 5 – 10 Years	125	32.2	32.2	64.2
	Between 11 – 19 Years	96	24.7	24.7	88.9
	Above 30 Years	43	11.1	11.1	100.0
Total		388	100.0	100.0	

Source: Primary data, 2020

Table 1 shows that 124 teachers (32%) of the 388 sampled had below 5 years teaching experience. Another 125 teachers (32.2%) had between 5 – 10 years of teaching experience while 96(24.7%) had between 1 to 9 years teaching experience. The remaining 43 tears (11.1%) had above 20 years teaching experience. As such from the sample size of 388, total of 139 teachers (35.8%) had above 10 years teaching experience while a total of 249 teachers (64.2%) had below 10 years teaching experience. This implies that the sample size is dominated by teachers with less than 10 years teaching experience

Students' academic performance in the selected public and private secondary schools in Katabi Town Council

Students' academic performance was examined in this study in terms of performance level of students in the Uganda certificate of education in mathematics in determining the level of student's academic performance in the school's performance in the terminal examination was computed. Thus, the frequency counts of the number of students who obtained grades 1 – 6 (credit grades) in mathematics in the examinations were transformed from discrete data into continuous data through secondary analysis (Micheal et al., 2023)

This was used to determine the level of students' academic performance in the core subject in the UCE. The grades obtained by students in the UCE in mathematics were collected from the ministry of education and sport. Table one two shows the performance level of the students in the core subjects in the UCE (Racheal et al., 2023)

Table 2: Performance level of students in UCE in the 16 selected public secondary and private schools in Katabi town council

Year	Mathematics
2016	26.0%
2018	27
2019	30

Source: Ministry of Education and Sports, 2019

What is the relationship between teacher's years of experience and students' academic performance in the selected secondary school in Katabi Town Council?

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Table 3: Teacher's years of experience and students' academic performance in the selected secondary school in Katabi Town Council?

		Frequency percent	Percent	Valid	Cumulative percent
Valid	Strongly agree	270	69.6	69.6	69.9
	Agree	112	28.9	28.9	98.5
	Strongly disagree	4	1.0	1.0	99.5
	Disagree	2	0.5	0.5	100.0
Total		388	100.0	100.0	

Source: Primary Data, 2020

Table three above shows that 270 (69.9%) of with 388 sampled strongly agree, and 112 (28.9%) of agree that experienced teachers in the various subjects could bring about better performance among students in secondary schools. While (4%) of respondents strongly disagree, and 2*0.5 % of respondents disagree that experienced teachers in the various subjects could bring about better performance among student's sin UCE. As such the analysis shows that experienced teachers in the various subjects could bring a better students' academic performance in UCE (Zulaikah & Rebecca, 2023).

Hypothesis 1, there is no significant relationship between teachers' years of experience and students' academic performance in secondary schools in Katabi town council

Hypothesis 1**Table 4: Summary of regression analysis on relationship between teachers teaching experience and students' academic performance**

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.698 ^a	.461	.497	.56195
Predictors: (contact), experienced teacher in the various subjects could bring about better performance				

Source: Secondary Data, 2020**Table 5: ANOVA**

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	5.012	1	5.012	15.870	1000 ^a
	Residual	121.896	386	.316		
	Total	126.907	387			
Predictors: (Constant), experienced teacher in the various subjects could bring about better performance						

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Dependent variables: students' academic performance

Source: Secondary Data, 2020

Table 4 and table 5 above reveal that a significant relationship exists between teacher's years of experience and students' academic performance in mathematics UCE in Katabi town council ($F(1, 386) = 15.870$; $P < 0.05$). The finding confirms that teachers' years of experience influenced students' academic performance in mathematics UCE as perceived by the respondents. In essence, the predicted variable of teacher's years of experience accounts from 46.1% of the total variance in students' academic performance in mathematics UCE ($R^2 = 0.431$) (Nelson et al., 2023). This percentage is high and statistically significant. Teachers' year of experience are an important predictor of students' academic performance in mathematics in the sampled secondary schools in Katabi town council. Therefore, the null hypothesis is rejected.

Hypothesis 2

There is no significant difference in the students' academic performance in schools that have more teachers with above ten years of experience and schools that have more teachers with ten years and less than ten years of experience in Katabi town council secondary schools

Table 6

Subject	Schools having teachers with years of teaching experience	N	Mean	SD	df	Calculated t	Table – t
	10 years	139	0.43	0.41	386	5.52	1.96
	< 10 years	249	0.21	0.20	386		

$P < 0.05$

Table 7: t-test analysis of scores for year 2017

Subject	Schools having teachers with years of teaching experience	N	Mean	SD	df	Calculated t	Table – t
	10 years	139	0.43	0.41	386	6.14	1.96
	< 10 years	249	0.23	0.23	386		

$P < 0.05$

Testing this hypothesis, data on the UCE results sin mathematics for years 2017 – 2018 were used. The students were classified into two groups. Since it is norm in the school system that teachers who spent above ten years in teaching profession are classified as experienced teachers (Ministry of education, 2017), the firsts group consisted of

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schools having more teachers with above ten years teaching experience while the second group contained schools having more teachers with ten years and less than ten years teaching experience (Paul & Kazaara, 2023).

The results are indicated in table 6 and 7 in table. The calculated t-value was greater than the table t-value in the subject in each of the years. The probability “P” was less than 0.05 in all subjects. This indicates a significant difference in the achievement of students between schools having more teachers with above 10 years’ experience in the subject in each of the years. School having teachers with 10 years teaching experience achieved between results than school having teachers with 10 years and less than ten years teaching experience (Anthony et al., 2023). The mean score was higher in schools having more teachers with above ten years teaching experience than in school having more teachers with 10 years and less than years of teaching experience. Therefore, the null hypothesis is rejected.

Conclusion

In conclusion, academic performance in mathematics is highly affected by teachers teaching experience. According to the findings, teachers with high teaching experience have more impact on learners than teachers with low teaching experience. Therefore, in order to improve academic performance in mathematics, teachers are encouraged to always attend seminars and also should be for further studies (Godfrey et al., 2023).

Recommendation

To foster improved academic performance secondary school students, government should give priority to the employment of professional and qualified teachers and ensure that such teachers are retained to enable them acquire experience on the job. The perennial failure recorded in mathematics (UCE) should urgently be addressed through the organization of workshops and seminars for teachers especially towards pedagogical training

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