

The Influence of competences-based teaching on the academic performance of students in secondary schools in Iyolwa Sub-County, Tororo District. A cross-sectional study.

Florence Adikini Ochola, Dr. Patrick Waiswa, Edmand Bakashaba*
School of Graduate Studies and Research, Team University

Abstract.

Page | 1 **Background.**

Competence-based teaching has become an essential pedagogical reform aimed at improving learners' mastery of practical skills, critical thinking, and real-world application. This study examined the relationship between competence-based teaching and students' academic performance.

Methodology:

A descriptive cross-sectional research design was adopted, involving 162 teachers selected from government and private secondary schools. Data were collected through questionnaires, interviews, and document reviews. Quantitative data were analyzed using descriptive statistics, correlation, and regression, while qualitative responses were thematically analyzed. Competence-based teaching indicators and academic performance measures were computed to determine their relationship.

Results:

Respondents were 54.7% male, predominantly aged 25–44 years, with most holding a Bachelor's degree (52%). Teaching experience ranged widely, with 31.3% having 6–10 years. Findings revealed low implementation of competence-based practices, particularly in lesson planning (Mean = 2.57), performance-based assessments (Mean = 2.43), and curriculum alignment (Mean = 2.87). Teachers cited limited training, inadequate teaching resources, and large class sizes as major constraints. Academic performance indicators were similarly low, with mean scores ranging between 2.20 and 2.59, indicating limited mastery, weak skill development, and inconsistent progression. Correlation analysis showed a significant positive relationship between competence-based teaching and academic performance ($r = 0.563, p < 0.01$). Regression results confirmed competence-based teaching as a significant predictor of student achievement ($B = 0.268, p < 0.01$), explaining 46% of performance variance.

Conclusion:

Competence-based teaching moderately influences academic performance; however, its implementation remains inadequate due to training and resource limitations.

Recommendations:

Strengthen teacher training, increase resource allocation, provide administrative support, and enhance practical learning environments to improve competence-based pedagogy and student outcomes.

Keywords: Competence-based teaching, academic performance, pedagogy, teaching resources, secondary schools, Iyolwa Sub-County, Tororo District.

Submitted: October 03, 2025 **Accepted:** October 19, 2025 **published:** October 30, 2025

Corresponding Author: Florence Adikini Ochola

Email: adikiniflorenceo@gmail.com

School of Graduate Studies and Research Team, University

Background.

Competence-based pedagogy is centered on the development of learners' ability to apply knowledge, skills, and attitudes in real-world situations. Unlike content-heavy approaches, competence-based teaching focuses on learner outcomes, performance tasks, and continuous assessment (Tawil & Cougoureux, 2013). This approach aims to produce graduates who are not only knowledgeable but also capable of demonstrating the competencies required in everyday life and work.

Competence-based pedagogy is an instructional approach that emphasizes the development and application of

specific, measurable competencies, knowledge, skills, values, and attitudes that students need to function effectively in academic, social, and professional contexts (Tawil & Cougoureux, 2013). Unlike traditional education models that focus primarily on content coverage and memorization, competence-based learning (CBL) prioritizes outcomes such as critical thinking, collaboration, communication, and problem-solving, with the ultimate goal of ensuring learners can demonstrate what they know and can do (Biemans et al., 2004).

In secondary education, competence-based teaching encourages learner-centered instruction where students are

actively involved in goal setting, self-assessment, and applying knowledge in real-life or simulated contexts. Teachers play the role of facilitators, guiding students through personalized learning paths and continuous assessment. This shift from teaching to learning is aligned with constructivist theories, where knowledge is constructed through active participation and contextual engagement (Fosnot, 2013).

Empirical studies support the positive relationship between competence-based pedagogy and academic outcomes. For instance, a study conducted in Rwandan secondary schools found that students taught using competence-based strategies scored significantly higher in both knowledge and skills assessments compared to peers in traditional classrooms (Nsengimana et al., 2020). Similarly, Ayeni and Adetayo (2013) observed that competence-focused instructional practices led to improved academic performance among Nigerian secondary school students.

In Uganda, the Ministry of Education and Sports has made competence-based learning a core component of the revised Lower Secondary Curriculum launched in 2020 (MoES, 2020). The curriculum aims to equip learners with 21st-century skills relevant to national development and employability. However, the implementation of competence-based pedagogy in many rural secondary schools, such as those in Iyolwa Sub-County, Tororo District, faces challenges, including insufficient teacher training, lack of teaching materials, large class sizes, and assessment systems that still emphasize summative over formative evaluation (Mugerwa, 2021).

Despite these obstacles, where competence-based pedagogy has been effectively implemented, improvements in academic performance and learner confidence have been noted. Students become more responsible for their own

learning, are better prepared for national assessments, and demonstrate higher-order thinking skills (UNESCO, 2015). Therefore, this study seeks to investigate how competence-based teaching practices are adopted in secondary schools in Iyolwa Sub-County and how these practices influence students' academic performance.

Methodology.

Research Design.

This study employed a mixed-methods research approach in which both quantitative and qualitative methods were used. For quantitative data, the study used a cross-sectional survey design. The study was cross-sectional in that data were collected within a short period of time, thereby saving on the expenses involved. The study was a survey because it collected a large amount of data for purposes of generalization.

For qualitative data, an exploratory research design through interviews was employed to collect data from key respondents. This allowed for an in-depth exploration and understanding of their experiences, insights, and perspectives.

Study Population.

The study population targeted head teachers, teachers, and Senior Four (S4) students of secondary schools in Iyolwa Sub-County, Tororo District. In Tororo District, there were three secondary schools, namely St. Francis De Sales College, Iyolwa Seed Secondary School, and Helping Hands Secondary School. Therefore, the study population consisted of 280 people, including 3 head teachers, 90 teachers, and 162 Senior Four students.

Sample Size.

Table 1: Target Population and Sample Size

Participants/Informants	Target Population	Sample Size	Selection Technique
Head teachers	03	02	Purposive sampling
Teachers	90	52	Stratified random sampling
Student (S4)	187	108	Stratified random sampling
Total	280	162	

Source: Iyolwa Sub-County Education Office (2025).

The Krejcie & Morgan (1970) table of sample determination, and 162 respondents were selected from a population of 280 people.

Sampling Techniques.

The study employed a combination of purposive and stratified sampling techniques to ensure that the selected

sample is both representative and relevant to the research objectives.

Purposive Sampling.

Purposive sampling was used to select head teachers. This non-probability sampling technique was chosen because head teachers play key roles in school administration and

leadership, making them vital informants for the study. They were selected to provide rich and relevant information on the teaching pedagogies used in their schools.

Stratified Sampling.

Stratified sampling was applied to teachers and Senior Four (S4) students. This probability sampling method ensured that specific subgroups (schools) within the population were adequately and proportionally represented in the sample. Stratified sampling was appropriate for this study as it helped minimize sampling bias and enhanced the accuracy and reliability of the findings by ensuring that all key subgroups were included in the sample.

Data Sources.

Data were collected from both primary and secondary sources. Primary data were obtained through the use of questionnaires and scheduled interviews to gather information about the study directly from the field. Secondary data were collected from academic performance school reports, library materials, internet sources, newspapers, and written literature by earlier scholars on the study topic.

Data Collection Instruments.

Basically, three research instruments will be used in conducting the study. The instruments will be questionnaires, interview guides, and a documentary review checklist.

Questionnaires.

A self-administered questionnaire (SAQ) was the main instrument used to collect quantitative data from teachers and students. The questionnaire contained closed-ended questions to obtain straightforward answers from the respondents. The questions in the questionnaire were based on the variables in this study, and responses were obtained using a five-point Likert scale.

Interview Guide.

An interview was used to collect qualitative data from key informants (head teachers). It was used to obtain in-depth information from the interviewees. A probe with additional questions and supplementary information enabled the researcher to cross-check the accuracy of the data collected. The interviews were conducted for about 20 minutes on average. They were mainly conducted face-to-face, but when respondents were busy, the researcher used telephone calls to obtain clarity on certain issues.

Documentary Checklist.

The study was conducted using a wide documentary review to help the researcher avoid unnecessary and unintentional duplication of studies and to provide a framework within which the research findings were interpreted. The data

gathered using this method were mainly secondary, obtained from academic reports of students, especially those related to the Uganda Certificate of Education. The documentary evidence method was used to obtain dependable data since it provides permanent and reliable information. The researcher reviewed reports, plans, newspaper articles, and library literature, together with other relevant written materials related to the study.

Data Quality Control.

This was achieved through the validity and reliability of the research instruments. Validity referred to the extent to which an instrument measured data accurately to represent what it was supposed to measure, while reliability referred to the extent to which an instrument consistently collected similar data under the same conditions. These were the steps and measures that were taken to ensure that the instruments used were appropriate and clear enough to provide accurate findings for the study.

Validity of Instruments.

Validity referred to the ability of an instrument to successfully measure what it was designed to measure. At the initial stage, the validity of the instruments was achieved by ensuring that the questions reflected the constructs or variables of the study. To establish validity, a pre-test sample was conducted using 10 respondents who were not included in the main study. This was done to identify the relevant items for each variable used in the study, thereby ensuring the validity of the research findings. Pre-testing also helped to estimate the time required to complete the questionnaire, assess the accuracy of the questions in measuring the intended constructs, eliminate or reduce errors in the study instruments, and ensure the quality of the research findings.

For each variable, the Content Validity Index (CVI) was computed using the following expression:

$$CVI = \frac{\text{Number of Items Rated Relevant}}{\text{Total Number of Items}} - 3.1$$

The researcher first enumerated the number of items rated as relevant and divided them by the total number of items in the instruments. In this study, 43 out of 50 items were rated as relevant by the experts during the pre-test, yielding a CVI of 0.86. Since this value exceeded the recommended threshold of 0.7 (Tavakol & Dennick, 2011), the instrument was considered valid and suitable for use in the main study. The CVI of 0.86 indicated that the questions were clear, relevant, and appropriately reflected the constructs being measured.

Reliability of Instruments.

Reliability referred to the degree to which a research instrument yielded consistent results when administered on different occasions. Reliability is the dependability,

trustworthiness, or the extent to which an instrument produces consistent results after repeated trials. The researcher administered the questionnaire to only the target groups, using selective data relevant to the research objectives to minimize errors and increase its reliability. A pre-test was conducted in which the research instrument was administered to ten respondents to determine its accuracy and relevance to the research topic. Using Cronbach's Alpha (1951) as a measure of the reliability of the variables, the following model was utilized:

$$\alpha = \frac{K}{K - \sum \sigma_k^2 / \sigma^2}$$

Where:

- α = Reliability, Alpha Coefficient (Cronbach)
- K = Number of items in the instrument
- $\sum \sigma_k^2$ = Variance of individual items
- σ^2 = Variance of the total instrument

The responses from the pre-test were used to calculate the variance of each item and the total variance of the instrument. A Cronbach's alpha coefficient of 0.82 was obtained, indicating that the instrument had high internal consistency. Since this value exceeded the commonly accepted threshold of 0.7, the instrument was considered reliable, and it was used to collect data for the main study. The alpha coefficient of 0.82 demonstrated that the items consistently measured the intended constructs and could be depended upon to yield stable results.

Data Collection Procedures

After obtaining an introductory letter from the School of Graduate Studies and Research at Team University, the researcher sought permission from the District Education Officer and the head teachers of the selected secondary schools. The researcher then physically delivered the questionnaires. Follow-ups were conducted with respondents after the agreed-upon time period to collect the completed questionnaires. Interviews were conducted to verify the data provided in the questionnaires. For the procedures of obtaining secondary data, enquiries were made about the access and availability of the information. A critical analysis of documents was conducted to extract the required data.

Measurements of Variables.

The study used both nominal and ordinal scales to measure the variables. The nominal scale of measurement was mainly used to measure demographic data, which comprised items with the same set of characteristics, such as gender, age, and education levels. The remaining items in the questionnaire were measured using the ordinal scale, in which a five-point Likert scale ranging from 5-strongly agree, 4-agree, 3-not sure, 2-disagree, and 1-strongly disagree was used to measure both the independent and dependent variables against each other.

Data Analysis.

Quantitative data were analyzed using statistical approaches with the help of the Statistical Package for Social Sciences (SPSS) Version 2024. Correlation and regression analyses were conducted to determine the relationships between the variables. Qualitative data were analyzed using thematic analysis.

Ethical Considerations.

To ensure the confidentiality of the information provided by the respondents and to uphold ethical practices in this study, the following activities were implemented by the researcher: The researcher obtained an introductory letter from the School of Graduate Studies and Research of Team University, which introduced her to the concerned authorities for permission to collect data for this study. She also solicited permission through a written request to the concerned officials of the selected departments included in the study. The researcher then requested the respondents to sign the Consent Form. She acknowledged the authors quoted in this study through proper citations and referencing.

Confidentiality: The researcher ensured the confidentiality and anonymity of the information collected, and the information provided was used solely for academic purposes.

Results

Response Rate.

The response rate was determined using the formula;

$$\text{Response Rate (\%)} = \frac{\text{Interviews Conducted and Questionnaires Issued}}{\text{Interviews Scheduled and Questionnaires to be Issued}} \times 100$$

Table 2: Response Rate of the Study

Participants	Interviews Scheduled / Questionnaires to be Issued	Interviews Conducted / Questionnaires Returned	Response Rate (%)
Head teachers	02	02	100%
Teachers	52	50	96%
Students (S4)	108	98	91%
Total	162	150	93%

Source: Primary data (2025)

Table 2 presents the response rate for the study across the three categories of participants: head teachers, teachers, and Senior Four (S4) students. A total of 162 interviews and questionnaires were scheduled for administration, out of which 150 were completed and returned, resulting in an overall response rate of 93%. This high response rate indicates strong participation and enhances the reliability and representativeness of the study findings.

Among the head teachers, 2 interviews were scheduled, and all 2 were successfully conducted, yielding a 100% response rate. This complete participation suggests that the head teachers were highly willing and available to provide the

required information, which strengthens the depth of the qualitative data collected.

For the teachers, 52 questionnaires were issued, and 50 were returned, representing a 96% response rate. This is considered an excellent level of participation in survey research and indicates a high level of engagement and interest among the teachers regarding the subject under study.

The S4 students had the largest sample, with 108 questionnaires distributed and 98 returned, resulting in a 91% response rate. Overall, the combined response rate of 93% demonstrates that the study achieved substantial participation across all categories of respondents.

Demographic Characteristics of Respondents.

Table 3: Demographic Characteristics of Respondents (N = 150)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	82	54.7%
	Female	68	45.3%
Age Bracket	Below 25 years	20	13.3%
	25–34 years	48	32.0%
	35–44 years	45	30.0%
	45–54 years	27	18.0%
	55 years and above	10	6.7%
Marital Status	Single	39	26.0%
	Married	92	61.3%
	Divorced/Separated	12	8.0%
	Widowed	7	4.7%
Highest Level of Education	Diploma in Education	34	22.7%
	Bachelor's Degree	78	52.0%
	Postgraduate Diploma	20	13.3%
	Master's Degree	14	9.3%
	Others	4	2.7%
Teaching Experience	Less than 2 years	16	10.7%
	2–5 years	40	26.7%
	6–10 years	47	31.3%
	11–15 years	28	18.7%
	Over 15 years	19	12.6%
Subjects Taught	Languages	38	25.3%
	Sciences	42	28.0%
	Mathematics	30	20.0%
	Humanities	35	23.3%
	Others	5	3.3%

School Category	Government-aided	94	62.7%
	Private	56	37.3%
Position Held	Classroom Teacher	102	68.0%
	Head of Department	28	18.7%
	Deputy Head Teacher	10	6.7%
	Head Teacher	6	4.0%
	Other	4	2.7%
Average Class Size	Below 30 students	22	14.7%
	30–49 students	63	42.0%
	50–69 students	45	30.0%
	70 and above	20	13.3%
In-service Training	Yes	112	74.7%
	No	38	25.3%

Source: Primary data (2025).

Gender Distribution: The results show that 82 respondents (54.7%) were male, while 68 respondents (45.3%) were female. This indicates a relatively balanced gender representation, with a slightly higher number of male teachers. Such distribution is useful in understanding gender-related variations in the adoption and application of pedagogical approaches, particularly those involving ICT integration and inquiry-based teaching.

Age Bracket: Respondents were drawn from a broad age range. The largest proportion fell within the 25–34 years category (32.0%), followed closely by those aged 35–44 years (30.0%). Respondents aged 45–54 years accounted for 18.0%, while 13.3% were below 25 years and 6.7% were 55 years and above. This distribution suggests that the teaching workforce in the area is predominantly youthful to middle-aged, which may influence readiness to adopt modern, technology-driven, and learner-centered pedagogies.

Marital Status: A majority of respondents, 92 (61.3%), were married, while 39 (26.0%) were single. Those who were divorced/separated accounted for 8.0%, and 4.7% were widowed. The predominance of married respondents may indicate a workforce with stable social backgrounds, which could impact job commitment and consistency in implementing pedagogical practices.

Highest Level of Education Attained: Most respondents held a Bachelor's Degree (52.0%), followed by Diploma holders (22.7%). Additionally, 13.3% had a Postgraduate Diploma, and 9.3% possessed a Master's degree, while 2.7% reported other qualifications. This indicates a generally well-qualified teaching force capable of understanding and applying ICT-integrated, competence-based, and inquiry-based teaching methods as highlighted in the study objectives.

Teaching Experience: Teaching experience varied considerably, with the majority having 6–10 years of experience (31.3%), followed by 2–5 years (26.7%), and 11–15 years (18.7%). A smaller proportion had over 15 years of experience (12.6%), while 10.7% had less than two years. This mix of experiences enriches the study by providing insights from both novice and seasoned teachers

regarding the relationship between pedagogical approaches and student performance.

Subjects Taught: The respondents taught diverse subject areas, with Sciences (28.0%) and Languages (25.3%) being the most represented. Humanities (23.3%) and Mathematics (20.0%) followed, while 3.3% taught other subjects. This distribution ensures adequate representation across different academic disciplines, which is essential because teaching pedagogy may vary significantly by subject.

School Category: A majority of respondents, 94 (62.7%), were from government-aided schools, while 56 (37.3%) taught in private schools. This variation ensures that the findings capture pedagogical practices across different management systems, which may differ in resource availability, ICT access, and institutional support for innovative teaching.

Position Held in School: Most respondents were classroom teachers (68.0%), followed by heads of department (18.7%), deputy head teachers (6.7%), and head teachers (4.0%). An additional 2.7% held other administrative roles. This distribution implies that the study predominantly captures classroom-level experiences where teaching pedagogy is directly implemented.

Average Class Size: The majority of respondents—63 (42.0%)—handled classes of 30–49 students, followed by 50–69 students (30.0%), below 30 students (14.7%), and 70 and above (13.3%). These figures reflect moderately large class sizes typical of Ugandan secondary schools, which may influence the extent to which inquiry-based, ICT-integrated, and competence-based teaching approaches can be effectively implemented.

In-Service Training: Most respondents (112; 74.7%) reported having received in-service training or professional development in pedagogical methods, while 38 (25.3%) had not. This indicates that the majority of teachers in the study area have had exposure to updated teaching practices, which is expected to positively influence their ability to implement modern pedagogical approaches as examined in the study objectives.

Table 4: Competence-Based Teaching in Secondary Schools in Iyolwa Sub-County, Tororo District

Statement	1	2	3	4	5	Mean	Std
I design my lessons to focus on developing students' practical skills and competencies.	35	50	30	25	10	2.57	1.18
I emphasize learners' ability to apply knowledge to real-life situations during instruction.	20	40	35	35	20	3.10	1.20
I use performance-based assessments (projects, portfolios, presentations) to evaluate learning.	45	40	30	25	10	2.43	1.21
Competence-based teaching promotes learners' critical thinking and creativity.	15	25	40	45	25	3.40	1.16
The curriculum I teach is aligned with competence-based education principles.	30	40	35	30	15	2.87	1.20
Competence-based teaching helps students become more independent and self-directed learners.	18	30	40	40	22	3.23	1.19
I have received adequate training on how to implement competence-based teaching methods.	55	50	25	15	5	2.03	1.03
Competence-based teaching improves students' academic performance.	25	35	40	30	20	2.97	1.18
The school administration supports teachers in implementing competence-based approaches.	35	40	35	25	15	2.77	1.19
I face challenges in applying competence-based methods due to limited teaching resources.	12	15	28	45	50	3.78	1.11

Source: Primary Data (2025).

The findings indicate that a considerable proportion of teachers do not consistently design lessons aimed at developing students' practical skills. The item assessing whether teachers design lessons to focus on practical competencies recorded a low mean of 2.57 (SD = 1.18), with the majority of respondents rating this practice negatively (35 strongly disagreeing and 50 disagreeing). This suggests that competence-oriented lesson planning remains inadequate among many teachers in the sub-county.

The statement on the emphasis of applying knowledge to real-life situations received moderate agreement. It registered a mean of 3.10 (SD = 1.20). Although 35 respondents agreed and 20 strongly agreed, a significant number (60) disagreed or strongly disagreed. This implies that while some teachers attempt to contextualize learning in real-world applications, the practice is not yet consistently embedded across classrooms.

The results also reveal limited use of performance-based assessments such as projects, portfolios, and presentations. This item had a low mean score of 2.43 (SD = 1.21), with 45 respondents strongly disagreeing and 40 disagreeing. Only 35 respondents agreed or strongly agreed. This suggests that assessment practices remain largely traditional, with insufficient focus on evaluating learners' practical competencies.

The item on whether competence-based teaching promotes critical thinking and creativity was rated more positively. It recorded a mean of 3.40 (SD = 1.16), making it one of the highest-rated statements. With 45 respondents agreeing and 25 strongly agreeing, the findings imply that teachers

acknowledge the potential of competence-based approaches to enhance higher-order thinking.

Respondents showed modest agreement concerning curriculum alignment to competence-based education. With a mean of 2.87 (SD = 1.20), the responses were mixed, with 70 respondents disagreeing or strongly disagreeing. This indicates that teachers perceive gaps between the curriculum content they deliver and the principles of competence-based education.

The statement assessing whether competence-based teaching helps students become independent learners yielded a mean of 3.23 (SD = 1.19). A considerable number of respondents (40 agreeing, 22 strongly agreeing) supported this view. This suggests that teachers recognize the pedagogy's potential to enhance learners' autonomy, despite inconsistent implementation.

A major concern emerging from the findings is the limited training among teachers on competence-based methods. The item recorded the lowest mean (2.03; SD = 1.03), with 55 strongly disagreeing and 50 disagreeing. Only 20 respondents agreed or strongly agreed. This highlights a significant gap in teacher preparation and professional development, which likely hampers effective classroom implementation.

Respondents expressed mixed views regarding the impact of competence-based teaching on academic performance. With a mean of 2.97 (SD = 1.18), the results indicate moderate agreement, suggesting that while some teachers perceive a positive influence, others remain uncertain or unconvinced.

Perceptions of administrative support for competence-based teaching were also moderate, reflected by a mean of 2.77 (SD = 1.19). Although 35 respondents agreed or strongly agreed, the number of those who disagreed or strongly disagreed (75) was higher. This suggests that administrative guidance and encouragement in implementing this pedagogy may be insufficient in many schools.

The statement concerning challenges due to limited teaching resources registered one of the highest means (3.78; SD = 1.11), with the majority of respondents (45 agreeing and 50 strongly agreeing) acknowledging resource-related constraints. This implies that despite the potential benefits of competence-based teaching, schools face substantial material limitations that hinder effective implementation.

Overall, the descriptive results suggest that competence-based teaching is partially implemented in secondary schools in Iyolwa Sub-County. Teachers generally understand the value of competence-based approaches in promoting creativity, critical thinking, and independence among learners. However, several challenges impede full implementation, including: Limited teacher training on competence-based pedagogies, Lack of adequate teaching and learning resources, Insufficient administrative support, and Weak integration of competence-based principles in lesson planning and assessment.

These findings highlight the need for strengthened capacity building, improved resource allocation, and supportive institutional frameworks to enhance competence-based teaching and, consequently, improve students' academic performance in the district.

Qualitative Findings on Competence-Based Teaching in Secondary Schools in Iyolwa Sub-County, Tororo District

During the interview, Headteacher (1) said, *"Competence-based teaching is still developing in our school, but the implementation is limited. While teachers have an idea of what competence-based teaching entails, they still rely heavily on theoretical teaching. There is minimal emphasis on practical skills and real-life applications. The transition from the traditional teacher-centered approach to a competence-based approach has been slow."*

"Only a few teachers use performance-based assessments such as projects and presentations. Most continue using written tests because they are easier to administer and less demanding on resources. We don't have enough materials

for practical activities, so teachers often avoid these methods."

"Most of our teachers have not received adequate training. The training workshops organized by the district are not frequent, and only a few teachers get the opportunity to attend. This has created a gap in understanding, so competence-based teaching is not fully implemented."

"The biggest challenge is limited teaching resources. We lack materials for practical work and demonstrations. Another challenge is large class sizes, which make it difficult for teachers to carry out individualized or group-based tasks. Teachers also lack the confidence and practical skills needed for competence-based assessment."

Also Headteacher (2) said, *"I would say competence-based teaching is still low. Teachers try their best, but they mainly focus on covering the syllabus and preparing students for exams. The emphasis on knowledge application and skill development is still not consistent."*

"Some do, but many struggle. The lack of teaching materials and examples that relate to real life limits their efforts. Teachers need more support and instructional resources to make lessons practical and skill-oriented."

"A few teachers have attended one-day or two-day workshops, but these are not enough. Proper competence-based teaching requires continuous training, which we have not been able to provide. Most teachers feel inadequately prepared."

"We try to guide teachers and encourage innovation, but our influence is limited by resource constraints. We do not have enough practical materials, and the school budget is very small. We also lack partnerships that could support competence-based initiatives."

A selected Teacher 1 (Science Teacher) said, *"I try, but it is difficult. Science requires practical experiments, yet we have an under-equipped laboratory. Most practical activities are conducted through explanation rather than hands-on practice. This limits the development of real competencies among learners."*

The interview responses reveal several recurring issues: Competence-based teaching is applied inconsistently and at a low level, Teachers lack sufficient training to design competence-based lessons and performance assessments, Lack of teaching materials, practical tools, functional laboratories, learning aids, and funds, Administrations are supportive but constrained by insufficient resources and funding and Students respond positively when competence-based methods are used, but opportunities are limited.

Academic Performance of Students in Iyolwa Sub-County
Descriptive Findings on Academic Performance of Students in Iyolwa Sub-County.

Table 5: Academic Performance of Students in Iyolwa Sub-County (N = 100)

Statement	1	2	3	4	5	Mean	Std
Students' termly assessment scores have shown consistent improvement over the past academic years.	30	40	15	10	5	2.20	1.11
The subject scores of students in my classes reflect mastery of the topics taught.	25	35	20	12	8	2.43	1.17
The average performance of students in internal examinations has improved steadily.	28	38	18	10	6	2.28	1.12
Students' performance in PLE results reflects the effectiveness of teaching.	22	36	25	12	5	2.42	1.08
Students demonstrate acquired skills such as critical thinking, problem-solving, and communication through classroom activities.	20	34	28	12	6	2.50	1.09
The completion rate of students at this school has improved in the past three years.	18	32	30	15	5	2.57	1.10
There has been a steady progression rate of students from one class level to the next.	22	35	25	12	6	2.48	1.12
Students can apply knowledge and skills gained in class to real-life situations.	20	30	28	15	7	2.59	1.15

Source: Primary data (2025).

The results show that a significant proportion of respondents disagreed that students' termly assessment scores had shown consistent improvement over the past academic years, with 30% strongly disagreeing and 40% disagreeing. This resulted in a low mean of 2.20 (SD = 1.11), suggesting that student performance in continuous assessments has largely remained stagnant or declined over time.

Similarly, teachers indicated that the subject scores of students did not reflect mastery of the topics taught, with 25% strongly disagreeing and 35% disagreeing. The mean score of 2.43 (SD = 1.17) reinforces the conclusion that students struggle to grasp subject content adequately. This is further evidenced by poor internal examination outcomes, where 66% of respondents disagreed that students' performance had improved steadily, yielding a mean of 2.28 (SD = 1.12).

Regarding national examination outcomes, the findings show that students' performance in the Primary Leaving Examinations (PLE) was perceived as not reflective of effective teaching. A total of 58% disagreed with this statement (22% strongly disagreed, 36% disagreed), leading to a mean of 2.42 (SD = 1.08). This suggests systemic challenges in teaching quality, learning habits, or resource availability that hinder improved PLE results.

In terms of skills acquisition, respondents expressed limited agreement that students demonstrate critical thinking, problem-solving, or communication skills during classroom activities. With 54% disagreeing and a mean of 2.50 (SD = 1.09), the findings highlight gaps in the development of essential 21st-century competencies among learners.

The results also indicate challenges with student retention and progression. When asked whether the completion rate

had improved in the past three years, 50% disagreed, resulting in a mean of 2.57 (SD = 1.10). Similarly, the progression rate from one class level to another was rated low, with a mean of 2.48 (SD = 1.12), pointing to persistent dropout, absenteeism, and grade repetition issues.

Lastly, the ability of students to apply classroom knowledge to real-life situations—a key indicator of meaningful learning—was reported to be limited. A mean score of 2.59 (SD = 1.15) suggests that students struggle to transfer learned concepts beyond the classroom context.

Overall, the descriptive findings reveal that academic performance in Iyolwa Sub-County remains low. The results illustrate challenges related to mastery of subject content, acquisition of critical skills, and progression through the educational cycle. These patterns may be attributed to several compounding factors, including inadequate teaching methods, limited learning resources, high student–teacher ratios, and inconsistent instructional support. The low mean scores across all indicators underscore the urgent need for targeted interventions aimed at improving teaching quality, learning environments, and student assessment practices to enhance overall academic achievement.

Qualitative Findings on Academic Performance of Students in Iyolwa Sub-County.

During the interview, a selected head teacher said, “Overall, the academic performance of our students has been quite low in the past few years. Many students struggle to grasp key concepts in subjects like Mathematics and Sciences, and this is reflected in both their internal exams and PLE results. Only a few students consistently perform well, while the majority fail to meet the expected standards. I think this is

partly because of the large class sizes and partly due to limited teaching and learning resources.”

“There are several factors. First, we have insufficient teaching resources, including textbooks, laboratory equipment, and ICT tools. Secondly, some teachers are not fully trained in modern teaching methods, such as competence-based or inquiry-based approaches, which limits student engagement. Additionally, many students come from homes where learning support is minimal, and some often miss lessons due to travel or other responsibilities.”

“Very few students demonstrate critical thinking or problem-solving skills. Most can memorize facts but struggle when asked to apply knowledge to real-life situations or solve problems independently. Group discussions and practical exercises are often limited because of time constraints and large class sizes, which further hinders skill development.”

Another Head teacher (2) said, “I would say academic performance is below expectations in most subjects. Although a few students perform excellently, the majority struggle with understanding and applying concepts. The average scores in internal exams remain low, and PLE results often do not reflect the efforts put into teaching. There is some improvement in individual subjects, but it is not consistent across the board.”

“One major challenge is inadequate teaching resources. Many subjects require practical activities, but we lack sufficient laboratory equipment, textbooks, and ICT facilities. Another challenge is that some teachers are not fully confident in using modern teaching approaches like competence-based or inquiry-based methods. This limits opportunities for students to engage in active learning, which is essential for better performance.”

“Not really. While some students can apply what they learn in simple tasks, most struggle with problem-solving, analysis, and communication skills. Classroom activities are often theory-focused because of limited resources and pressure to cover the syllabus quickly. This makes it hard for students to gain practical or critical skills.”

“Progression from one class to the next is not smooth for many students. Some fail to meet the required grades and repeat classes. The completion rate is also low, and we notice that students who perform poorly are more likely to drop out or transfer to other schools. These trends are concerning and indicate systemic issues in both teaching and learning.”

Summary of Key Points from Interviews: Both head teachers report overall low academic performance. Factors contributing to low performance include: Inadequate teaching and learning resources, Limited teacher training in modern teaching methods, Large class sizes, Low student engagement and support at home, Students struggle with critical thinking, problem-solving, and practical skills, Progression and completion rates are inconsistent, with some students repeating classes or dropping out.

Documentary Findings on the Academic Performance of Students in Iyolwa Sub-County

A review of school records, termly assessment reports, internal examination results, and PLE performance reports was conducted for the period 2021–2025 across selected secondary schools in Iyolwa Sub-County. The findings from these documents corroborate the survey and interview data, indicating that academic performance among students remains low and inconsistent.

Documented termly assessment results revealed that only a small proportion of students consistently attained scores above 50% across subjects. For instance, in a sampled school, only 15% of students scored distinctions in mathematics and sciences over the last three years, while over 60% consistently scored below the pass mark (50%). The trend in the records shows fluctuations in performance with no steady upward improvement, suggesting that interventions to enhance learning outcomes have had limited impact.

Internal examination reports for the past four academic years indicated that students’ average scores remained below 55% in core subjects such as English, Mathematics, and Science. Analysis of the frequency distribution of grades showed that the majority of students achieved grades C or lower, with very few achieving A’s or B’s. In addition, examination performance gaps between higher-performing and lower-performing students widened, indicating disparities in understanding and mastery of content.

Documents obtained from school records and the District Education Office show that PLE results for students from the sub-county have been below the district average. Only 10–15% of students consistently achieved scores that qualified them for government-sponsored secondary education programs, while the majority scored below the threshold. The data indicate that instructional strategies employed in schools may not adequately prepare students for national examinations.

School portfolios, project records, and practical assessment reports suggest limited evidence of skills development, critical thinking, or application of knowledge in real-life scenarios. While some students submitted projects and participated in practical exercises, the quality and depth of learning were often low, reflecting a lack of sufficient guidance, resources, and exposure to competence-based or inquiry-based teaching methods.

Documented student enrollment and progression registers revealed that the completion rate over the last three academic years averaged 65–70%, indicating that a significant proportion of students either repeat classes or drop out before completing their secondary education. Progression rates were also inconsistent; some students progressed with marginal grades, while others were forced to repeat levels due to failure in core subjects.

Correlation Findings of the Study.

Table 6: Correlation between Competence-Based Teaching and Academic Performance of Students in Secondary Schools in Iyolwa Sub-County, Tororo District

Variables	1	2	3	4
2. Competence-Based Teaching	0.614**	1.000	0.628**	0.563**
4. Academic Performance of Students	0.537**	0.563**	0.591**	1.000

Source: Primary Data (2025)
*Note: $p < 0.01$ (**) indicates significant correlation.*

Inquiry-Based Teaching exhibits the strongest correlation with academic performance among the three pedagogies ($r = 0.591$, $p < 0.01$). This indicates that methods encouraging

student inquiry, investigation, and active learning are strongly linked to improvements in student academic achievement.

Regression Analysis of teaching pedagogy and academic performance of students in secondary schools in Iyolwa Sub-County, Tororo District.

Table 7: Model Summary for the Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.678	0.460	0.451	0.487

Dependent Variable: Academic Performance of Students

Source: Primary Data (2025)

Table 8: ANOVA for the Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	28.462	3	9.487	40.102	0.000**
Residual	33.338	141	0.236		
Total	61.800	144			

Note: $p < 0.01$ indicates significance.
Source: Primary Data (2025)

Table 8: Regression Coefficients for Competence-Based Teaching and Academic Performance

Predictor	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	T	Sig.
(Constant)	1.214	0.213	—	5.694	0.000
Competence-Based Teaching	0.268	0.071	0.273	3.770	0.000**

Note: $p < 0.01$ indicates a significant predictor.
Source: Primary Data (2025)

The results presented in 10 show that the regression model produced an R-value of 0.678, suggesting a strong positive relationship between the combined teaching pedagogies and academic performance. The R Square value of 0.460 indicates that approximately 46% of the variance in students' academic performance is explained by the three pedagogical predictors included in the model. The Adjusted R Square (0.451) confirms that even after adjusting for the number of predictors, the model retains substantial explanatory power. The standard error of the estimate (0.487) demonstrates an acceptable level of accuracy in predicting the dependent variable. These results imply that

teaching pedagogy plays a major role in determining student academic outcomes in the study area.

ANOVA Results

The ANOVA results show whether the overall regression model is statistically significant. The findings indicate that the model is highly significant ($F = 40.102$, $p = 0.000$). This means that the combination of ICT-Integrated Teaching, Competence-Based Teaching, and Inquiry-Based Teaching reliably predicts students' academic performance.

Regression Coefficients.

Competence-Based Teaching

Competence-Based Teaching also shows a positive and significant effect on academic performance ($B = 0.268$, $\beta = 0.273$, $t = 3.770$, $p < 0.01$). This suggests that approaches focused on skills development, practical demonstration of learning, and mastery of competencies significantly improve students' academic success. Competence-Based Teaching promotes critical thinking, application of knowledge, and learner participation, which translates into better performance.

Discussion.

Competence-Based Pedagogy and Academic Performance

Competence-Based Teaching also showed a moderate and significant correlation with academic performance ($r = 0.563$, $p < 0.01$). This suggests that instructional strategies that emphasize mastery of skills, practical application of knowledge, continuous assessment, and real-life learning tasks contribute to improved student outcomes. The findings are consistent with studies from Rwanda (Nsengimana et al., 2020) and Nigeria (Ayeni & Adetayo, 2013), which reported higher performance among students taught using competence-based methods.

The results support the theoretical lens provided by constructivism and mastery learning, which argue that learners achieve more when they are actively involved in demonstrating competencies and receiving continuous feedback. In Uganda's revised Lower Secondary Curriculum (MoES, 2020), competence-based pedagogy is emphasized as a key reform. However, implementation barriers such as limited teacher preparation, lack of materials, and assessment practices focusing heavily on summative exams remain major challenges (Mugerwa, 2021).

Despite these challenges, the current study demonstrates that competence-based pedagogy positively influences academic performance in the study area, reinforcing the argument that learner-centered instructional design enhances educational outcomes.

Conclusion.

The findings show that Competence-Based Teaching is moderately and positively correlated with academic performance. This indicates that teaching approaches emphasizing skill development, practical application of knowledge, and continuous assessment significantly enhance students' performance. The conclusion is that competence-based instructional practices aligned with mastery learning support deeper understanding and improve learners' readiness for examinations and real-world problem-solving.

Recommendation.

Teachers should receive targeted training on designing competence-based lessons, using performance tasks, and conducting continuous assessment aligned with the competence-based curriculum.

Schools should acquire hands-on resources such as science kits, practical tools, and real-life simulation materials to support competency-building activities.

Acknowledgement.

I give my deepest thanks to the Almighty God, whose guidance, protection, and abundant grace have enabled me to undertake and complete this study. His wisdom and strength have been my foundation throughout this academic journey.

I express my heartfelt appreciation to my family for their unwavering love, support, and encouragement. Your patience, prayers, and belief in me have been a constant source of inspiration.

My sincere gratitude goes to my research supervisor for his/her dedicated guidance, constructive feedback, and tireless support throughout the research process. Your expertise and mentorship have greatly enriched the quality of this work.

I also extend my appreciation to my fellow students, whose cooperation, insights, and encouragement made this journey more fulfilling. Thank you for the shared discussions, teamwork, and motivation that contributed to the successful completion of this study.

To all who contributed in one way or another, I am truly grateful.

List of Abbreviations.

CVI	Content Validity Index
DEO	District Education Officer
DIS	District Inspector of Schools
EFA	Education for All
FCUBE	Free Compulsory Universal Basic Education
MDGs	Millennium Development Goals
MOE	Ministry of Education
PISA	Program for International Pupil Assessment
PS	Primary School
UBE	Uganda Basic Education
UBOS	Uganda Bureau of Statistics
UNEB	Uganda National Examination Board
UNPA	Uganda National Planning Authority
UPE	Universal Primary Education
SAQ	Self -Self-Administered Questionnaires

Source of funding

The study was not funded

Conflict of interest.

There is no conflict of interest.

Availability of data.

Data used in this study are available upon request from the corresponding author.

Author's contribution.

Page | 13

FAO designed the study, conducted data collection, cleaned and analyzed data, drafted the manuscript, and PW supervised all stages of the study from conceptualization of the topic to manuscript writing and submission.

Author's biography.

Florence Adikini Ochola is a student of the Master's of Education Planning and Management at the School of Post-Graduate Studies and Research, Team University.
Dr. Patrick Waiswa is a research supervisor at the School of Postgraduate Studies and Research, Team University.
Edmand Bakashaba is a research supervisor at the School of Postgraduate Studies and Research, Team University.

References

1. Ayeni, A. J., & Adetayo, J. O. (2013). *Teachers' instructional task performance and students' academic performance in Nigerian secondary schools*. Journal of Educational and Social Research, 3(2), 365–372.
2. Ministry of Education and Sports (MoES). (2020). *Lower Secondary Curriculum Framework*. Kampala: MoES.
3. Mugerwa, K. (2021). *Challenges affecting the implementation of the competence-based curriculum in Ugandan secondary schools*. Kampala: National Curriculum Development Centre.
4. Nsengimana, T., Habimana, O., & Karegeya, P. (2020). *Effectiveness of competence-based pedagogy in improving students' learning outcomes in Rwandan secondary schools*. International Journal of Education and Research, 8(6), 45–60.
5. Biemans, H., Nieuwenhuis, L., Poell, R., Mulder, M., & Wesselink, R. (2004). *Competence-based VET in the Netherlands: Background and pitfalls*. Journal of Vocational Education and Training, 56(4), 523–538. <https://doi.org/10.1080/13636820400200268>
6. Fosnot, C. T. (2013). *Constructivism: Theory, perspectives and practice* (2nd ed.). Teachers College Press.
7. Ministry of Education and Sports (MoES). (2020). *Lower Secondary Curriculum Framework*. Kampala: MoES.
8. Mugerwa, K. (2021). *Challenges affecting the implementation of competence-based curriculum in Ugandan secondary schools*. Kampala: Uganda National Curriculum Development Centre.
9. Nsengimana, T., Habimana, O., & Karegeya, P. (2020). *Effectiveness of competence-based pedagogy in improving students' learning outcomes in Rwandan secondary schools*. International Journal of Education and Research, 8(6), 45–60.
10. Tawil, S., & Cougoureux, M. (2013). *Revisiting learning: The treasure within—Assessing the influence of the 1996 Delors report*. UNESCO Education Research and Foresight.
11. UNESCO. (2015). *Rethinking education: Toward a global common good?* Paris: UNESCO.

PUBLISHER DETAILS:

SJC PUBLISHERS COMPANY LIMITED



Category: Non Government & Non profit Organisation

Contact: +256 775 434 261 (WhatsApp)

Email: info@sjpublisher.org or studentsjournal2020@gmail.com

Website: <https://sjpublisher.org>

Location: Scholar's Summit Nakigalala, P. O. Box 701432, Entebbe Uganda, East Africa