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RELATIONSHIP BETWEEN ACCOMMODATING LEARNING STYLE AND ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS IN KAMWENGE DISTRICT, UGANDA. A CROSS-SECTIONAL STUDY.

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Abstract

Background

Academic achievement was seen as a symbol of social status and provided avenues for further education. The aim of the study is to assess the relationship between accommodating learning style and academic achievement of secondary school students in Kamwenge District, Uganda.

Methodology

This study employed a descriptive, correlational and crosses- sectional survey design. The quantitative technique provided detailed numerical analysis of the research problem and investigated the relationship between the research variables. Respondents comprised of 265 students (s4), 58 teachers, 04 head teachers and 05 Education administrators within Kamwenge District.

Results

55.3% of the respondents were male while 44.7% were female. The correlation between accommodating learning styles and academic achievements among secondary students in Kamwenge District was 0.634 indicating a moderately strong positive correlation between accommodating learning styles and academic achievements among secondary students in Kamwenge District. The p-value (Significance) being less than 0.05 indicates that this correlation is statistically significant, suggesting that it is unlikely to have occurred by chance. The coefficient for accommodating learning style (B1) is 2.329, indicating that for each unit increase in accommodating learning style, there is an associated increase of 2.329 units in academic achievements. The R Square value of 0.34 suggests that approximately 34% of the variance in academic achievements can be explained by accommodating learning style in this model.

Conclusions

Accommodating and kinesthetic learning styles demonstrate stronger positive correlations with academic achievements compared to audio learning style.

Recommendations

Secondary schools and Ministry of Education should develop individualized learning plans for students based on their identified learning styles.

Keywords: *Accommodating learning style, Academic achievement, Secondary school students in Kamwenge District.*
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Background

During the colonial era, education in Uganda was primarily focused on providing basic literacy skills to meet the demands of the colonial administration (Mahuro & Hungi, 2016). Secondary education was limited and mainly reserved for the elite or those who could afford it. Academic achievement was seen as a symbol of social status and provided avenues for further education or employment opportunities (Wamala & Seruwagi, 2013). After Uganda gained independence in 1962, there was a push towards improving the accessibility and quality of education (Akellot & Bangirana, 2019). The government implemented policies to increase enrollment rates in secondary schools and provide scholarships for talented students. This resulted in a greater emphasis on academic achievement as a measure of success and a pathway to social mobility (Ludigo, Mugimu, & Mugagga, 2019).

The Ministry of Education and Sports has taken steps to reform the curriculum and examination system to be more competency-based and promote critical thinking skills hence new learning styles (Nabizadeh, Hajian, Sheikhan, & Rafiei, 2019). This shift is aimed at moving away from rote memorization and encouraging students to apply their knowledge in practical situations (Wafula et al., 2023). Efforts have been made to improve teacher training and professional development programs. The government has invested in the recruitment and training of more teachers, as well as providing incentives to retain qualified educators. The hope is that better-trained teachers will be able to provide higher-quality education and improve academic

achievements (Ndidi & Effiong, 2020). The aim of the study is to assess the relationship between accommodating learning style and academic achievement of secondary school students in Kamwenge District, Uganda.

Methodology

Research design

This study employed a descriptive, correlational and crosses- sectional survey design. The quantitative technique provided detailed numerical analysis of the research problem and investigated the relationship between the research variables.

Study population

The target population of the study was 332 participants. These comprised of 265 students (s4), 58 teachers, 04 head teachers and 05 Education administrators within Kamwenge District (DEO, DIS).

Geographical scope

The study was conducted in Kamwenge district. Kamwenge District is bordered by Kyenjojo District to the north, Kyegegwa District and Kiruhura District to the northeast, Ibanda District to the east and southeast, Kitagwenda District to the south, Kasese District to the west Bunyangabu District and Kabarole District to the northwest. The study specifically collected data from St Peter Claver SS, Kaberebere, Rwamwanja SS, Bwizi seed school and Kabambioro SS. These schools have were selected due to low grades in Uganda Certificate of Education.

Sample Size

A sample size of 178 was selected from the population of 332 participants using Kreijcie & Morgan (1970) table of determining sample size as shown in Table 1

Table 1: Sample size, Sampling techniques & target population

Participants	Population Target	Sample Size	Selection Technique
District Education Administrators	05	05	Purposive sampling
Head teachers	04	04	Purposive sampling
Teachers	58	48	Simple random sampling
Students(s4)	265	121	Simple random sampling
Total	332	178	

Source: Kamwenge District Education Department (2022)

Sampling Techniques Procedure

The study used a purposive sampling technique and a simple random sampling technique to arrive at the sample size. Simple random sampling was used to select teachers and four senior students who participated in this study. The method was used to eliminate bias.

Purposive Sampling was used to select head teachers and District Education Administrators as key respondents which will help in identifying teachers and students to participate in the study and ensure that only the useful (teachers and students) are selected and it also saves time.

Data Sources

Data was selected from both primary and secondary sources. Primary data was obtained using questionnaires and scheduled interviews to look for information about the study directly from the researcher's field.

Secondary data was collected from academic reports of the selected secondary schools, library, internet research, newspapers, and written literature by earlier scholars on the study topic.

Data Collection Instruments

Three research instruments were used in conducting the study. The instruments were questionnaires, an interview guide, and a documentary review checklist.

The questionnaire was the main instrument and the interview guide was used to gain an in-depth understanding of the subject and the interface with the respondents. Documentary review checklists were intended to obtain a framework for the interpretation of the findings to arrive at realistic conclusions and recommendations.

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Questionnaires

Questionnaires were sent to respondents to obtain primary data. This made it more convenient and easier to collect data from respondents with busy schedules ie teachers and students as they answered the questions at leisure while consulting documents, the instrument also ensured a high response rate and elicited the required information on a wide range of issues on the study topic. Closed-ended questions using Likert scales were used to enhance the simplicity of straightforward questions. Open-ended questions on the other hand were intended to permit a greater depth of response on specialized issues of the interview.

Interview guides

An interview method was used to secure in-depth of information from the interviewees by the researcher. A probe with additional questions and gathering supplemental information enabled the researcher to cross-check the accuracy of the data collected as recommended by Sekaran (2004). The interviews were conducted for about 10 minutes on average among the head teachers and administrators within the district. They were mainly conducted using face-to-face techniques but when respondents were busy; the researcher used telephone calls to obtain clarity on certain issues.

Documentary checklist

The study was conducted on a wide documentary review to help the researcher avoid unnecessary and unintentional duplication of studies and provide a framework within which the research findings were interpreted as stated by (Mugenda and Mugenda, 2003). Data gathered using this method was secondary data from a critical examination of public and private recorded information related to the issue under investigation. The documentary evidence method was used to get dependable data as it was permanent and reliable information. The researcher reviewed reports, plans, newspaper articles, and literature from the library together with other relevant written material on the study.

Data quality control

These were the steps and measures taken to ensure that the instruments used were good and clear enough to give the right findings of the study. To control the quality of the data, the researcher carried out validity and reliability tests of the instrument as reflected below.

Validity of instruments

According to Amin (2005), the validity of an instrument is when it measures what it is supposed to [ME1] measure; that the data is collected honestly and accurately represents the respondents' opinions. The internal validity of the instrument was measured based Content Validity Index and a score above 0.70 was accepted. The validity of the questionnaire was determined by pre-testing the questions on a group of ten respondents who had expertise in the field of research but were out of the intended sample. They were required to fill out the questionnaires and comment on the clarity of the questions.

Structured interviews were used to overcome biases and the researcher pledged confidentiality of the information given by respondents. Content Validity was calculated using the formula below:

Content Validity Index= (Jachi & Mandongwe) $\frac{\text{Number of relevant questions}}{\text{Total number of items}}$

Reliability of instruments

Reliability is the measure of the degree to which a research instrument yields consistent results if administered on different occasions. According to Amin (2005), reliability is dependability, trustworthiness, or the degree to which an instrument yields consistent results after repeated trials. The researcher administered the questionnaire to only target groups and was used for selective data which will only be relevant to the research objectives to minimize the errors and increase its reliability. A pretest was done whereby the research instruments used were tested with ten respondents to find out their accuracy and relevance to the research topic.

Using Cronbach's Alpha (1951), as a measure of the reliability of the variables the following model

will be utilized; $\propto = K1 - \Sigma\sigma 2k$

$$K-1 \quad \sigma 2$$

Where;

α = Reliability, Alpha Coefficient (Cronbach)

K = Number of items in the instrument

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$\Sigma\sigma 2k$ = Variance of individual items

$\sigma 2$ = Variance of the total instrument

Data collection procedures

After obtaining an introductory letter, permission was sought from the relevant parties within the Kamwenge Education sector before starting to collect data collection. The researcher physically delivered questionnaires at respective secondary schools. Follow-ups on the respondents were made and the questionnaires were.

Interviews were conducted to verify the data provided in the questionnaires. For procedures of obtaining secondary data, inquiries were made about access and availability of the information. A critical analysis of documents was made to squeeze out 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 rest of the items in the questionnaire were measured using the ordinal scale in which the five-point Likert scale ranging from 5-strongly agree, 4-agree, 3-no sure, 2-disagree, and 1-strongly disagree were used to measure both the independent and dependent variables against each other.

Data Analysis

Data collected from the field was edited, coded, and later analyzed using the Statistical Package for Social Scientists (SPSS) version 17 computer program. Quantitative data was analyzed using tables, correlation analysis to show the relationships, and regression analysis to show the influence of learning styles on the academic achievements of secondary school students.

Pearson's correlation coefficients (r) and level of significance (p) were used to test the hypotheses at 95 confidence levels in the correlation analysis. This involved running a correlation analysis allowing it to find any significant relationship at 2-tailed. The adjusted R2, t-value beta, and significance values were used to measure the influence of the independent variables on the dependent variable in the regression analysis.

Ethical considerations

An introductory letter from the School of Graduate Studies and Research of Team University that intended to introduce the researcher to the concerned authorities in the district was sought

Permission was solicited through a written request to the concerned officials in the selected secondary schools and Kamwenge District Education Department.

Respondents were requested to sign the *Consent Form* if they were to participate in the study

Previous authors whose work was quoted in this study through citations and referencing were acknowledged

Confidentiality and anonymity of the information collected was held and the information given was used for academic purposes.

Results

Response rate

The researcher issued 169 questionnaires and requested interviews from 9 participants for this study.

Table 2, out of the 5 administrators who were requested for interviews, 4 responded, yielding an 80% response rate. This indicates a relatively good level of engagement from this group.

All 4 head teachers who were issued questionnaires and requested interviews responded, resulting in a 100% response rate. This suggests a high level of cooperation and willingness to participate from this group.

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Table 2: Response rate of the study

Participants	Issued questionnaires and requested interviews	Received questionnaires and conducted interviews	Response rate
District Education Administrators	05	4	80%
Head teachers	04	4	100%
Teachers	48	45	93.8%
Students(s4)	139	117	84.2%
Total	178	**170**	**95.5%**

Source: *Primary data (2024)*

Out of the 48 teachers who were issued questionnaires and requested interviews, 45 responded, yielding a response rate of 93.8%. This indicates a good overall response rate from the teachers, reflecting their engagement with the study.

Among the 139 students issued questionnaires and requested interviews, 117 responded, resulting in a response rate of 84.2%. While this is the lowest response rate among the participant groups, it still represents a substantial number of student responses.

The total response rate for the study was calculated to be 95.5%, which indicates that the majority of the participants engaged with the study by completing the questionnaires and interviews.

In conclusion, the findings of the study on learning styles and academic achievements of secondary students in Kamwenge District suggest a high level of participation and engagement from the various participant groups, with particularly strong responses from head teachers and teachers. The response rates indicate a generally positive attitude towards the research topic and a willingness to contribute to the study's objectives. This level of participation will likely lead to a more comprehensive and reliable analysis of learning styles and academic achievements among secondary students in the district

Table 3 Demographic characteristics of the respondents

Category of respondent	Frequency	Percentage
Gender		
Male	94	55.3%
Female	76	44.7%
Total	**170**	**100%**
Age Group		
15– 24 years (students)	117	68.8%
25-35 years (teachers & Administrators)	35	20.6%
36-50 years (head teachers and senior teachers)	16	9.4%
51 & above years (head teacher, District Education officer)	2	1.2%
Total	**170**	**100%**
Education level		
Secondary	117	68.8%
Diploma	28	16.8%
Degree	22	12.9%
Masters	3	1.8%

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Total	**170**	**100%**
Preferred learning styles (students only)		
Accommodating learning style	38	32.5%
Audio learning style	25	21.4%
Kinesthetic learning style	54	46.1%
Total	117	100%

Source: Field data, 2024

Demographic characteristics of respondents

Table 3, on the demographic characteristics of the respondents on gender distribution, the following were observed.

The study surveyed a total of 170 respondents, with 55.3% being male and 44.7% female. This indicates a relatively balanced gender distribution among the participants.

Findings on age showed that majority of respondents fall within the 15-24 years age group, comprising 68.8% of the total. This suggests that the study primarily focused on students in the secondary education level. Teachers and administrators in the 25-35 years age group made up 20.6% of the respondents, while head teachers and senior teachers in the 36-50 years age group account for 9.4%. Those aged 51 and above represent a small percentage of 1.2%.

Further, findings on the education level showed that majority of the respondents, comprising 68.8%, are currently on secondary education. This indicates that the study primarily focused on students in the secondary school level within Kamwenge District. A notable proportion of the respondents, accounting for 16.8%, have obtained a diploma qualification. This suggests that there is a significant representation of individuals with a diploma background within the study cohort.

Approximately 12.9% of the respondents hold a bachelor's degree. This indicates that there is a subset of participants who have completed undergraduate studies and could potentially include educators, administrators, or individuals with higher educational qualifications. A small percentage, specifically 1.8% of the respondents, has attained a master's degree. This suggests that there are a few individuals with postgraduate qualifications within the sample population.

Overall, the study findings reveal a mix of respondents with varying levels of education, with a significant focus on secondary education students. Understanding the educational backgrounds of the participants is essential for interpreting the study results and implications for educational practices and interventions in Kamwenge District. Further analysis could explore how the education level of respondents may influence their preferred learning styles and academic achievements, providing deeper insights into the educational landscape of the district.

Findings on preferred learning styles were conducted on students only and findings indicated that kinesthetic learning style was the most preferred (46.1%), followed by accommodating learning style (32.5%) and audio learning style (21.4%). This implies that a significant portion of students in Kamwenge District prefer a hands-on, tactile approach to learning, indicating a potential need for educators to incorporate more interactive and practical teaching methods.

In conclusion, the study focused on understanding the learning styles and preferences of secondary students in Kamwenge District. The findings suggest a diverse range of preferred learning styles among students, with a notable emphasis on kinesthetic learning. Educators and policymakers in the district could utilize this information to tailor teaching strategies and curriculum design to better accommodate the learning preferences of students, potentially leading to improved academic achievements.

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Table 4: Accommodating learning style and academic achievements of secondary students in Kamwenge District

Statement	Mean	Std. Deviation
We learn through hands-on activities and experiments	4.2	0.2
We learn with visual aids (colorful and well-organized materials)	2.4	0.3
Our teachers create a flexible learning environment in the classroom	4.6	0.3
Teachers allow group discussions for extensive learning	4.6	0.2
Teachers provide personalized instructions	2.1	0.3
We apply theoretical knowledge to real world problems	3.8	0.6
The learning styles boosts students confidence in answering questions	2.8	0.4
Teachers integrate various techniques while teaching	2.7	0.5
Students pay attention to teachers during lessons	3.6	0.6
Students participate actively during lessons	4.0	0.3
Students comprehensively understand the material	2.6	0.6
Students develop transferable skills during lessons	2.1	0.5

Accommodating learning style and academic achievements of secondary students in Kamwenge District.

Table 4, on the statement "We learn through hands-on activities and experiments" had a mean of 4.2 and standard deviation of 0.2. This statement indicates that students strongly agree (4.2 on a 5-point scale) that they learn effectively through hands-on activities and experiments. The low standard deviation suggests that there is relatively little variability in responses, indicating a consistent agreement among students. Hands-on activities and experiments are highly valued and effective learning methods among students in Kamwenge District.

The statement "We learn with visual aids (colorful and well-organized materials)" had a mean score of 2.4 and standard Deviation of 0.3. Students tend to disagree (2.4) with the use of visual aids. The standard deviation suggests some variability in responses, indicating that opinions are more mixed compared to hands-on activities. Visual aids are rarely utilized by teachers in secondary schools.

The statement "Our teachers create a flexible learning environment in the classroom" had a mean score of 4.6 and standard deviation of 0.3. Therefore, students agree (4.6) that their teachers create a flexible learning environment. The low standard deviation indicates a high level of agreement among students. Flexibility in the learning environment is highly valued and consistently provided by teachers in Kamwenge District.

The statement "Teachers allow group discussions for extensive learning" had a mean score of 4.6 with standard deviation of 0.2. This shows that students agree (4.6) that group discussions are allowed for extensive learning. The low standard deviation suggests a high level of consensus among students. Group discussions are widely accepted and seen as beneficial for learning by students in the district.

The statement "Teachers provide personalized instructions" had a mean score of 2.1 with standard deviation of 0.3. Therefore, students tend to disagree (2.1) with the statement that teachers provide personalized instructions. The standard deviation suggests some variability in responses, but overall,

there is a leaning towards disagreement. Personalized instructions are not perceived as commonly provided by teachers in Kamwenge District, which may be an area for improvement.

The statement "We apply theoretical knowledge to real-world problems" had a mean score of 3.8 and standard deviation of 0.6. Students tend to agree (3.8) that they apply theoretical knowledge to real-world problems. However, the higher standard deviation indicates more variability in responses compared to other statements. While there is general agreement, there may be some variation in the extent to which theoretical knowledge is applied to real-world problems among students.

The statement "The learning styles boost students' confidence in answering questions" had a mean score 2.8 with standard deviation of 0.4. Students tend to disagree (2.8) that learning styles boost their confidence in answering questions. The standard deviation suggests some variability in responses, but overall, there is a leaning towards disagreement. The current learning styles may not effectively boost students' confidence in answering questions in Kamwenge District.

The statement "Teachers integrate various techniques while teaching" had a mean score of 2.7 and standard deviation of 0.5. Students tend to disagree (2.7) that teachers integrate various techniques while teaching. The higher standard deviation indicates more variability in responses. There is a perception among students that teachers may not effectively integrate various teaching techniques in the classroom.

The statement "Students pay attention to teachers during lessons" had mean score of 3.6 and standard deviation of 0.6. Students tend to agree (3.6) that they pay attention to teachers during lessons. However, the higher standard deviation suggests some variability in the extent to which students pay attention. While there is a general agreement, attention levels during lessons may vary among students in the district.

The statement "Students participate actively during lessons" had mean score of 4.0 and standard deviation of 0.3. Students strongly agree (4.0) that they participate actively during lessons. The low standard deviation suggests a high level of consensus among students. Active participation during lessons is widely practiced and accepted among students in Kamwenge District.

The statement "Students comprehensively understand the material" had a mean score of 2.6 and standard deviation of deviation of 0.6. Students tend to disagree (2.6) that they comprehensively understand the material. The higher standard deviation indicates more variability in responses. There may be some challenges in students comprehensively understanding the material, with opinions varying among students.

The statement "Students develop transferable skills during lessons" had a mean score of 2.1 and deviation of 0.5. Students tend to disagree (2.1) that they develop transferable skills during lessons. The standard deviation suggests some variability in responses. There is a perception among students that the current lessons may not effectively facilitate the development of transferable skills.

In summary, the findings suggest that while certain aspects of accommodating learning styles, such as hands-on activities, flexible learning environments, and group discussions, are highly valued and practiced among students in Kamwenge . District, there are areas for improvement, such as providing personalized instructions, integrating various teaching techniques, boosting students' confidence, and facilitating comprehensive understanding of the material and development of transferable skills. These findings can inform efforts to enhance teaching practices and promote better academic achievements among secondary students in the district.

Table 5: Correlation between accommodating learning styles and academic achievements of secondary students in Kamwenge District

		Accommodating learning styles
Students' academic achievements	Pearson Correlation Sig. (2-tailed)	.634 .000
	N	117

Table 5, the correlation between accommodating learning styles and academic achievements among secondary students in Kamwenge District was 0.634. This indicated a moderately strong positive correlation between

accommodating learning styles and academic achievements among secondary students in Kamwenge District. This means that students who exhibit accommodating learning styles tend to have higher academic achievements. The p-value (Significance) being less than 0.05 indicates that this correlation is statistically significant, suggesting that it is unlikely to have occurred by chance.

Table 6: Regression between learning styles and academic achievements of secondary students in Kamwenge District

Model	R	R Square	Adjusted R Square		
Accommodating learning	.728[a]	0.34	0.38		
Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta		
(Constant)	3.132	.039		3.234	.000
Accommodating learning	2.329	.000	.016	3.516	.002
a. Dependent Variable: Academic achievements of students					

Table 6, The coefficient for accommodating learning style (B1) is 2.329, indicating that for each unit increase in accommodating learning style, there is an associated increase of 2.329 units in academic achievements. The R Square value of 0.34 suggests that approximately 34% of the variance in academic achievements can be explained by accommodating learning styles in this model.

Accommodating learning style also shows a significant positive impact on academic achievements, although to a lesser extent compared to kinesthetic learning style. Audio learning style has the weakest association with academic achievements, as indicated by its lower R Square value and coefficient compared to the other two styles.

Discussion

Accommodating learning style and academic achievements of secondary students in Kamwenge District.

According to the finding; the statement "We learn through hands-on activities and experiments" had a mean of 4.2 and a standard deviation of 0.2. This statement indicates that students strongly agree (4.2 on a 5-point scale) that they learn effectively through hands-on activities and experiments. The low standard deviation suggests that there is relatively little variability in responses, indicating a consistent agreement among students. Hands-on activities and experiments are highly valued and effective learning methods among students in Kamwenge District.

The statement "We learn with visual aids (colorful and well-organized materials)" had a mean score of 2.4 and a standard deviation of 0.3. Students tend to disagree (2.4) with the use of visual aids. The standard deviation suggests some variability in responses, indicating that opinions are more mixed compared to hands-on activities. Visual aids are rarely utilized by teachers in secondary schools.

The statement "Our teachers create a flexible learning environment in the classroom" had a mean score of 4.6 and a standard deviation of 0.3. Therefore, students agree (4.6) that their teachers create a flexible learning environment. The low standard deviation indicates a high level of agreement among students. Flexibility in the learning environment is highly valued and consistently provided by teachers in Kamwenge District.

The statement "Teachers allow group discussions for extensive learning" had a mean score of 4.6 with a standard deviation of 0.2. This shows that students agree (4.6) that group discussions are allowed for extensive learning. The low standard deviation suggests a high level of consensus among students. Group discussions are widely accepted and seen as beneficial for learning by students in the district.

The statement "Teachers provide personalized instructions" had a mean score of 2.1 with a standard deviation of 0.3. Therefore, students tend to disagree (2.1) with the statement that teachers provide personalized instructions. The standard deviation suggests some variability in responses, but overall, there is a leaning towards disagreement. Personalized instructions are not perceived as commonly provided by

teachers in Kamwenge District, which may be an area for improvement.

The statement "We apply theoretical knowledge to real-world problems" had a mean score of 3.8 and a standard deviation of 0.6. Students tend to agree (3.8) that they apply theoretical knowledge to real-world problems. However, the higher standard deviation indicates more variability in responses compared to other statements. While there is general agreement, there may be some variation in the extent to which theoretical knowledge is applied to real-world problems among students.

The statement "The learning styles boost students' confidence in answering questions" had a mean score of 2.8 with a standard deviation of 0.4. Students tend to disagree (2.8) that learning styles boost their confidence in answering questions. The standard deviation suggests some variability in responses, but overall, there is a leaning towards disagreement. The current learning styles may not effectively boost students' confidence in answering questions in Kamwenge District.

The statement "Teachers integrate various techniques while teaching" had a mean score of 2.7 and a standard deviation of 0.5. Students tend to disagree (2.7) that teachers integrate various techniques while teaching. The higher standard deviation indicates more variability in responses. There is a perception among students that teachers may not effectively integrate various teaching techniques in the classroom.

The statement "Students pay attention to teachers during lessons" had a mean score of 3.6 and a standard deviation of 0.6. Students tend to agree (3.6) that they pay attention to teachers during lessons. However, the higher standard deviation suggests some variability in the extent to which students pay attention. While there is a general agreement, attention levels during lessons may vary among students in the district.

The statement "Students participate actively during lessons" had a mean score of 4.0 and a standard deviation of 0.3. Students strongly agree (4.0) that they participate actively during lessons. The low standard deviation suggests a high level of consensus among students. Active participation during lessons is widely practiced and accepted among students in Kamwenge District.

The statement "Students comprehensively understand the material" had a mean score of 2.6 and a standard deviation of deviation of 0.6. Students tend to disagree (2.6) that they comprehensively understand the material. The higher standard deviation indicates more variability in responses. There may be some challenges in students comprehensively understanding the material, with opinions varying among students.

The statement "Students develop transferable skills during lessons" had a mean score of 2.1 and a deviation of 0.5. Students tend to disagree (2.1) that they develop transferable skills during lessons. The standard deviation suggests some variability in responses. There is a perception among students that the current lessons may not effectively facilitate the development of transferable skills.

The correlation between accommodating learning styles and academic achievements among secondary students in Kamwenge District was 0.634. This indicated a moderately strong positive correlation between accommodating learning styles and academic achievements among secondary students in Kamwenge District. This means that students who exhibit accommodating learning styles tend to have higher academic achievements. The p-value (Significance) being less than 0.05 indicates that this correlation is statistically significant, suggesting that it is unlikely to have occurred by chance.

The coefficient for accommodating learning style (B1) is 2.329, indicating that for each unit increase in accommodating learning style, there is an associated increase of 2.329 units in academic achievements. The R Square value of 0.34 suggests that approximately 34% of the variance in academic achievements can be explained by accommodating learning styles in this model.

The findings underscore the importance of recognizing and accommodating diverse learning styles in educational settings. Teachers and educators should consider individual students' preferences and adapt instructional methods accordingly to optimize learning outcomes.

In summary, the findings suggest that while certain aspects of accommodating learning styles, such as hands-on activities, flexible learning environments, and group discussions, are highly valued and practiced among students in Kamwenge District, there are areas for improvement, such as providing personalized instructions, integrating various teaching techniques, boosting students' confidence, and facilitating comprehensive understanding of the material and development of transferable skills. These findings can inform efforts to enhance teaching practices and promote better academic achievements among secondary students in the district.

Conclusions

Accommodating and kinesthetic learning styles demonstrate stronger positive correlations with academic achievements compared to the audio learning style.

Recommendations

Secondary schools and the Ministry of Education should develop individualized learning plans for students based on their identified learning styles. This could involve assessments or surveys at the beginning of the academic year to determine each student's preferred learning style, allowing teachers to tailor their instruction

Flexible assessment methods that accommodate different learning styles should be adopted instead of relying solely on traditional written exams, and incorporate a variety of assessment techniques such as oral presentations, project-based assessments, and hands-on demonstrations to allow students to demonstrate their understanding in ways that align with their preferred learning styles.

The effectiveness of instructional strategies based on learning styles in improving academic achievements should be continuously monitored and evaluated to Gather feedback from both students and teachers to assess the impact of these approaches and make necessary adjustments as needed.

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List of abbreviations

USE: Universal Secondary Education

STEM: Science, Technology, Engineering, and Mathematics

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Conflict of interest

The author did not declare any conflict of interest

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Emmanuel Agaba is a student of a Master of Education Planning and management at Team University

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