

Active teaching & learning practices and students' academic performance in secondary schools in Arua District

DOI: 10.46932/sfjdv3n4-062

Received in: April 14th, 2022

Accepted in: June 30th, 2022

Acidri Emmanuel Bileti

Master of Arts in Education Management

Institution: Uganda Christian University - Arua Campus

Address: Uganda Christian University, Arua Campus, P O Box 356 Arua, Uganda

E-mail: emmabileti@rocketmail.com

ABSTRACT

The purpose of this paper was to evaluate the degree to which Active Teaching and Learning (ATL) practices influence students' academic performance in secondary schools in Arua district. The specific objectives of the study were to (1) analyse the levels at which ATL methods, techniques and instructional materials are used in secondary schools in Arua district (2) examine the level of students' academic performance in secondary schools in Arua district (3) evaluate the influence of ATL on students' academic performance in secondary schools in Arua district. The paper hypothesized that there was no significant influence of ATL practices on students' academic performance in secondary schools in Arua district. A sample of 120 was drawn comprising of head teachers, deputy head teachers, directors of study, subject teachers and students from four Enabel partner secondary schools in Arua district. A mixed method research design was used. Data was collected through use of questionnaire survey, observation guide and focus group discussions. The study revealed that the level to which ATL methods were used at Secondary schools in Arua district was moderate at mean of 3.10 (62%), ATL techniques was very high at Mean 4.39 (88%) and ATL Instructional resources was high at Mean 3.84 (77%). Level of students' performance was high at mean 3.72 (75%). The influence of ATL practices on students' academic performance was positive with r – value .634 and Coefficient of Determination (r^2) at .401 meaning that ATL practices had influenced students' academic performance by 40.1% by the study period leaving 59.9% influenced by other factors. The null hypothesis which stated that there was no significant influence of ATL practices on students' academic performance in secondary schools in Arua district was rejected because the P-value of 0.000 was found to be less than the significance level of 0.01. Teachers and other stakeholders should always be innovative in the use of ATL methods, instructional resources and techniques to enhance students' academic performance.

Keywords: Active teaching and learning, students' academic performance, Secondary schools.

1 INTRODUCTION

The use of active teaching and learning (ATL) practices to improve students' academic performance is a new concept in many parts of the world though its origin can be traced way back to 18th century in European and American schools. Students' academic performance in secondary schools is at the centre of all learning interventions and becomes pathetic when inappropriate teaching methods, techniques and instructional resources are used especially in secondary schools. In sub-Saharan Africa critical thinking through ATL was not encouraged in colonial schools, the graduates of these institutions

were keenly aware of the injustices inflicted upon their schooling system and the content of it. By the early 1980s, many countries in Africa adopted structural adjustment reforms aimed at restructuring their curriculum and schooling, this resulted in an increased emphasis on quality education and efficiency manifested in revised curricula and methods of teaching. The Dakar Framework specifically advocated for use of “active learning techniques” and “a relevant curriculum that builds upon the knowledge and experience of the teachers and learners” (UNESCO, 2000). The high degree of inspiration by international development organizations meant that global educational trends toward the adoption of ATL had been noted and adopted by many African policymakers and planners. Some of the most common features of ATL that one finds in current policy include, attention to the child as an active learner; learning through problem posing and inquiry; locally-relevant curricula, at least in Secondary schools; diversified and formative assessments; and teacher reflection to improve practice (UNICEF, 2016). Despite these examples of curricular and organizational change, it appears that to date policy has changed more than practice when it comes to teachers actually utilizing ATL practices especially in most parts of Africa; lecturing and drilling being common teaching methods in schools hence grossly affecting students’ academic performance at secondary schools in Uganda.

The study focused on two key concepts, namely: Active teaching and learning (ATL) and students’ academic performance. According to BTC (2014) ATL is a practice that places the student at the center of the teaching and learning process. It focuses on students’ needs, abilities, backgrounds, and interests with the teacher serving primarily as a guide and facilitator for learning. The approach marks a significant shift from teacher-centered pedagogy, where students take a more passive role as teachers transmit knowledge that students learn primarily through rote memorization. According to Freeman, (2014) ATL is a practice in which teacher involves students in the learning process more directly than in other methods. Specifically ATL dimensions studied were methods, techniques and instructional materials. The second concept was students’ academic performance. According to the Macmillan English Dictionary of Advanced learners, students’ academic performance refers to the process of students using knowledge as distinguished from merely possessing it. According to Bonwell and Eison (1991) students can improve their academic performance by adopting a positive mental attitude, improving their note-taking and essay-writing skills. In this study, the concept students’ academic performance was looked at as a process that describes how well a student performs by means of having impressive test scores in literacy, numeracy, extracurricular accomplishments and leadership roles.

This paper was directed by the constructivism theory of learning initiated by Jean Piaget, John Dewy, Bruner, and Vygotsky in 19th century. The theory is based on the belief that learning occurs as learners are actively involved in the process. Learners are the makers of meaning and knowledge. The theory postulates that, knowledge is not external to the knower and awaiting discovery by him or her;

rather, knowledge “is created through a process of new information interacting with the prior knowledge and experiences of learners (Vavrus, Bartlett, & Salema, 2013). This philosophy of knowledge suggests that teachers should create the conditions for students to discover and actively construct knowledge and to develop the higher-order thinking skills of analysis and synthesis through inquiry-oriented lessons in the classroom. Lessons should encourage students to draw upon, connect, and analyze their prior knowledge and experiences through self-discovery and interaction with other students and with the teacher (Frances, Mathew, & Bartlett, 2011).

Contextually, this study was situated in Arua district which is located in north western Uganda at the vanguard of two countries namely, South Sudan and Democratic Republic of Congo. The district has 52 secondary schools and most of them have received complaints in the recent past from stakeholders such as Ministry of Education and Sports, Members of Parliament, Board of Governors, Parents, journalists, teachers and students over the deteriorating quality of education (Yikii, 2018). Anguparu (2018) observed declining levels of students’ academic performance in U.C.E and U.A.C.E, low levels of critical thinking, writing and numeracy skills. Teaching and learning in the district had for long been characterized by rote methods and techniques which were teacher centred. In 2014, ATL was introduced by MoES and TIET at National Teachers’ Colleges and later to several secondary schools to change learning approach. The investigator agreed with Ozitiru (2018) who reasoned that if the use of rote methods are not overturned through promoting the use of newly introduced ATL methods, techniques and tools at secondary schools in Arua district, then the efforts by all stakeholders to improve students’ academic performance would remain in jeopardy; thus, the need for this investigation.

1.1 PROBLEM STATEMENT

Enhancing students’ academic performance through appropriate teaching practices in secondary schools is at the centre of all learning interventions globally. However, efforts to enhance students’ academic performance has been pathetic in many secondary schools in Arua district. There are several recorded cases of declining levels of student’s examination grades, mental abilities, curiosity, and problem solving skills (Aseru, 2016). Nearly, 85% of schools in Arua district recorded decline in students’ academic performance over the last five years, mostly attributed to inappropriate choice of teaching aids and methods by teachers (Anguparu, 2014). While there have been several research conducted on students’ academic performance in Uganda (Kadondi, 2014; Ariko, 2010; Kisembo, 2013) there is still scanty information on how ATL Methods influence students’ academic performance in secondary schools in Arua district. Some studies have tried to relate teaching techniques to students’ academic performance (Drani, 2018; Ejiku, 2018; Munduru, 2015) however, none of them clearly explained the degree to which different ATL techniques influence students’ academic performance in Arua district. In order to improve

students' academic performance we need to use appropriate instructional resources and tools. Few investigations like that of (Drani, 2017) tried to find out the levels to which instructional resources influence pupils' academic performance in primary schools in Arua municipality. This findings however, fall short of establishing the degree of to which ATL practices influence students' academic performance in secondary schools in Arua district. The persistent degeneration in students' academic performance in secondary schools in Arua district if not addressed from holistic manner being proposed in this study, will result into a broader spheres of pathetic students' academic performance as it will spill to all education subdivisions in the country.

1.2 STUDY OBJECTIVES

This study objectives of the study were to (1) analyse the levels at which ATL methods, techniques and instructional materials are used in secondary schools in Arua district (2) examine the level of students' academic performance in secondary schools in Arua district (3) evaluate the influence of ATL on students' academic performance in secondary schools in Arua district.

1.3 RESEARCH QUESTIONS

1. What is the level to which ATL methods, techniques and instructional resources are used in secondary schools in Arua district?
2. What is the level of students' academic performance in secondary schools in Arua district?
3. What is the influence of ATL practices on students' academic performance in secondary schools in Arua district?

1.4 HYPOTHESIS

There is no significant influence of ATL practices on students' academic performance in secondary schools in Arua district.

2 LITERATURE REVIEW

2.1 ATL PRACTICES

2.1.1 ATL Methods

Drani (2018) established that decline in students' academic performance was due to teachers' reluctance to use ATL methods in several secondary schools. According to Anguparu (2018) ATL methods such as problem based learning requires the teacher a lot of time to plan and prepare. If not well planned, the methods can mislead the learners and divert the teaching and learning process from the learning objectives hence resulting into low student performance. Fontana (1995) established that low

levels in use of ATL methods like problem based learning, learning stations and Project based learning were major contributions in the low levels of academic performance of students in secondary schools. According to BTC (2014) key ATL methods recommended for secondary schools are as follows; Learning *station* also called “corners” or “activity centres” are specific areas in a classroom where learners rotate from station to station to complete an educational task using different approaches. A debriefing session follows after to discuss what was learned at the different learning stations. During this session, learners can also answer questions and explore next steps. A classroom learning station is a designated place in a classroom where learners complete an educational task. This could be at a computer, where learners are asked to investigate a topic (e.g. through an online search assignment). This could be a table where historical objects are on display for examination. This could be a boom box where learners listen to music from a particular time period. Learning stations are purposefully designed to include the most effective strategies for increasing learning opportunities for all learners, encourage active participation, collaboration, and opportunities for extended reading, writing and speaking. *Learning contract* is an agreement, written collaboratively between a learner and a teacher that details what is to be learned, how it will be learnt, and how that learning will be verified. It sometimes involves the learner’s parents. Learning contracts allow learners to decide what they wish to strive for, which activities they will engage in, and how they will demonstrate that they have satisfactorily completed their studies. They also permit the teacher to take advantage of the motivation within individual learners. The use of learning contracts allows the learner to structure his or her learning and to be an active participant in the process of education. A learning contract provides a useful mechanism for reassuring both parties about whether a planned piece of work will meet the requirements of a course or module. *Problem-based learning* is a method that challenges learners to learn by solving problems presented in the form of case studies and simulations. This method enables learners to be self-directed and to acquire lifelong learning skills. It produces critical thinkers and problem solvers as learners integrate knowledge and skills from a number of disciplines. It motivates learners to find and use appropriate learning resources. *Project based learning* was looked at as a method that refers to learners designing, planning, and carrying out an extended project that produces a publicly exhibited output such as a product, publication, presentation or service. Project-based learning involves publicly exhibited final product. Well-designed projects ask learners to tackle problems and issues important to people beyond the classroom (Walker & Leary, 2009).

2.1.2 ATL Techniques

Leo (2010) established that low levels of teaching techniques among teachers grossly affect students’ academic performance at all levels. According to Barge (2010) academic performance of students is dependent on many factors including the choice of teaching techniques. According to BTC, (2014)

students' academic performance is affected mainly by techniques used by teachers. Key ATL techniques that could improve academic performance in schools are as follows; *Story telling* entails learners hearing stories, putting themselves in place of the characters and tell and re-tell stories. Stories are helpful in providing a clear understanding of abstract ideas such as honour, wisdom and courage. *Simulation* is the creation of a realistic environment using a real-life situations or occupational experiences. It is the presentation of a problem, event, situation or object as it appears in real life. Simulation can take many forms including role-play, models and games. It involves learners acting out a situation as it happens in reality. The learners will be able to express their feelings, perceptions, actions and experiences in the learning process. *Demonstration* is a specific type of presentation and a technique of teaching by example rather than simply explaining, it is a visual practical presentation of a concept, process or skill showing how something works or is performed. The learners perform a demonstration to ascertain learning. *Group work* is a technique in which all participants are collectively involved in a shared process of constructing knowledge and applying skills. It is a collaborative and participatory learner-centred approach. It stimulates in-depth learners' knowledge and skills such as teamwork, critical thinking, interpersonal communication and peer teaching. Typically, a group consists of around 5-10 learners, though in large classrooms, group work can be organized for as many as 15-20 learners. Whether you use a small or large group in a teaching/ learning situation depends on the nature of the assignment, the size of the class and available space. Group work motivates learners to think creatively and teaches them how to discuss and reach consensus. *Brainstorming* is a technique to generate ideas and thoughts. It does not have the purpose to find a solution for a specific problem, but to gather a list of spontaneous ideas from learners. Different brainstorming techniques can be applied to facilitate the process of gathering and organizing ideas. For all these techniques, learners are given a specific task on a given topic and to share their ideas at various levels. Every learner should feel free to say whatever comes to mind, any ideas or comments, no matter how unsophisticated or inappropriate without being criticized. *Presentation* is a technique in which content is delivered through oral, visual and audiovisual channels that allow teacher-learner interaction. Presentations can be done by teachers or learners to support delivery of a specific message, actively involving learners in knowledge construction.

2.1.3 ATL Instructional Resources

UNESCO (2011) report revealed that teachers under utilize instructional materials which impact on learners performane negatively in schools. Teachers are hesistant in engaging learners in the usage of variosus instructional resources in many secondary schools in Arua district henceforth reducing students academic performance (Anguparu, 2014). According to BTC (2014) instructional resources that can improve students academic performance are as follows; *Charts* which are graphical representations of

data, in form of symbols, such as bars in a bar chart, lines in a line chart, or slices in a pie chart. Charts are often used to ease understanding and relationships between parts of the data. They are used in a wide variety of fields, and can be created by hand (often on graph paper) or by computer using a charting application. Four of the most common charts are histograms, pie charts, bar charts and line charts. *Maps* are symbolic depiction highlighting relationships between elements of some space, such as objects, regions, and themes. Many maps are static two-dimensional, geometrically accurate (or approximately accurate) representations of three-dimensional space. Although most commonly used to depict geographical information, maps may represent any space, real or imagined, without regard to context or scale; e.g. brain mapping and extraterrestrial mapping. *Diagrams* are two-dimensional geometric (can be three-dimensional also) symbolic representations of information according to some visualization technique. A popular diagram is the Venn diagram that shows all possible logical relations between a finite collections of sets and illustrates simple set relationships. Also a Mind Map is a widely used diagram. A mind map is a diagram used to visually organize information. A mind map is often created around a single concept, drawn as an image in the center of a blank landscape page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those. *Flashcards* are sets of cards bearing information, like words or numbers, on either or both sides, used in classroom drills or in private study. One writes a question on a card and an answer overleaf. Flashcards can bear vocabulary, historical dates, formulas or any subject matter that can be learned via a question and answer format. *Quiz* is a form of mind game in which the learners (as individuals or in teams) attempt to answer questions correctly. Quizzes are usually scored in points and many quizzes are designed to determine a winner from a group of participants. In an educational context, a quiz is usually a form of a student assessment, but often has fewer questions of lesser difficulty and requires less time for completion than a test. Quizzes are widely used as a learning drill to aid memorization by way of spaced repetition, enable knowledge retention and support active participation of learners by question and answer, these kind of practice and drill exercises can complement deep learning and understanding. In summary, the researcher identified gaps in the usage of ATL Methods, techniques and instructional resources in enhancing students' academic performance at secondary schools in Arua district requiring further investigation; hence the need for this investigation.

2.2 STUDENTS ACADEMIC PERFORMANCE

Investigation of academic performance of students has been a topic of growing interest in higher educational circle. Hanson (2000) reported that Student performance in literacy, numeracy and critical thinking is affected by different factors such as learning abilities, gender and race. Although performance on standardized tests receives the greatest attention in discussions of students' academic performance,

teachers' evaluations of performance as indicated in course grades represent a common metric of student performance that often is more directly tied to the day-to-day business of teaching and learning than are annual standardized test scores. Grades serve a number of important functions. They communicate to students and parents' information about students' mastery of course content. In secondary school, a passing grade also is the criterion for a course's contributing to accumulated credit for graduation (Polloway et al., 1994). However, as a measure of academic performance, teacher-given grades have well-known limitations. Grades are composite measures that account not only for students' content mastery but often for other factors, such as their class participation, attitudes, progress over time, and attendance. Both general and special educators are known to consider these various factors when grading, but to emphasize different factors. For example, special education teachers are less likely than general educators to consider literacy and numeracy levels, homework or attendance to be important in grading student performance, but are more likely to consider in-class participation to be important (Blackorby, Wagner, Levine, Cameto, & Guzman, 2003). Moreover, substantial variations in grading practices occur across teachers, schools, and school districts. Despite these complicating factors, student grades still are an important indicator within the academic performance outcome domain for students.

3 METHODOLOGY AND PROCEDURE

This paper adopted a concurrent mixed method research design; this is where only one data collection phase was used during which quantitative and qualitative data collection and analysis are conducted separately yet concurrently to help provide well validated and verified findings (Oso & Onen, 2009). Quantitative research approach was mainly used where a detailed investigation into characteristics of individuals as expressed at a particular point in time was carried; numerical data was collected on beliefs, attitudes, opinions, practices and perceptions related to ATL practices and students' academic performance in secondary schools in Arua district. Qualitative research approach was adopted. This involved studying commonality of a lived experience within a particular group and its fundamental goal is to arrive at a description of the nature of the particular phenomenon typically through interviews (Cresswell, 2013). This design helped the researcher gain first-hand knowledge about what participants experienced through broad and open-ended inquiry, in-depth understanding of ATL practices and students' academic performance in secondary schools in Arua district. Transcendental phenomenological design is flexible and allows more freedom during the interview to explore essences of others' experiences (Mariwilda, 2015). The researcher is cautious of the weaknesses of this design which includes difficulty in ensuring pure bracketing leading to interference in the interpretation of the data; it does not produce generalizable data. On a practical note, it is important to consider the possible difficulties of participants expressing themselves. The subjectivity of the data leads to difficulties in establishing reliability and

validity of approaches and information. It is difficult to detect or to prevent researcher induced bias (Lichtman, 2006). According to Abuga (2014) the use of mixed research method design is recommended since it significantly helps to provide comprehensive and detailed explanation of the phenomena under study.

3.1 TARGET POPULATION, POPULATION SIZE, SAMPLE SIZE AND SAMPLING TECHNIQUES

The target population for this study comprised of head teachers, deputy head teachers, directors of study, teachers from Enabel partner secondary schools (Muni Girls, Okufura and Arua secondary) in addition to Arua Public, Mvara secondary, Modern Secondary school Ocoko, Vurra Secondary, Oluko Secondary and Ushindi secondary schools. The sample size was 122 respondents determined using Morgan's table 99% confidence level and 0.5% margin of error.

Table 1: Showing target population, population size, sample size and sampling techniques

Target Population (Category)	Population size	Sample size	Sampling technique
Head teachers	08	08	Purposive
Deputy head teachers	08	08	Purposive
Directors of Study	08	08	Purposive
Teachers	102	83	Simple random
Student leaders	16	15	Simple random
Total	150	122	

Source: Developed for the study by the researcher with information from Krejcie & Morgan (1970)

3.2 DATA COLLECTION INSTRUMENTS

Self-administered questionnaire was used as the main instrument designed in the 5 point Likert scale as reflected in table 2 below. The use of questionnaire enabled a lot of data collected over a short period of time and was relatively cost effective.

Table 2: Showing the mean ranges of Likert Scale

Description	Mean Range	Scale
Very high	4.20 - 5.00	5
High	3.40 - 4.19	4
Moderate	2.60 - 3.39	3
Low	1.80 - 2.59	2
Very low	1.00 - 1.79	1

Source: Adopted from Renis Likert (1932)

Focus Group Discussion Guide was used to gather information from student leaders and teachers from the target population. This instrument involved randomly and carefully selected participants who freely shared their experiences and practices on ATL Practices and students' academic performance in secondary schools in Arua. The researcher guided the discussion by constructing controlling questions and documented information from the groups.

3.3 VALIDITY AND RELIABILITY TESTS OF THE DATA COLLECTION INSTRUMENT

Validity of the instrument was established. Validity refers to the appropriateness, meaningfulness and usefulness of any inferences, and it is the extent to which conclusion or measurement is well founded and corresponds accurately to the real world (Nsubuga & Katamba, 2013). Validity is important because it helps to determine what type of tests to use, and help to make sure researchers are using methods that are not only ethical and cost effective but also methods that truly measure the idea in question. Three professional raters were used to determine the Content Validity Index of the questionnaire. Where the first rater considered 17 statements on the questionnaire to be valid out of 20 statements giving a CVI of $(17/20) = 0.85$. The second rater considered 18 statements valid out of 20 statements giving a CVI of $(18/20) = 0.90$. The third rater considered 18 statements valid out of 20 giving a CVI of $(18/20) = 0.90$. The validity of the questionnaire for this study was then determined by adding up the individual CVI from the raters, divided by the number of raters, $(0.85+0.90+0.90)/3 = 0.88$ (see table 3). This made the instruments to be considered valid as recommended by Amin (as cited by Amviko, 2017).

Reliability of the instruments was determined. Nsubuga & Katamba (2013) defines reliability as the consistency of scores or answers provided by an instrument. To establish the reliability of the instruments for this study, pre-testing was done from 4 secondary schools at Maracha district and participants were selected using purposive and simple random sampling techniques and questionnaires were administered to them. Following this, Alpha coefficient (Cronbach's Alpha) method was used to analyze and determine the reliability of the items on the questionnaire. The reliability of coefficient for the questionnaire scored 0.910 which made the questionnaire to be considered reliable because it was above the recommended minimum score of 0.7 (Cronbach, 1984).

4 FINDINGS AND DISCUSSION

4.1 BACKGROUND INFORMATION ON RESPONDENTS

Respondents background information was captured as shown as presented here in Table 5.

Table 3: Background information on respondents

Items	Description	Frequency	Percentages
Gender	Male	86	72
	Female	34	28
	Total	120	100
Highest education level	Others	35	29
	Bachelor's degree	51	43
	Post Graduate	34	28
	Total	120	100
Age bracket	18 – 35 years	68	57
	36 – 53 years	35	29
	Above 53 years	17	14
	Total	120	100

Source: Primary data (2018)

In Table 3 above, majority 86 (72 %) of the respondents were males as compared to females who were 28 (28%) of the 120 respondents in the study. This means that most of the information provided in this study had more of male opinions. It also revealed that the males were more committed towards the study as compared to females. 34 (28 %) of the respondents had Post Graduate Diploma, those who had Bachelor's degree were 51 (43%) and 35 (29%) of the respondents had other qualifications. The result revealed that majority of the respondents were respondents who were highly educated and this made them to give relevant information concerning the study. Majority 68 (57%) respondents were in the age bracket of 18 – 35 years. 35 (29%) of the respondents were in the age bracket of 36 -53 years and 17 (14%) of the respondents were in the age bracket of 53 years above. This means that the researcher dealt with mature respondents hence an opportunity to get reliable opinions on the study.

Research Question 1: What is the level to which ATL practices used in secondary schools in Arua district?

4.1.1 ATL Methods

Table 4: showing the degree to which ATL Methods are used to enhance students' academic performance in secondary schools in Arua district

Items	Mean	Std. Deviation	Interpretation
Learning stations	3.71	.95	High
Contract based learning	3.71	.48	High
Problem based learning	3.00	.81	Moderate
Project based learning	2.00	1.29	Low
Grand Mean and Standard Deviation	3.10	0.87	Moderate

N= 120, Source: Primary data (2018)

Legend 9:1.00 – 1.79 = Very Low, 1.80 – 2.59 = Low, 2.60 – 3.39 = Moderate, 3.40 – 4.19 = High and 4.20 – 5.00 = Very High

In respect to the table 4 above, the general level to which ATL methods were used in secondary schools in Arua district was depicted to be moderate with Mean 3.10 (62%) at 0.87 standard deviation. In detail, the level at which learning station was used to enhance students' academic performance in secondary schools in Arua district was high with Mean 3.71(74%) at .95 standard deviation alongside contract based learning with Mean 3.71(74%) at .48 standard deviation, Problem based learning was moderate with Mean 3.00 (60%) at .81 standard deviation; Project based learning was low with Mean 2.00 (40%) at 1.29 standard deviation. During interviews and Focus Group Discussion several respondents expressed that the use of ATL Methods in secondary schools in Arua had been moderate.

This study result meant that teachers and other shareholders need to work extra hard and strengthen the use of ATL Methods especially project based learning in secondary schools in Arua district.

4.1.2 ATL Techniques

Table 5: Showing the degree to which ATL Techniques are used to enhance students' academic performance in secondary schools in Arua district

Items	Mean	Std. Deviation	Interpretation
Story telling	4.43	.78	Very High
Simulation and role play/dramatization	4.56	.53	Very High
Think pair and share	4.58	.53	Very High
Exhibition	4.43	.53	Very High
Demonstration	4.86	.37	Very High
Group work	4.14	1.21	High
Brainstorming	4.00	.57	High
Presentation and discussion	4.14	.69	High
Grand Mean and Standard Deviation	4.39	0.65	Very High

N= 120, Source: Primary data (2018)

Legend 9: 1.00 – 1.79 = Very Low, 1.80 – 2.59 = Low, 2.60 – 3.39 = Moderate, 3.40 – 4.19 = High and 4.20 – 5.00 = Very High

In respect to the table 5 above, the general degree to which ATL techniques were used in secondary schools in Arua district was shown to be very high with Mean 4.39 (88%) at 0.65 standard deviation. Specifically, the use of storytelling in secondary schools in Arua district was very highly with Mean 4.43 (89%) at .78 standard deviation alongside simulation, role play/dramatization with Mean 4.56 (91%) at .53 standard deviation, think pair and share at Mean 4.58 (92%) at .53 standard deviation, exhibition with Mean 4.43(89%) at .53 standard deviation and demonstration at Mean 4.86 (97%) at .37 standard deviation. It was further revealed that the use of group work in secondary schools in Arua district was high with Mean 4.14 (83 %) at 1.21 standard deviation together with brainstorming with Mean 4.00 (80 %) at .57 standard deviation, presentations and discussion at Mean 4.14 (83 %) at .69 standard deviation. During interviews and Focus Group Discussion several respondents expressed that use of ATL techniques in secondary schools in Arua had been very high.

This study result meant that the level to which ATL techniques were used to enhance students' academic performance in secondary schools in Arua district was overwhelming over the last five years. Therefore, teachers are encouraged to maintain the usage of the ATL techniques in a bid to improve students' academic performance further.

4.1.3 ATL Instructional resources

Table 6: showing the degree to which ATL Instructional Materials are used to enhance students’ academic performance in secondary schools in Arua district.

Items	Mean	Std. Deviation	Interpretation
Charts and maps	4.29	.48	Very High
Diagrams	4.71	.48	Very High
Internet and social media	4.29	.75	Very High
Student Portfolio	4.28	.48	Very High
Flash cards	3.71	.75	High
Images / pictures	3.44	.97	High
Quiz	3.00	1.29	Moderate
Assessment Rubrics	3.00	1.00	Moderate
Grand Mean and Standard Deviation	3.84	0.78	High

N= 120, Source: Primary data (2018)

Legend 9:1.00 – 1.79 = Very Low, 1.80 – 2.59 = Low, 2.60 – 3.39 = Moderate, 3.40 – 4.19 = High and 4.20 – 5.00 = Very High

In respect to the table 6 above, the general level to which ATL instructional resources are used in secondary schools in Arua district was portrayed to be high with Mean 3.84 (77%) at .87 standard deviation. In detail, the degree at which charts and maps were used to enhance students’ academic performance was very high with Mean 4.29 at .48 standard deviation alongside diagrams with Mean 4.71(94%) at .48 standard deviation, internet and social media with Mean 4.29 (86%) at .48 standard deviation and student portfolio with Mean 4.28 (86%) at .48 standard deviation. While flash cards had highly enhanced students’ academic performance with Mean 3.71(74%) at .75 standard deviation, besides Images/pictures with Mean 3.44 (69%) at .97 standard deviation. Quiz with Mean 3.00 (60%) at 1.29 standard deviation and assessment rubrics with Mean 3.00 (60%) at 1.00 standard deviation had moderately been used to enhance academic performance of students in secondary schools in Arua district. During interviews and Focus Group Discussion several respondents expressed that ATL instructional resources had been highly used to enhance students’ academic performance in secondary schools in Arua. This study result meant that the level to which ATL instructional resources were used in secondary schools in Arua district was high over the last five years. Therefore, the use of instructional resources such as charts and maps, diagrams, internet and social media, student portfolio should be encouraged at secondary schools in Arua district while more efforts should be on the use of flash cards, images/pictures, Quiz and Assessment Rubrics.

Research question 2: What is the level of students’ academic performance in secondary schools in Arua District?

Table 7: showing the level of students' academic performance in the secondary schools in Arua district.

	Mean	Std. Deviation	Interpretation
Numeracy	3.72	.48	High
Literacy	3.71	.46	High
Course grades	3.44	.75	Moderate
Grand Mean and Standard Deviation	3.72	0.56	High

N= 120, Source: Primary data (2018)

Legend 9:1.00 – 1.79 = Very Low, 1.80 – 2.59 = Low, 2.60 – 3.39 = Moderate, 3.40 – 4.19 = High and 4.20 – 5.00 = Very High

In respect to the table 7 above, the level of academic performance of students in secondary schools in Arua district was portrayed to be high with Mean 3.72 (74%) at .56 standard deviation.

In detail, the level of students' academic performance in numeracy skills was high with Mean 3.72 at .48 standard deviation, Literacy with mean of 3.71 (74%) at .46 standard deviation, and level of students' performance in course grades was moderate 3.44 Mean and .75 standard deviation. This study result meant that the level of students' academic performance in secondary schools in Arua district was high over the last five years.

Research question 3: What is the influence of ATL practices on students' academic performance at secondary schools in Arua District?

Table 8: Model summary

Model	r	r ²	Adjusted R Square	Std. Error of the Estimate
1	.634 ^a	.401	.400	.70147

a. Predictors: (Constant), ATL Methods, ATL Techniques, ATL Instructional resources

Source: Primary Data (2018)

The Regression coefficient (r) indicates in general the influence of ATL practices on students' academic performance at secondary schools in Arua district was positive as shown by the r – value of .634 at 0.05 level of significance; r² was calculated to be .401 meaning that ATL practices had influenced students' academic performance at secondary schools in Arua district by 40.1% over the study period leaving 59.9% been contributed by other factors which still needs to be researched on.

However, an examination of the level to which each of the variables of ATL practices influenced students' academic performance at secondary schools in Arua district showed that ATL Methods was topmost with Beta value of 0.407 (41%) at .000 significance followed by ATL techniques at Beta value of 0.388 (39%) at .000 significance and ATL Instructional resources with Beta value of 0.375 (38%) at .000 significance (see table 10 below).

Table 9: coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.439	.455		5.364	.000
ATL Methods	.390	.074	.407	5.142	.000
ATL Techniques	.380	.103	.388	3.251	.000
ATL Instructional Resources	.372	.083	.375	1.542	.000

a. Dependent variable: students' academic performance
Source: Primary date (2018).

4.1.4 Testing study hypothesis

This study hypothesized that there was no significant influence of ATL practices on students' academic performance in secondary schools in Arua district. To test the null hypothesis, the study generated a Pearson correlation analysis (see table below)

Table 10: showing Pearson Correlation Analysis between ATL Practices and students' academic performance.

		Students' academic performance.
ATL Practices	R	.416**
	P-value	.000
	r ²	.173
	N	120

**, Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data (2018)

From the generated Pearson correlation analysis the null hypothesis which stated that there was no significant influence of ATL practices on students' academic performance in secondary schools in Arua district was rejected because the P-value of 0.000 was found to be less than the significance level of 0.01. Therefore, an alternative hypothesis that there was significant influence of ATL practices on students' academic performance in secondary schools in Arua district was adopted. This meant that ATL practices are influential towards students' academic performance in secondary schools in Arua district.

5 CONCLUSION AND RECOMMENDATION

In line with the findings and the resulting discussions, it is concluded that the use of ATL 1) Methods was moderate, 2) techniques was very high and 3) instructional resources was high in secondary schools in Arua district. The level of students' academic performance in schools was high and the study concludes that there was significant influence of ATL practices on students' academic performance in secondary schools in Arua district.

The recommendation is that teachers and other stakeholders should always be prudent, innovative and increase the use of ATL methods, instructional resources and techniques to further improve students' academic performance in secondary schools in Arua district.

REFERENCES

- Abuga, M. (2014). *Research Methods*. Kampala: Bugema University.
- Amviko, G. (2017). *Human resource attributes and project performance in child development centres in Arua district*. Kampala: Bugema University Graduate school.
- Anguparu, M. (2014). *Developing aural skills in Music Students through drill techniques at NTC Muni*. Arua: NTC Muni.
- Ariko, E. (2010). *Causes of low academic performance in rural areas*. Kampala: SCRIBD.
- Aseru, M. (2016). *Active learning in Uganda*. Arua: BV .
- Barge, S. (2010). *Principles of Problem and Project Based Learning* . Aalborg: Aalborg University.
- Bonwell, C., & Eison, J. (1991). *Active learning creating: excitement in classroom*. Oxford: ERIC clearing house.
- BTC. (2014). *Active teaching and learning training Manual*. Kampala: BTC Uganda.
- Cresswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. California: Thousand Oaks,.
- Cronbach, L. (1984). *Essentials of Psychological Testing*. New York: Harper & Row.
- Drani, R. B. (2017). *Teacher Educators' Application of Active teaching and learning: A case of Belgium Teacher Training Education in Uganda*. Dar el salam: unpublished Med research.
- Drani, R. B. (2018). *Enhancing Pre-service Teachers competences in ICT through blended learning: A case of year two religious studies students at NTC - Muni*. Arua: Enabel.
- Ejiku, E. E. (2018). *Promoting sports among DES students through learning stations at NTC Muni*. Arua: NTC Muni.
- Fontana, D. (1995). *Psychology for teachers*. London: Macmillan Press.
- Freeman, S. (2014). *Active learning increases student performance in science, engineering, and mathematics*. California: NAS publishers.
- Glenda, A. (1996). *Active Learning in a Constructivist Framework* . New York: Springer.
- Glenda, R., & Dunn, K. (2009). *Producing Caring Qualified Teachers: An Exploration of the Influence of Pre-service Teacher Concerns on Learner-centeredness.* " *Teaching and Teacher Education*. Arkansas: Elsevier B.V.
- Kadondi, J. (2014). *Parental involvement and students' academic performance in public secondary schools in Pallisa District, Uganda*. Kampala: Makerere University.
- Kisembo, F. (2013). *Academic Performance in Uganda*. Bergen: University of Bergen.
- Lichtman, M. (2006). *Qualitative research in education: A user's guide*. London: Sage Publications.
- Mariwilda, P. D. (2015). *Phenomenology in Educational Qualitative Research: Philosophy as Science or Philosophical Science?* India: ResearchGate.

- Munduru, J. (2015). *Group discussion and students performance at schools in Arua district*. Arua: UCU, Arua.
- Nsubuga, & Katamba. (2013). *Basic research simplified for University students*. Kampala: Newgo publishers.
- Oso, W. Y., & Onen, D. (2009). *Writing Research proposal and report- A handbook of beginning researchers*. Nairobi: Sitima Printers.
- Ozitiru, I. (2018). *Employing personal lecturer parenting system to enhance maximum guidance and counseling to Students*. Arua: NTC Muni.
- UNESCO. (2000). *The right to education: towards education for all throughout life*. Paris: UNESCO Publishing.
- UNESCO. (2011). *Ensuring quality by attending to inquiry: Learner-centered pedagogy in Sub-Saharan Africa; Fundamentals of Teacher Education Development*. Addis Ababa: International Institute for Capacity Building in Africa.
- UNICEF. (2016). *Improving quality education and children's learning outcomes and effective practices in Eastern and Southern Africa regions*. Australia: Acer.
- Walker, A., & L. H. (2009). Walker, A., and Leary, H. *A Problem Based Learning Meta Analysis: Differences Across Problem Types, Implementation Types, Disciplines, and Assessment Levels*. *The Interdisciplinary Journal of Problem-based Learning*.
- Yikii, J. (2018). *Enhancing public speaking skills among DES year 1 English language students through Focus in regular debating*. Kampala: NTC Muni.