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Original Article

The Role of Technology-Enabled Teaching and Learning in Enhancing Student-Student Interaction in Secondary Schools in Kampala District

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Technology Enabled Teaching/Learning, Classroom Interaction.

Classroom interaction is the backbone of quality, inclusive, equitable and life-long learning. It is an avenue through which meaningful and quality education is developed. This study examined the role of technology-enabled teaching and learning in enhancing student-student interaction in secondary schools in Kampala District - Uganda. The study followed a purely-qualitative tripartite case study design. The study participants included 9 teachers and 54 students that were purposively sampled. Observations of classroom lessons, semi-structured interviews of teachers and Focus Group Discussions of students were the major data collection methods used. The study found out that Technology-enabled teaching and learning facilitated student-student interaction as technology develops students' skills in research and learning which are key to student-student interactions. Technology shaped students' presentations and discussion in the class through provision of relevant information on the topics of discussion which further made discussions enjoyable with everyone contributing due to the readily available information. The study recommend that many secondary schools should allow students carry their own devices to school to make their learning easy and enjoyable. More tools like the interactive digital boards, should be employed in the classroom for better quality interactions.

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INTRODUCTION

In the world's journey of achieving quality, equitable, inclusive and lifelong education as stipulated in Sustainable Development Goal 4, a careful study and analysis of classroom processes is key and a central activity since in it exists the greatest opportunity and greatest failure in the quest of quality learning (UNESCO, 2013). The quality of a country's education system is all born at the classroom level; competencies, abilities and skills that are highly desired by most of the education stakeholders are all developed through classroom interaction. Globally, research about classroom interaction in general begun in the 1950s and 60s in Europe with the main focus on teachers' and learners' interaction (Shomoossi et al., 2008). Research about classroom interaction was greatly inspired by Vygotsky's theory of Social development which claimed that "individuals take two levels to learn, the first one is interaction with others which can be referred to as social level and individual's interacted mental structure" (Choudaraju & Lakshman, 2020).

The wide use of technology in education started with the development of Internet in the 1980s and the inception of the World Wide Web in 1995, that brought considerable growth in the adoption of technology within educational institutions, for both distance and on-campus teaching and learning (Kirkwood & Price 2016). It's important to note that the growth of technology use in schools was initially much more prevalent in western countries than the other countries and hence to meet with the unevenly distribution of technology use in educational institutions across all countries, the Common wealth of learning in its Strategic Plan of 2015-2021, "Learning for Sustainable Development," introduced a new initiative — Technology-Enabled Learning (TEL) to enable other governments adopt at least a little bit of technology in the teaching and learning practices (Kirkwood & Price, 2016). Digital technologies have been heralded as a means for

educational transformation and are used in education to provide engaging learning environments that inspire and motivate students to learn (Taylor et al., 2021). On top of that technology can also increase inclusive, equitable and social responsibility by providing a learning environment that inspires students and prepares them for a technology focused society (Taylor et al., 2021).

In Africa, technology use in education has been limited by a number of factors which include incompetence of the teachers and students, poor connectivity and inadequate resources (Guesbaya, 2016). The massive appreciation of technology use in education in African countries has largely been because of the outbreak of Covid-19 that greatly affected the physical schooling of students. As Maikomo (2022) points out that Education is one of the sectors that quickly embraced virtual interactions as an alternative in the wake of the pandemic. Research about classroom interaction in Uganda has been related with factors that affect classroom interaction. Among the practices that affect classroom interactions in Uganda is part-time teaching which is a common practice among teachers as Kaahwa & Muwanguzi (2022) claim that the involvement of teachers in part-timing could support or dampen their classroom interaction and pedagogical effectiveness. Sekiziyivu & Mugimu (2017) stressed also that the challenges of classroom interactions over emphasize on teaching of grammatical structures which creates fear among students to participate and large classes that are hard to control. (Uwezo, 2019) revealed that the poor-quality learning in aspects of reading and writing was attributed to poor classroom processes and absence of interaction among students. The inconsistent poor performance of secondary school students in science subjects was greatly linked to the poor quality of classroom interactions as Uganda National Examinations Board [UNEB], (2020)

stresses that cram work and failure of conceptualization had caused 18000 candidates to fail their exams. The use of teaching methodologies which do not allow active learning and acquisition of skills was one of the major critics of the old curriculum by Mubangizi, (2020) and thus there is much need to carefully study classroom processes which contribute to active learning like teacher-student interactions. Nabiryo (2021) also stresses that the benefits of student-student interaction were well laid out however its practice was little in lower secondary classes in Kampala. There is notable weakness in utilizing learner to learner interaction in secondary schools in Kampala (Nabiryo, 2021). Mitana et al. (2019) further notes that most classroom practices in developing countries like Uganda are of an authoritarian nature and teacher-driven where learners are rarely in educational inequality, alternative learning, digital divide, digital toolsolved in the teaching and learning processes. This research therefore explored how technology enabled teaching and learning enhances student – student interaction.

Problem Statement

The quality of education is determined by the quality of learning and the quality of learning is determined by the quality of classroom interactions as Havik & Westergård (2020) assert that effective learning is contingent upon the extent to which students are engaged in learning activities in the classroom. Learner-learner interaction if well-structured and managed, can be an important factor of cognitive development, educational achievement of students and emerging social competencies and develop the learners' capacities through collaboration. Learner interaction not only develops the academic skills of the learners but also social and interpersonal skills which are highly demanded by society today. The students' leaving of secondary school without acquiring the skills and knowledge required for either world of work or higher education was one of the pressing issues in Uganda Education Sector Strategic Plan (ESSP) of 2004-2015. And still, the UNEB reports of

different years have consistently stressed the failure of learners to exhibit understanding of the subject content, higher-order thinking skills, creativity, and critical thinking skills (UNEB, 2018). The limited student-student interaction in schools in Uganda has rendered learning and mastery of subject content failure as stressed by (Nabiryo, 2021). Therefore, the study examined the role of technology enabled teaching in enhancing student-student interactions.

Objectives of the Study

To examine the role of Technology Enabled teaching and learning in enhancing student-student interaction

LITERATURE REVIEW

The analysis of the student-student interaction was made with respect to the three features: function of students' talk, modes of participation in the group work and types of student's talk (Worku & Ababa, 2020). The study considered technology as digital tools used to support teaching and learning that include projectors, videos, audios, laptops, tablets, and smart boards. In the Rooms for Engaged and Active Learning (REAL) designed in Michigan State University, which intended to promote student engagement, collaborative active learning, and faculty-student interaction in a technology-rich environment, It was observed that The REAL classroom increased students engagement and collaboration, student participation in classroom increased due to the small groups discussions that promoted more ownership of students' own learning and thus the study affirmed that technology use in classroom increased student interaction, engagement and collaboration (Lee et al., 2014). The study about REAL class exposes deficiencies in terms of contextualization that is to say the study findings in USA state may not meet up with Uganda secondary school. In the study about the value of classroom cultures in writing instruction among lower secondary learners, Nabiryo (2021) found out that learner to learner interaction enabled learners' mastery of writing and that it supported all stages of the writing

process. The study also exposed the fact that little classroom interactions were observed during the research process, hence the study recommended more research about how student-student interactions could be enhanced in Secondary classrooms.

In the study about Classroom Interaction Practices and Students' Learning Outcomes in Physics, Achor et al. (2019) established that student-centred kind of classroom interaction facilitated students' performance in physics and was effective in changing students' attitude towards learning of physics. The study thus recommended more studies about Student-centred classroom interaction as one way that could be used by physics teacher to improve their attitude towards learning of physics and thereby become excited learners in physics. Adhya & Panda, (2022) in their research about Technology enabled Learning course during and after Covid-19 indicated that TEL facilitated a paradigm shift from traditional, teacher-centred and lecture-based activities towards more of student-centred, hands-on learning with group-based activities. Teacher educators emphasized TEL's ability to facilitate learning by providing continuous access to learning materials and content. Technology enabled learning was credited for its ability to engage learners during the synchronous and asynchronous activities however, the study was limited by its conceptualization of technology enabled learning as it was understood as purely online and yet the current study conceptualized technology enabled learning as the teaching and learning which is aided by digital tools within a physical classroom.

In the study about the Influence of National Examinations on Classroom Practice in Primary Schools in Uganda, Mitana et al. (2019) reveals dominancy of teacher-centred pedagogical approaches and techniques in the observations as teachers merely narrated lesson contents to the pupils during the 10 observed classrooms however much teachers were very aware of the usefulness of child-centred pedagogies. The study recommended for more research about

enhancement of learner-centred pedagogies and thus the current study addressed the knowledge gap by examining the role of technology enabled learning in enhancing student-student interactions.

In a study about classroom interactions in a physics teaching, Worku & Ababa (2020) found out that the students were involved in group talks which had little significance to the co-construction of knowledge because of their low quality and low frequency of occurrences. The interaction among students during the group - work session was characterized by domination. It was also noticed that the poor preparation of group-work task and the ineffective teacher interventions were accounted for the existence of low quality and quantity of student talks, dominated classroom interaction and the absence of exploratory talk. The study employed a purely qualitative research approach with a single case study design. Results from the single case study of a different context could not be generalized thus the current study intended to address the gap by employing a multiple case study design. In a study about The Effect of Using "Student Response Systems (SRS)" on Faculty Performance and Student Interaction in the Classroom, Altwijri et al. (2022) found out that Among the most beneficial effects of using SRSs, was that it increased the interaction, focus, and participation of students in the lecture and stimulated their desire to attend and prepare for the lecture. It also helped the faculty members to improve their teaching strategies and enabled them to know the weaknesses or strengths of students, which in turn led to the improvement of the entire educational process. However, the findings in a country like Saudi Arabia which is far more developed in the use of technologies cannot be compared with the context of Uganda where challenges of digital divide are still major issues and hence this created justifications for the current study.

Schindler et al (2017) in his study about computer-based technology and student engagement in Higher Education found out that digital games provided the most far-reaching

influence across different types of student engagement, followed by web-conferencing and Facebook. Of the technologies reviewed, digital games, web-conferencing software, and Facebook had the most far-reaching effects across multiple types and indicators of student engagement, suggesting that technology should be considered a factor that influences student engagement. Overall, the findings provided preliminary support that computer-based technology influences student engagement, however, additional research was needed to confirm and build on findings. Therefore, the current study sought to build on the findings by collecting primary data about technology enabled teaching and learning and student - student interaction. In a study sought to explore the student experience of a technology-enabled learning space, Verdonck et al., (2019) observes that While it was anticipated that students would focus on what they liked and disliked while learning in this space, an unanticipated finding was that the students emphasized how the space facilitated collaborative learning. From these students' perspectives, the technology-enabled learning space supported communication, encouraged group work and self-directed learning and facilitated deeper learning through the use of technology. The study only captured on aspect of student–interaction which collaborative learning through group work and therefore it remained very uncertain whether the other aspects of student-student interactions like discussions and presentations were also aided by the use technology.

METHODOLOGY

Design

The study employed a purely qualitative multiple case study design. Qualitative methods were used

in both data collection and analysis of results. Qualitative research was chosen because of its ability to study phenomenon like classroom interactions in their natural setting while providing better and deep understanding of the key concepts (Amin, 2005). The study used the multiple case design to clearly develop an in-depth analysis and examination of the role of technology enabled learning in enhancing classroom interactions in different classroom environment while in different environment and classroom settings.

Study Area

The study was carried out in Kampala District – Uganda. Kampala District was suitable for this study because the technology advantages it has over other districts in Uganda. Kampala has very many skilled and experienced teachers who can easily use technologies in the classroom unlike other areas as Kagoda (2012) reported that high quality teachers tend to remain in urban schools with urban amenities like piped water, electricity relatively better housing. Electricity is a prerequisite for the use of technology and it's in Kampala electricity is at least reliable. Many of Kampala learners are well-versed with different technologies and thus making Kampala very reliable and suitable for execution of research effectively. Research has revealed that teachers are aware of the benefits of student-student interaction and yet the actual practice is absent in Kampala schools (Nabiryo, 2021).

Population and Sampling

The population comprised of students and teachers who were purposively selected from three secondary schools in Kampala. The schools were coded as Than High School, FA High School and lastly M secondary school.

Table 1: Characteristics of the schools

Name of the school	Category	Status of technology	Class population
Than High school	Second world private	Averagely low	40-50(stream)
FA high school	First world private	Very Good	60-80(stream)
M Secondary school	First world government	Averagely good	70 and above(stream)

In total the study sampled 63 respondents including both the teachers and students. 54 students from lower secondary were purposively selected to participate in the focus group discussion. The focus group consisted of 6 students and they were three focus groups in each school. The teachers that participated in the study were 9 taking a representation of 3 from every

school. All teachers selected were teachers of lower secondary schools that is senior one, two and three however some also doubled as teachers in Advanced secondary. This sample was considered sufficient for this study in line with recommendations of (Creswell, 2009) on sample size in qualitative studies.

Table 2: demographics of the teachers are as following.

Name of the respondent	Sex	Age	Subject taught	Qualification level	Years of Experience
Than T.1	Male	42	Math/Entrepreneurship	Diploma	20 years
Than T.2	Male	45	Math /physics	Degree	23 years
Than T.3	Female	40	English	Degree	15 years
M T.1	Male	35	Geography	Degree	15 years
M T.2	Male	38	Geography	Degree	10 years
M T.3	Male	28	History/lug	Degree	4 years
FA T.1	Male	29	Biology	Degree	7 years
FA T.2	Female	28	English	Degree	7 years
FA T.3	Female	26	Kiswahili	Degree	4 years

Research Tools

The Observation guides also called observation checklist was used to get primary data about classroom interaction. The semi-structured interview guides consisting of open-ended questions that probed the respondent to give as much information as possible in relation to interaction activities were also used in the study. Focus Group Discussion guides were composed of leading questions which were open-ended in nature and some few unstructured questions.

Validity and Reliability

Validity was ensured by use of several sources of data collection like observation, focus group discussion and interviews. Creswell (2014) justifies that triangulating of different data sources by examining evidence from sources and using it to build a coherent justification for themes was another way of achieving validity. The study used member checking to determine the accuracy of the findings by taking back the transcribed data to the participants for verification. The study also took quality time in field in order to develop an in-depth understanding of the phenomenon of study which yielded valid findings. Reliability was ensured through case study protocols and

documenting its procedures as recommended by Yin, (2009) that qualitative researchers need to document the procedures of their case studies and to document as many steps of the procedures as possible. The researcher also did a thorough check of transcripts to eliminate mistakes during the transcription process.

Ethical Considerations

The study adhered to research ethics including; informed consent, confidentiality, privacy, plagiarism as articulated in literature (Creswell, 2014). Confidentiality was observed in handling documents and reports from the different schools. The respondents' identity was also kept anonymous so that the teachers', students', and schools' names were not included anywhere in the report. More so, Informed consent was observed by informing the participants in advance their role during data collection process and expectations of the researcher and also ensured there was agreement between the respondents and the researcher. Contributions from other studies have been duly acknowledged

FINDINGS

This section presents the findings about the role of technology enables teaching and learning in enhancing student-student interaction. The researcher observed a lesson in Than High School where the teacher engaged learners to work in groups after the projection of a video about digestion in the stomach. The classroom setting was already in group arrangement and time was not wasted to arrange the students in groups. Discussion question was projected and learners began working in their groups. Some groups were working together and everyone offered individual support to the other however in the other groups, a few members discussed. The teacher kept moving around the classroom to supervise and maintain order, and to make sure that everyone was engaged in the discussion. To make sure that learners were very engaged the teacher promised to choose at random the group representatives who had to discuss for the class and the marks which they got would be shared by all the group members. This motivated the group members and many were seen labouring to explain concepts to their fellow group members to make sure that everyone understood. While during presentations, many of the group members were competent and confidence to discuss for the class.

Technology tools like the projecting of a video before discussion provided prior knowledge that became a basis for the group discussion among the students since everyone had at least something to contribute to the discussion. However, as much as there were interactions among students, teachers played a great role in making sure that everyone participated and that there was maximum order in class during the group discussion. In another lesson observed, learners had been given group assignment prior and they presented the findings from their group research. While discussing for the class, learners showed understanding and ownership of what they were presenting. In some cases, pronunciation of words would fail the discussant, but other group members would come in to help. After the discussions, learners received

feedback from the class in form of questions, answers, and supplements to the work.

Findings which were obtained from observation also showed that technology tools aided research and group presentation. In an observed Geography lesson, the learners presented about how volcanicity leads to the formation of mountain. This was done clearly well with every group member having a part to present with even clear illustrations made on the blackboard. After the presentation the group members received feedback from the students inform of questions and supplementary information from the teacher and fellow students. The other group presented about formation of rift valley which also illustrated very well in picture form by the group member. After their discussion students asked questions and the teacher concluded the presentation and introduced a new sub topic where he gave other groups that had not presented. In a discussion with the teacher after the lesson highlighting my concerns of how the teacher was able to accomplish learner –lead discussions, the teacher responded that he had developed a reading and researching culture among learners prior to the lesson which he said helped them to grasp things very better. He argued that all he does was to give learners research questions and sites on YouTube where they can get relevant information. The teacher concluded that its takes time but students understand very well and they never forget what was taught by fellow students. During a discussion with the students who had presented about how they found presentation type of assignment, the students exposed very much love for the approach since it gave them a chance to use technology and understand better. However, they also expressed some challenges related to quite a variety of information that sometimes it is hard to understand the relevant and irrelevant data.

Presentations are very good, the teacher gives us the assignment days before and gives us sites where we can get the information on YouTube, we enjoy seeing videos and by the way we understand very well and it becomes

easy to discuss. Madam now the challenge is that sometimes we have many assignments; lessons be very packed that we get limited time to do our research.” (M Secondary School, FG)

Another student revealed,

On top of that madam, we get challenges with the internet in the computer lab, but our teacher is good, when we complained to him, he gave us his phone in the evening and we watched the videos” (M secondary School, FG).

Technology provided prior knowledge to students before going in for discussion, in case of research work, technology software like You-tube enabled the students to get information about the research work which enabled to discuss for others during presentations. Engagement of students in group discussion is dependent on the ability of the teacher to effectively supervise and monitor the classroom and lastly the presence of background information/knowledge insights upon the students are able to discuss from an informed ground whether from their research work or learning materials presented by the teacher.

In an interview with the teachers, they were asked how they are able to engage students in group discussion, and they responded as follows;

First and foremost, the classroom setting of lower classroom allows group discussion, students sit in groups facing each other as you saw, that allows/ helps us not waste a lot of time organizing them in group. I always give groups question to discuss among themselves which keeps them engaged (Teacher Interview 2, FA high School)

To help me engage my students in groups, I give them a research question to research in their free time using the available technology, groups present to the whole class after the research, at many times I give groups different questions and sometimes I give them the same questions, you can't imagine what great learning and new ideas of knowledge

that students come with (Teacher Interview 2, M Secondary School)

However also students noted how they work in their groups during the Focus group Interview.

When they are in groups, I give them a phone to see the picture that relates to the assignment, you will find them very active with many ideas written down differing from one another, even the weak ones will have something to present, but now the problem, these bright students tend to overshadow the weak ones and sometimes they do the assignment themselves alone. But you know teachers we are also so bright, so what I do I scare them that I will chose at random so that will make all of them active (Teacher Interview 1 Than High School).

From the above discussion, teachers effectively engage the students with the aid of technology from as simple as a phone, technology provides insights and understanding of the subject matter that prompts everyone at least to have what to say including even the weak students. Supervision during the group work discussion is very key otherwise some students might leave the groups without interacting and learning anything since they are usually covered by the bright students. The classroom setting is also credited as one factor that also accelerates the working in groups since the sitting arrangement allows learners to work effectively with each other. Group discussion in classroom are highly dependent on the teacher's skills to fully engage the learners since even the same technology can be used and students learn nothing.

Teachers were again asked whether technology eases the students working in groups and they responses was as follows;

With the aid of digital tools, learners easily get information and share with the group members and therefore digital tools assist them to interact well. When learners have these gadget, groups and group members are very active. Challenge comes in that we have big numbers and you have to be passing when

they are in groups. To be honest, to have effective group discussion, there has to be maximum supervision which is quite hard for us, students look these gadgets and when you give them a question, they always want to know. Technology can be distractor with big numbers but when you have a manageable number it is easier to work in groups (Teacher Interview 3, M Secondary School).

Working in Groups is usually very good with the aid of technology, students are highly motivated and very eager to learn from the digital tool used. At the end of the group discussion, learners will always present reasonable answers when technology is used however, teacher always has to effectively supervise, walk around the classroom to get order and make sure everyone participants (Teacher Interview 2, M Secondary School).

Group activities became easier with technology and very understandable, Research using Digital devices provides better work for students, so they always come up with constructive feedback. Which I would attribute to the practicability of the content that technology provides. (Teacher Interview 1, FA High School).

Bright students usually dominate the classes but I always chose at random so it encourages also weaker ones to always ask to understand the bright students. Students, even weak students usually understood better in groups with follow students than when they are taught by me (teacher Interview 3 M Secondary School).

Teachers have appreciated the fact that with the aid technology, Students working in groups is easy since everyone is able to find information about the topic of discussion, technology motivates the learners to work together and accomplish a desired goal with the help of the weaker ones. However, Teachers also highlight the fact that bright students sometimes dominate the discussion which the teachers solve by making rules and regulations like choosing at random.

In interview with the students, learners were asked how they find working in groups when digital tools are used in the classroom, they responded as follows;

We learn in groups and we sit in groups. When we are in groups, we easily see the things on the teacher's phone and we do not have to fight for them, we always understand better, there are those things that we could not have understood until the group leader helped us'' (Focus Group Discussion 1, Than High School).

while discussing in groups, internet helps us get new ideas but with wrong ideas that are not related others talk a lot in discussion, everyone brings a new idea, I do not understand things but in groups Flora helps whenever I do not understand things. Support one other and develop Unity (Focus Group Discussion 2, Than High School).

You get ideas from others when in groups, like Yesterday, we had Nitrogen cycle, we had not understood it but we understand it better after watching a video about and discussing in our groups. Like the theory is hard but technology makes us understand and discuss better in groups (Focus Group Interview 2, M Secondary School).

The work in groups it is very good and we help one another. We always watch videos after class, discuss the research in groups but like sometimes we are distracted, some members play games and with high volume which becomes uncomfortable. (Focus Group Discussion 2, M Secondary School).

Now, we group leaders and these leaders are always the brightest students and they always dominate the discussions uhhh, when a teacher gives a question, the group leader shares parts of the question amongst us and we make individual research then we discuss together to come up with a final assignment to be discussed in class. But sometimes some of our answers are neglected. (Focus Group 2 FA high School).

Students loved working in groups and agreed that technology tools helped them during their research before and during the group discussion however they complained about bright students dominating over the discussion which seemed to be a threat to the student-student interactions.

Yes, like have friends in other streams and my friends they discuss for me physics and there is a way they explain and you understand everything. There those things teachers explain but you do not understand but our friends help us understand them better. (Focus Group 3 FA High School).

Working in Groups is usually good, but sometimes the noise is also a lot, however the teacher keeps walking around the classroom to get order and make sure everyone participates. (Focus Group 1 Than High School).

Students expressed love about working in groups most especially with the aid of digital tools, many of them understand better when their colleagues explain to them, while others tend to get more information about the research area as related to the group. However, it is not without challenges, many group discussions are bound to disagreement, bright students dominating the discussion and other stubborn members disorganizing the discussion with funny statements and behaviour.

One teacher stressed that even without technology students understand better and love working in groups however he claimed that with the aid of technology instruction becomes very easy, students are easily motivated and everyone will have a concept to discuss with other. The students also claimed that with the aid of technology they get ideas from one another and end up with sounding research, even the weaker students who are always quite tend to react with technology. However, this technology is not without challenges some students can be distracted by technology like the adverts that usually run through when one is watching a video, thus to make it effective there has to be maximum

supervision of students especially the back groups.

DISCUSSION

The study conceptualized student-student interaction as a talk among students inform of group discussion or group work/ question-feedback within students in the class and group presentation. The assumption of student-student interaction is that Students are more likely to develop a deep conceptual understanding of subject matter when they interact with and discuss their thoughts with others. Findings from the focus group discussions indicated that learners would fail to understand from the teacher but then understand better when a fellow student guide them through the assignment/subject content. Findings portrayed student-student interaction majorly in three ways which are; group presentation, group work/discussions and feedback between students in the classroom. With group presentation, most of the group discussion were done before class and in the class the groups just presented what they had organized after their discussion, group discussion/work were a contribution of pre-class activities however they most of them were done during class. And lastly the feedback between students was in such a way that students would ask a question maybe to the teacher but by chance fellow students would raise to respond to the queries. Such are in agreement with Nodirovna (2020) who categorized student-student interaction as group presentation, peer assignment, group discussion, role plays, Opinion sharing, conversation and discussions and dialogue.

On contrary to Adaba (2017) in the research about student interaction in English classroom that found out that the students did not actively participate during the speaking activities because lack of background knowledge, attitudinal problems, fear of making mistakes, lack of confidence and lack of personal motivation. Findings from this study revealed that technology enabled teaching and learning enhanced group discussions and active students' participation in the classroom, the technology modified classroom

environment increased the motivation and love of students' love to interact with each other mainly because of prior knowledge/information provided. This is supported by Lee et al. (2014) who found out that technology rich classrooms increased students' engagement and collaboration, student participation in classroom increased due to the small group discussions that promoted more ownership of students' own learning.

Findings revealed that Group discussions were faced with the issue of negotiation of common meaning and understanding since many students came up with many diverse ideas due to the aid of technology, thus teachers' guide during the group discussion seemed very significant to relax student's arguments. There also existed cases where group leaders dominated the discussion as it was presented in the findings from the teacher and student interviews and observations. The same was observed by Alsabbagh (2019) in findings as it was noted that the interaction among students during the group work session was characterized by domination. Findings still revealed that individual student groups presented during classroom learning and basically their presentation was aided by technology tools like related videos which gave them a clear picture of what the teacher desired with even illustrations. During these presentation students seemed very knowledgeable and the teacher just supplemented to strength what they had discussed, students were able to answer to most of the students' queries and those that they failed were handled by the teacher. Technology was appreciated for motivating learners to a carry out extensive research which was responsible for the clear presentation with even relevant illustrations. In support with the findings, Verdonck et al. (2019) found out in their study that Students perceived the presentations to be easier as they could share their work with their peers at the table, to the front of the room and speak to the whole group, and ease was attributed to the effective and efficient knowledge share which was aided by technology.

Technology enabled learning and teaching aided quality and effective student-student interactions in the classroom since information needed to enable discussions and member participation was readily available through the use of technology tools, Group discussions were very dynamic and to be effective with classroom rules had to be straightened, changing the leadership position and also changing of the group members to always allow proper knowledge construction, academic-oriented talk/discussion. Otherwise, some can tend to be social jazz centres. However much technology was an important tool during student-student interaction, teachers' role was greatly credited for its ability to foster effective discussions through maximum supervision and guidance to weak groups as supported by Hajera (2018) that As the teachers walked around the class, they observed the groups working on the group tasks, they offered to facilitate those groups that needed help and those who were not progressing with the task as well as the other groups, Hence there was differentiated instruction with varying levels of facilitation which led to different amounts of interactions in the classroom.

CONCLUSION

Technology-enabled teaching and learning facilitates student-student interaction through developing students' love for research and learning which are key to student-student interactions. Technology shapes students' presentations and discussion in the class through provision of relevant information on the topics of discussion which further makes discussions enjoyable with everyone contributing due to the readily available information

Recommendation

The study recommended that many secondary schools should allow students carry their own devices to school to make their learning easy and enjoyable. More tools like the interactive digital boards, should be employed in the classroom for better quality interactions. And on top of that, more digital tools like laptops, projectors and reliable internet should be provided by schools in

order to encourage the use of them in the classroom.

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