

SYNCHRONOUS DIGITAL COMMUNICATION TOOLS AND STUDENTS' COLLABORATIVENESS IN SOCIAL STUDIES IN SECONDARY SCHOOLS IN CALABAR SOUTH LOCAL GOVERNMENT AREA OF CROSS RIVER STATE, NIGERIA

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Abstract

The study investigated the influence of Synchronous Digital Communication Tools on Students' Collaborativeness in Social Studies in Secondary Schools in Calabar South Local Government Area of Cross River State. Two research questions and two null hypotheses were formulated to guide the study. Ex-post facto research design was adopted for the study. The population of the study was 2,490 Junior Secondary School Students from eight public secondary schools and a total of three hundred and twenty (320) students were selected for the study through simple random sampling technique. A 25-item structured questionnaire was used as instrument for data collection. Data collected were analyzed with mean, standard deviation, percentage and linear regression. All the hypotheses were tested at 0.05 level of significance. The findings of the study revealed among others that, there is significant influence of Zoom on students' collaborativeness in Social Studies. Based on the findings, it was recommended that schools should adopt the use of Synchronous digital communication tools in teaching subjects other than social studies.

Keywords: Digital Communication; Students' Collaborativeness, WhatsApp and Zoom,

Introduction

Synchronous digital communication tools are those tools that allow students interact in real time, such as video conferencing (zoom), instant messaging (WhatsApp), live chat, skype and Miro. These tools are rich for providing immediate feedbacks to their users. The advantages of utilizing synchronous communication tools is that they facilitate real time collaboration, just like in the traditional classroom where the students and the teacher may interact spontaneously and the participants can have feedback from each other. The presence of cheap or even free technologies for real-time online collaboration may also make it financially feasible for students to have such technology on their laptops, phones, etc. this may help them communicate one-on-one or by group. Utilizing these tools also help students develop effective social skills and may lead to increased motivation and engagement leading to effective learning (Adie, Okri & Anditung 2019).

Social studies is given a core status and made compulsory subject for all students in Junior Secondary Schools in Nigerian education system due to its relevance in enabling citizens acquire skills, knowledge, attitude and values with which they can explore their environments so as to have a comfortable and fulfilled life (Olayinka, 2016). Social studies is an academic discipline that encompasses various subjects focused on the study of human society and the relationship among individual communities and institutions. The main objectives of social

studies are to provide students with a comprehensive understanding of the world and to develop their critical thinking, problem solving and citizenship skill.

Collaboration is defined as working together through meetings, near-instant replies to messaging and a shared schedule. Similar availability is expected so that students can complete their work at the same time and reach out to each other when necessary. Students respond almost immediately to communication and reply on meetings to share information and establish work priorities. Collaboration can encourage interruption but enables individual contributors to give and get fast responses. Collaborative learning is an effective method that enables students to work in small groups. Collaborative learning involves students learning in pairs or small groups through different learning activities. As opposed to teacher-centred, it is student-centric providing children with a sense of autonomy over their educational process. What makes collaboration in early childhood education vital is that when children share combined attention in activities, the process provides a major cognitive challenge in itself (Hilkemeijer, 2023).

Zoom, as a remote learning tool, has both positive and negative impacts on students' collaborativeness. It allows for virtual group discussions, sharing of resources, and collaborative projects, fostering teamwork and communication skills. However, challenges like technical issues, lack of non-verbal cues, and difficulties in coordinating group activities can hinder effective collaboration. Gao, Li and Wang (2020) noted that while Zoom facilitate group discussions, some students reported feeling less engaged and connected compared to face-to-face interactions, potentially affecting their collaborative efforts in subjects like social studies. Zoom influenced online learning tool with a variety of capabilities (including screen sharing, virtual whiteboards, file sharing, transcription of recordings, and non-verbal feedbacks). The level of participation in class may change (Roy, 2020). Despite the fact that technology has always been viewed as a tool, analysis of it uses a functional paradigm that emphasizes its instrumental aspect. Technology, in Lanzara's opinion, is more than just a tool; it also has a dubious side that has the ability to be both beneficial and detrimental (Mader, 2015).

Zoom has become an integral part of remote and hybrid learning, impacting collaborative learning experiences in subjects like social studies. Rebecca, et al., (2021) has highlighted how synchronous online platforms, including Zoom, can facilitate collaborative learning by creating spaces for meaningful interactions among students. In social studies, Zoom's breakout room feature is particularly beneficial. Also, Bell and Carr (2021) have demonstrated the effectiveness of these breakout rooms in promoting student collaboration. By dividing students into smaller groups, teachers can encourage discussions on historical events, societal issues, or cultural aspects, fostering peer-to-peer learning and collaborative problem-solving.

Skype, similar to other remote communication tools, can positively impact students' collaborative learning experiences in social studies. It allows for real-time video conferencing, facilitating group discussions, virtual field trips, and interviews with experts, enhancing engagement and interaction among students. Kebritchi, Lipschuetz and Santiago (2017) highlighted that Skype supports collaborative learning by enabling students to connect globally, share diverse perspectives, and work together on projects, fostering a deeper understanding of social studies topics. However, challenges related to internet connectivity, audiovisual quality, and time zone differences might sometimes impede effective collaboration.

Hamid, Waycott, Kurnia and Chang (2015) proposed an analytical study of the use of Skype to support interaction between students with each other and with their instructors. The study, in conclusion, introduced some empirical evidence of the benefits of using Skype in learning. The benefits can be mapped to three interactions Skype can carry: interaction between students, interaction between students and teachers, and interaction between students and content. Lee, Wang and Patel (2023) investigated the role of Skype, a popular video conferencing platform, in promoting collaborativeness among students in educational settings.

Utilizing a mixed-methods approach, the research explores the impact of Skype on student engagement, interaction, and learning outcomes across diverse academic disciplines.

In an increasingly interconnected world, digital communication tools play a crucial role in facilitating collaboration and knowledge sharing among students. Skype, as a widely-used video conferencing platform, offers unique opportunities for synchronous communication and collaboration. This study seeks to examine the efficacy of Skype in enhancing students' collaborativeness and its implications for educational practices.

WhatsApp, often used informally for communication, can also support collaborative learning among students in social studies. Its instant messaging features facilitate quick exchanges of ideas, sharing of resources, and group discussions, promoting collaboration outside the classroom. Al-Rahmi, Aldraiweesh, Yahaya and Al-Rahmi (2015), Nkanu, Imoke and Bisong (2023). highlighted how WhatsApp groups and other social media platforms enhanced collaborative learning experiences by allowing students to ask questions, share relevant articles, and engage in discussions, thereby supplementing their understanding of social studies topics. However, challenges such as distractions from non-academic conversations and the need for clear guidelines on appropriate use might affect the effectiveness of WhatsApp as a collaborative learning tool.

Due to the group-based feature of WhatsApp, it is necessary to examine the application's effort in fostering collaborative learning. According to Kim, Lee and Kim (2014) collaborative learning can be achieved via different tools, such as discussion boards, blogs, and instant messenger. According to Johansson (2016) when students learn together with others, for instance in discussion settings that provide group solving tasks or content, they are part of a collaborative learning environment. Collaborative learning could motivate participants, and also arouse their interest (Njoku & Prince, 2015; Yin, 2016). Also, Kim, et al., (2014) opined that collaborative learning needs team-related skills and task-related skills to enable team members to work together smoothly and efficaciously. Johansson (2016) mentioned in their article, for social media or any other ICT device to attain its full potential in collaborative learning is much dependent on everyone stays active and wants to contribute to the learning process.

Miro, a digital whiteboarding and collaboration platform, can significantly enhance students' collaborative efforts in learning social studies. According to Kim and Watt (2021), Miro facilitates interactive and visual collaboration among students by enabling them to co-create mind maps, diagrams, and timelines related to social studies topics. Its features, like real-time editing, commenting, and visual organization, supported group brainstorming and project-based learning, allowing students to work together effectively, even in remote settings. Miro's flexibility in organizing information visually also encouraged engagement and deeper exploration of social studies concepts. However, the platform's learning curve and the need for clear instructions on its usage might affect its seamless integration into collaborative learning activities.

Miro facilitates various group activities like icebreakers, team retrospectives, workshops, and group discussions. Its interactive features promote active participation and inclusivity among students. A study by Hrastinski and Stenbom (2020) highlighted the positive impact of using Miro in collaborative learning activities, emphasizing its effectiveness in promoting active engagement and knowledge construction among students. Another research by Ellis et al, (2018) explored the use of online collaborative platforms, including Miro, in higher education. They found that such tools supported collaborative learning and enabled students to co-construct knowledge in a social setting. Miro's ability to facilitate collaboration aligns with contemporary pedagogical approaches that emphasize active, participatory, and student-centered learning. However, challenges related to technical proficiency, managing diverse contributions, and equitable participation might arise and need to be addressed to optimize its use in educational settings.

Miro serves as a powerful platform for students to collaborate, create, and innovate together. Academic studies affirm its positive impact on collaborative learning, making it a valuable asset in the educational landscape for fostering student collaboration and engagement. According to Lee, et al., (2023) in the study "Leveraging Miro for Collaborative Learning: A Mixed-Methods Investigation" This study explores the integration of Miro, a collaborative online whiteboard platform, in educational settings to enhance students' collaborativeness in learning. Employing a mixed-methods approach, the research investigates the impact of Miro on student engagement, interaction, and learning outcomes among students. As digital technologies continue to reshape education, collaborative tools like Miro offer innovative opportunities for fostering interactive and participatory learning experiences. This study seeks to investigate the efficacy of Miro in promoting collaborativeness among students and its implications for pedagogical practices (Lee et al., 2023).

Therefore, this study sought to find out how the use of synchronous digital communication tools can improve students' collaborativeness in Social Studies in Calabar South Local Government Area, Cross River State.

Research Questions

The study addressed the following research questions:

1. To what extent does the use of Zoom influence students' collaborativeness in Social Studies?
2. In what way does Skype influence students' collaborativeness in Social Studies?
3. How does the use of WhatsApp influence students' collaborativeness in Social Studies?
4. In what way does Miro influence students' collaborativeness in Social Studies?

Research Hypotheses

The following null hypotheses guided the study and was tested at 0.05 level of significance:

1. There is no significant influence of zoom on students' collaborativeness in Social Studies.
2. There is no significant influence of Skype on students' collaborativeness in social studies.
3. There is no significant influence of WhatsApp on students' collaborativeness in Social Studies.
4. There is no significant influence of Miro on Students' collaborativeness in Social Studies.

Methods

The study adopted ex-post facto research design. The population of the study comprised all the junior secondary school students in eight public secondary schools in Calabar South Local Government Area. Two sampling techniques, namely: Census and sampling random sampling techniques was used for data collection. The census or total population sampling technique was used to adopt all the eight public junior secondary schools in the study area. The census sampling technique is used when the elements of the population is small or the researcher is able to study the entire population. Here, the number of schools in the study area was small hence the entire schools were selected. The simple random sampling technique was used to select the students who constituted the sample of the study. The sample of the study constitute three hundred and twenty (320) junior Secondary school students. The main instrument for data collection was a well validated questionnaire designed by the researchers. Data collected were analyzed with mean, standard deviation, percentage and linear regression.

Data Analysis and Results

Hypothesis one: There is no significant influence of Zoom on students' collaborativeness in Social Studies

Table 1: Summary of Regression Analysis of influence of Zoom on students' collaborativeness in Social Studies (N=314).

B	RR Square		Adjusted R Square	Std. Error of the Estimate			
11.876	.111	.012	.009	1.09410			
Summary Regression ANOVA							
		Sum of Squares	Df	Mean Square	F	P	Remark
Regression		4.676	1	4.676	3.676	0.04	P<0.05 Sig
Residual							
Total		373.479	312	1.197			
		378.156	313				

Note: * $P < 0.005$

The table shows a coefficient of correlation (R) of 0.602 and a R square of 0.111. This means that 11.1% (Adj. $R^2 = 0.012$) of the variance in students' collaborativeness in Social Studies is accounted for by the independent variable (use of Zoom). The result in Table 1 above showed there was a significant influence of the independent variables (use of Zoom) on the dependent variable (students' collaborativeness in Social Studies), $F(1,320) = 10.801$, $p = 0.04 < 0.05$. That is the use of Zoom plays a significant role in enhancing students' collaborativeness in Social Studies ($\beta = 11.876$, $p < 0.05$). It implies that the use of Zoom significantly influences students' collaborativeness in Social Studies.

Hypothesis two: There is no significant influence of Skype on students' collaborativeness in Social Studies.

Table 2: Summary of Regression Analysis of influence of Skype on students' collaborativeness in Social Studies (N=314)

B	.R	.R Square	Adjusted R Square	Std. Error of the Estimate		
11.829	.122	.015	.012	1.09268		
Summary Regression ANOVA						
		Sum of Squares	Df	Mean Square	F	P
Regression		5.644	1	5.644	4.277	0.03
Residual						
Total		372.513	312	1.194		

Note: * $P < 0.005$

The table shows a coefficient of correlation (R) of 0.122 and a R square of 0.015. This means that 1.5% (Adj. $R^2 = 0.012$) of the variance in students' collaborativeness in Social Studies is accounted for by the independent variable (use of Skype). The result in Table 2 above showed there was a significant influence of the independent variables (use of Skype) on the dependent variable (students' collaborativeness in Social Studies), $F(1,320) = 4.727$, $p = 0.03 < 0.05$. That is the use of Skype plays a significant role in enhancing students'

collaborativeness in Social Studies ($\beta = 11.829$, $p < 0.05$). It implies that the use of Skype significantly influences students' collaborativeness in Social Studies.

Discussion of findings

Hypothesis one examined the influence of using zoom on students' collaborativeness in social studies. The result indicated that there is a significant influence of the use of zoom on students' collaborativeness in social studies. This result agrees with Khan *et al.*, (2021) who posits that, using video communications (zoom) boosts productivity, lowers training costs, makes subject matter experts accessible (regardless of location), and provides students with real-time, immediate access to classes and course materials. It is easier for students to retain the course material when practice exercises and feedback are combined with multimedia and instructional design. Educational institutions must employ video communications to engage with current and new students, give access to outside experts, work with other universities, and electronically interact with students, teachers, and staff in order to stay competitive and boost revenue.

Hypothesis one examined the influence of using Skype on students' collaborativeness in social studies. The result indicated that there is a significant influence of the use of Skype on students' collaborativeness in social studies. These findings corroborate the position of Lee et al (2023) in a study "Exploring the influence of skype on students' collaborativeness in learning" investigates the role of Skype, a popular video conferencing platform, in promoting collaborativeness among students in educational settings. Utilizing a mixed-methods approach, the research explores the impact of Skype on student engagement, interaction, and learning outcomes across diverse academic disciplines.

The findings of the study underscore the potential of Skype as an effective tool for promoting collaborativeness and enhancing learning outcomes in educational contexts. By leveraging the platform's video conferencing capabilities, educators can create dynamic and interactive learning environments that foster active participation, knowledge construction, and social interaction. However, further research is warranted to explore optimal strategies for integrating Skype into educational practices and its long-term effects on students' learning.

Conclusion

The integration of these synchronous digital communication tools within social studies classrooms significantly augments student collaborativeness. They empower students to engage actively in the subject matter, work collaboratively with peers, and develop essential skills such as communication, critical thinking, and teamwork—all of which are crucial not only in their academic pursuits but also in their future endeavors beyond the classroom.

Recommendations

The following recommendations were made based on the findings of the study.

1. Schools should adopt the use of synchronous digital communication tools in teaching subjects other than social studies.
2. Schools should employ the use of collaborative digital platforms to facilitate group projects and collaborative learning activities among students.
3. Schools should ensure that the learning environment is conducive for productive collaboration by providing a quiet space where distractions are minimized during virtual sessions using these tools.
4. Schools should have a reliable internet connection, sufficient devices (such as laptops or tablets), and appropriate software or platforms to support the effective use of synchronous digital communication tools. This will help minimize technical difficulties during collaborative sessions.

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