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Students' Experiences of Online Cooperative Learning for Economics post-Covid-19: A Case of one University in the Eastern Cape Province, South Africa

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ABSTRACT

Online Cooperative Learning (OCL) is the learning process in which students learn in small groups using Learning Management Systems (LMSs). OCL flourishes in virtual learning environments that emphasize individual freedom within online learning communities. The purpose of the study was to explore online cooperative learning as a strategy to teach Economics post-COVID-19. The study was guided by May and Dobb's cooperative learning theory, in which group work is prioritized. The study adopted a qualitative approach underpinned by a case study. A purposive sampling that comprised six instructors and ten students was employed. Data was collected through individual interviews, and it was analyzed using Content Analysis (CA) and categorized using thematic analysis. The findings revealed that students demonstrate academic improvement, flexibility, convenience, and exposure to technological tools. It was concluded that the use of online cooperative learning provides more benefits than setbacks. The study recommended the intensive use of OCL in Economics. Lastly, this study addressed the gap by providing valuable insights into the importance of this instructional approach and enabling instructors to design and implement online cooperative learning experiences that enhance students' economic literacy and prepare them for real-world economic challenges.

Keywords: *COVID-19, Economics, Online Cooperative Learning, Learning Management Systems, Students.*

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INTRODUCTION

Online cooperative learning is a dynamic and impactful educational approach that harnesses the power of small student groups collaborating harmoniously to amplify not only personal understanding but also the collective knowledge of the entire group. Rooted in the philosophy of shared progress, online cooperative learning revolves around the notion that students can achieve superior learning outcomes by pooling their diverse strengths, insights, and perspectives. As elucidated by Johnson et al., this method thrives when students amalgamate their efforts to realize common educational objectives.[1] Essentially, online cooperative learning stands as an instructive framework wherein cohorts of students engage in purposeful teamwork to conquer well-defined tasks. These tasks could encompass a spectrum of academic endeavors, spanning from intricate homework assignments to hands-on laboratory experiments and intricate design projects.

[1] Carla C. Johnson et al., "Online Teaching in K-12 Education in the United States: A Systematic Review," *Review of Educational Research* 93, no. 3 (June 3, 2023): 353–411, https://doi.org/10.3102/00346543221105550.

Online cooperative learning constitutes a pedagogical approach that intricately weaves together the threads of individual autonomy and a sense of belonging within a vibrant learning collective, as underscored by Huff.[2] This methodology transcends the binary divide between solitary learning and collaborative engagement, aiming to glean the manifold advantages inherent in both realms. In alignment with the insights of Cottell and Millis, the thriving heart of online cooperative learning beats within the virtual domains where individual empowerment harmoniously coexists with the spirit of interconnected online learning communities.[3] In the wake of the evolution from conventional Learning Management Systems (LMSs) to the dynamic landscape of e-learning 2.0, the contours of collaborative learning have witnessed a paradigm shift, as expounded upon by Chen, Ke, and Chen.[4] The digital canvas now extends beyond the confines of mere content dissemination, nurturing collaboration through innovative conduits such as blogs, wikis, and social software. Through these virtual avenues, learners metamorphose into creators, shaping collective knowledge repositories, engaging in meaningful discourse, and leveraging the collective intellect of the online learning community.

Research into online cooperative learning has yielded overwhelmingly positive results, as exemplified by the comprehensive study conducted by Arifiati et al., which underscores the versatility of cooperative learning approaches across diverse academic disciplines.[5] The findings from this research reinforce the conviction that cooperative learning transcends disciplinary boundaries. Furthermore, Merwe emphasizes that the positive outcomes of cooperative learning extend far beyond academic gains alone.[6] Indeed, this approach has been shown to foster improved race relations among students, a testament to its capacity to bridge divides and promote inclusivity. Additionally, cooperative learning contributes significantly to personal and social development, nurturing essential life skills such as communication, teamwork, and empathy. In a study by Petrunich-Rutherford and Daniel, it was observed that students who wholeheartedly engaged in group activities, exhibited collaborative behaviors, offered constructive feedback, and cooperated effectively with their peers were more likely to achieve higher test scores and superior course grades by the semester's end.[7] This substantiates the assertion that cooperative learning is an active pedagogy that not only enhances academic achievement but also cultivates a robust skill set for future endeavors. Furthermore, the research by Scager bolsters the argument for cooperative learning by reiterating its positive impact on academic performance.[8] Their findings echo the sentiment that cooperative learning serves as a catalyst for heightened academic attainment.

However, the traditional methods of teaching economics often rely on individual learning approaches, limiting students' opportunities for collaboration and active participation. With the increasing prevalence of online education platforms, there is a need to explore the efficacy and influence of implementing online cooperative learning as a strategy for teaching economics. It's worth noting that while studies offer valuable insights into the benefits of cooperative learning, there is a notable gap in the literature when it comes to investigating students' experiences of online cooperative learning, particularly in the context of Economics post-COVID-19. There has been very limited research that has been conducted on how online cooperative learning specifically contributes to students' understanding and application of economic concepts, as well as their development of critical thinking skills and problem-solving abilities. As a result, the motivation behind the current study is to fill this void and delve deeper into the first-hand experiences of students engaging in online cooperative learning for Economics in the post-COVID-19 era. By shedding light on the unique challenges, advantages, and perceptions of

[2] Cynthia Huff, "Cooperative Learning: A Model for Teaching," *Journal of Nursing Education* 36, no. 9 (November 1997): 434–36, https://doi.org/10.3928/0148-4834-19971101-09.
[3] Philip G. Cottell and Barbara J. Millis, "Cooperative Learning in Accounting," *Journal of Accounting Education* 10, no. 1 (March 1992): 95–111, https://doi.org/10.1016/0748-5751(92)90019-2.
[4] Farn-Shing Chen, Hong-Sen Ke, and Yuan-Chen Chen, "Online Learning as a Panacea? An Empirical Study to Discuss Problem-Based Cooperative Learning in Taiwan," *International Journal of Emerging Technologies in Learning (IJET)* 15, no. 18 (September 25, 2020): 251, https://doi.org/10.3991/ijet.v15i18.15079.
[5] Nurce Arifiati et al., "University Students Online Learning System during Covid-19 Pandemic: Advantages, Constraints and Solutions.," *Systematic Reviews in Pharmacy* 11, no. 7 (2020).
[6] Martyn Van der Merwe, Jean V Fourie, and Amarachi J Yoro, "Learning Support Strategies for Learners with Neurodevelopmental Disorders: Perspectives of Recently Qualified Teachers," *African Journal of Disability* 9, no. 1 (2020): 1–10.
[7] Maureen L. Petrunich-Rutherford and Frances Daniel, "Collaborative Quizzes: Impact on Student Performance and Attendance," *Teaching of Psychology* 46, no. 2 (April 3, 2019): 115–20, https://doi.org/10.1177/0098628319834172.
[8] Karin Scager et al., "Collaborative Learning in Higher Education: Evoking Positive Interdependence," *CBE—Life Sciences Education* 15, no. 4 (December 2016): ar69, https://doi.org/10.1187/cbe.16-07-0219.

students in this specific context, the study aims to contribute to the evolving landscape of online cooperative learning and inform future instructional strategies in the field of Economics**.**

LITERATURE REVIEW

Many studies have shown that when correctly implemented, online cooperative learning improves information acquisition and retention, higher-level thinking skills, interpersonal and communication skills, and self-confidence.[9] Online cooperative learning has been found to yield many benefits to students who engage in it. In addition, the data gathered through the student opinion scale suggests that students liked cooperative learning.[10] Moreover, a study by Farrell and Farell, the findings suggested that despite some difficulties, the majority of students reported that cooperative learning created supportive team experiences that assisted them to develop discussion skills and better engage with the content of Economics.[11] In support of the latter, Adu and Galloway, in their study showed that cooperative learning methods improve students' achievement in economics and attitude towards economics.[12] In addition, online cooperative learning may make the learning experience a richer one for Economics students and for faculty.

Hwang, Lui, and Tong, find that cooperative learning is a more effective pedagogy than traditional lecture for students who were raised and educated in a passive learning environment.[13] Megahed and Mohammad support this by asserting that the online cooperative learning method is an effective teaching approach that improves the self-esteem of students, and it is highly recommended instructional pedagogy to prepare students for lifelong learning.[14] In addition, the online cooperative learning teaching method has a higher effect on students learning than the lecture teaching method.[15] Students' positive interdependence observed in this study suggests that online cooperative learning cultivates a classroom culture where students are willing to contribute without any fears.[16] Moreover, research revealed that the online cooperative learning method increases students' awareness of their environment and courses, self-efficacy, and self-confidence and helps students to socialize.[17]

Within the economics education literature, although limited, there are a number of studies that examined the link between online cooperative learning and students' performance.[18] The results are mixed. Few studies have shown that students using the online cooperative learning approach tend to

[9] Mona Zamani, "Cooperative Learning: Homogeneous and Heterogeneous Grouping of Iranian EFL Learners in a Writing Context," *Cogent Education* 3, no. 1 (December 31, 2016): 1149959, https://doi.org/10.1080/2331186X.2016.1149959; Zahariah Mohd Zain et al., "Teaching Economics Using Cooperative Learning Approach: Accounting Students' Performance and Attitude/Enseignement De L'économie En Utilisant L'approche De L'apprentissage Coopératif: La Performance Et L'attitude Des Étudiants En Comptabilité," *Canadian Social Science* 5, no. 6 (2009): 92.

[10] Gökhan Bayraktar, "The Effect of Cooperative Learning on Students' Approach to General Gymnastics Course and Academic Achievements," *Educational Research and Reviews* 6 (February 1, 2011): 62–71.

[11] B. Farrell and H. Farrell, "Student Satisfaction with Cooperative Learning in an Accounting Curriculum," *Journal of University Teaching and Learning Practice* 5, no. 2 (September 1, 2008): 45–61, https://doi.org/10.53761/1.5.2.4.

[12] E.O. Adu and G. Galloway, "The Effects of Cooperative Learning on Students' Economics Achievement and Attitude towards Economics," *Journal of Economics* 6, no. 1 (April 2, 2015): 30–36, https://doi.org/10.1080/09765239.2015.11885014.

[13] Nen-Chen Richard Hwang, Gladie Lui, and Marian Yew Jen Wu Tong, "Cooperative Learning in a Passive Learning Environment: A Replication and Extension," *Issues in Accounting Education* 23, no. 1 (February 1, 2008): 67–75, https://doi.org/10.2308/iace.2008.23.1.67.

[14] Mona M. Megahed and Fathia A. Mohammad, "Effect of Cooperative Learning on Undergraduate Nursing Students' Self-Esteem: A Quasi- Experimental Study," *Journal of Nursing Education and Practice* 4, no. 11 (August 24, 2014), https://doi.org/10.5430/jnep.v4n11p1.

[15] Farzad Mohammadjani and Forouzan Tonkaboni, "A Comparison between the Effect of Cooperative Learning Teaching Method and Lecture Teaching Method on Students' Learning and Satisfaction Level," *International Education Studies* 8, no. 9 (August 26, 2015), https://doi.org/10.5539/ies.v8n9p107.

[16] Chie Sugino, "Student Perceptions of a Synchronous Online Cooperative Learning Course in a Japanese Women's University during the COVID-19 Pandemic," *Education Sciences* 11, no. 5 (May 13, 2021): 231, https://doi.org/10.3390/educsci11050231.

[17] Abdulkadir Yoruk, "Students' Ideas on Cooperative Learning Method," *Universal Journal of Educational Research* 4, no. 5 (May 2016): 1231–35, https://doi.org/10.13189/ujer.2016.040537.

[18] Stephen Ntim, Michael Opoku-Manu, and Anthony Addai-Amoah Kwarteng, "Post COVID-19 and the Potential of Blended Learning in Higher Institutions: Exploring Students and Lecturers Perspectives on Learning Outcomes in Blended Learning," *European Journal of Education and Pedagogy* 2, no. 6 (2021): 49–59; Zhengyi Zhang, Yao Wang, and Siliu Cai, "Reflections on International Cooperative Education among Universities in the Post-COVID-19 Era," *Forest Chemicals Review*, 2021, 1396–1407; Randolph Nsor-Ambala, "The Impact of Collaborative Learning Approaches on Assessment Outcomes in an Accounting Theory Class," *Accounting Education* 31, no. 1 (2022): 1–38.

perform better than those students who rely on the conventional approach.[19] Other studies showed no supporting evidence (Johnston et al., 2021). The mixed results could not provide conclusive evidence on the link between the online cooperative learning approach and students' performance, particularly when teaching economics subject as a non-core subject for a group of students of different fields, such as accounting.

Another body of education literature has examined students' attitudes toward the online cooperative learning approach.[20] These studies showed that students tend to favor the online cooperative learning approach compared to the conventional approach.[21] These studies showed that students also tend to become more forward-looking to online classes and actively participate in class discussions. They become more positive towards the subject, as well as being able to communicate effectively and improve their social skills.[22] However, the study on attitudes toward online cooperative learning in the economics education literature has yet to be extensively examined. Examining this issue in the context of economics would shed some light on whether similar results would appear.

METHODOLOGY

The paper adopted a qualitative case study research methodology with narratives and semi-structured interviews as the main data collection instruments to solicit information from the participants at the institution understudy. Additionally, semi-structured interviews were used to collect data, and the collected data was presented in a non-verbatim format. The population comprised 39 students, and a sample of 16 students was purposively selected to participate in the study. The students were purposively selected on the basis that they would provide rich data that the researchers were looking for. The data analysis was done through the use of content analysis and presented thematically. The researchers selected this type of data analysis to ensure the easy presentation of data and easy reading and comprehension of the study.

Population and Sampling

The population for the study was the students from the faculty of education in the Department of EMS at the institution under study. The number of students from the EMS department, which served as the population, was 39 students. The study purposively selected 16 students for the study. These numbers were selected so to ensure that the data collected is sufficient and manageable.

Ethical Considerations

The researchers began by applying for ethical clearance approval by following the processes of the institution. Informed consent was sought in order to protect the participants' rights, and part of that process included outlining the objectives of the study and any prospective benefits (or lack thereof). The participants were made aware that their responses would be kept confidential and anonymous and that they could leave the study at any time without consequences.

PRESENTATION OF FINDINGS

The findings of the study are presented in this section. Quite a number of views were expressed by the participants in relation to online cooperative learning. Based on the findings, themes were developed to ensure a clear presentation of findings:

[19] Caroline Wong, Esther Fink, and Abhishek Bhati, "Future of Learning and Teaching in Higher Education Post-COVID-19," in *Digital Transformation in a Post-Covid World* (CRC Press, 2021), 221–44.

[20] Sandralyn Ifeoma OBUIKWU, Kingsley OBIUKWU, and Chimezie O Amanze, "Google Classroom A Tool Of Virtual Learning And Academic Performance Of Economics Students In Aifue: A Case Study Of Pre And Post Covid-19 Era (2019-2023)," *Social Sciences* 1, no. 1 (2024): 1–16; R.J. McClung, Y.H. Liao, and M.D. Barr, "Teaching Sustainable Development Goals Through Collaborative Tandem Learning in a Post-COVID-19 Era," in *SDGs in the Asia and Pacific Region* (Cham: Springer International Publishing, 2024), 597–617.

[21] Yoruk, "Students' Ideas on Cooperative Learning Method."

[22] Nsor-Ambala, "The Impact of Collaborative Learning Approaches on Assessment Outcomes in an Accounting Theory Class"; Noornadiah Md Sari, Khoo Yin Yin, and Zainizam Zakariya, "The Impact of Google Classroom-Assisted Collaborative Learning Approach on Economics Students' Attitudes," *International Journal of Advanced Research in Education and Society* 3, no. 4 (2021): 21–37.

Positive Experiences and Adaptation to Online Cooperative Learning

Many students reported a positive experience with online cooperative learning, noting that they were able to learn effectively without significant disruptions. One of the students had this to say:

> *We were learning well without any interference.*

Students found the use of technology in their online learning experiences quite engaging. They appreciated the ability to learn in their preferred environments and the convenience of revisiting recorded content when necessary. She said:

> *My online experience with online cooperative has been great because is quite interesting to use technology to learn, for example, a person can learn best in his or her best place of comfort, and when I miss the most important information I can go back to my recoding to receive what I missed.*

Some students expressed enthusiasm for online cooperative learning, with one student mentioning that they "loved it" and found it more appealing than other communication tools like FaceTime.

> *Loved it, it's cooler than FaceTime.*

Despite occasional connectivity challenges, students generally found online cooperative learning to be a great way to continue their education during the pandemic. They emphasized that it ensured safety and allowed for interaction with instructors and peers without disruptions. One of the students said:

> *It has been a great way of learning even though the impacts of connectivity sometimes become an obstacle. Online learning was very easy and very safe during the COVID-19 pandemic because it allowed us to study while we were on lockdown. It was easy for us to interact with our instructors while we were on lockdown and the lessons we conducted during that time. Meaning that there was no need to stop learning.*

Students noted that online cooperative learning was effective in keeping them safe from the risks associated with in-person learning during a pandemic. The student said that:

> *Online cooperative learning was effective because learning could take place without endangering our lives.*

Some students mentioned that online cooperative learning made certain aspects of learning easier, while others found it challenging, particularly for tasks that traditionally require in-person interaction. One of the students had this to say:

> *It has made things easier and some hard as well because there are some things that need to be done in contact.*

For some students, the experience began in 2022, and the transition to virtual and online communication was initially challenging but eventually became a captivating learning experience. The other student had this to say:

> *It began in 2022, and it was a good experience as I was new to learning virtually, and online communication was a very beguiling moment for me.*

Effective Online Collaboration for Economics Assessments

The findings indicate a theme centered around the effective ways in which students collaborated online for economics assignments or projects. Here are key examples that support this theme.

Students discussed challenges they faced during online learning, demonstrating a supportive peer environment where they helped each other understand and overcome obstacles. One of the students had this to say:

> *We had discussions during online learning and if anyone was experiencing challenges we explained to them.*

Students leveraged online tools such as Microsoft Teams and Microsoft Word for real-time collaboration. They highlighted the ease of conducting virtual meetings, sharing documents, and jointly working on assignments. One of the students had this to say:

> *We can use teams to discuss our ideas even if we are not in the same place but we can still have a meeting, and use Microsoft Word to type the assignment at the same time. When you click share then you enter your teammate's email address and both of you can write the assignment at the same time.*

Microsoft Teams and WhatsApp were mentioned as essential communication platforms for sharing information, organizing meetings, and enhancing collaborative efforts. The student said:

> *We used Microsoft Teams to communicate and whatsapp for sharing more information.*

Students expressed satisfaction with the effectiveness of these online tools, describing them as great and efficient for facilitating group work. He said:

> *We shared information by having meetings on teams, it's a great tool so far.*

Students emphasized the convenience of online learning, allowing them to gather information and conduct research using laptops and cell phones without needing to attend physical classes. The student said:

> *It's a lot easier to do assignments online because we are able to look for information online using our laptops and our cell phones without the need to go to classes in order to do them.*

Group assignments were structured with ample time for data and information collection, accommodating the virtual learning environment. The student had this to say:

> *Group assignments whereby we were given enough time to collect data and information.*

An online class format was established for comprehensive discussions and assignment instructions, streamlining the collaborative process. The student expressed that:

> *An online class first took place where everything would be discussed. Assignments were discussions through the online class and how they will be submitted.*

Online meetings were a fundamental component of their collaboration strategy, providing a platform for clarifying assignment expectations and sharing insights. One of the students said:

> *We collaborated through online learning by having online meetings to explain to each other what is expected to be done.*

Effective Online Tools and Platforms for Economics Cooperative Learning

The findings suggest a theme focused on the effective online tools and platforms that students found useful for facilitating cooperative learning in economics. Here are the key tools and platforms highlighted, along with their benefits. PowerPoint presentations were used to display study notes, enhancing the visual aspect of learning and making complex economic concepts more accessible. One of the students said:

> *We use PowerPoint to show the notes we were studying.*

Microsoft Teams emerged as a prominent tool for facilitating collaboration. It enabled students to share ideas, experiences, and insights, fostering interactive discussions. One of the students had this to say:

> *We mostly use Microsoft Teams for meetings, Microsoft Word and Moodle.*

Students appreciated tools like Microsoft Teams and PowerPoint for their user-friendliness. These platforms were easily accessible, allowing students to participate actively in online classes and discussions. One of the students said:

> *In Microsoft Team we were able to share our own ideas and experiences about economic activities.*

Personal devices such as laptops and cellphones, coupled with a reliable WiFi connection, were considered indispensable tools. They enabled students to access online class platforms, take notes, and engage effectively with course content. The student said:

> *I always use my laptop, cellphone and wifi connection. These tools were very useful because I was able to access the platforms where our classes were conducted. It was easy to make notes while I was in class. Microsoft Teams was very easy to operate and to log in.*

Overcoming Challenges in Online Cooperative Learning

The findings suggest a theme focused on the challenges encountered during online cooperative learning and the strategies employed to overcome them.

Students frequently faced network problems that disrupted their online learning experience. To overcome this challenge, some sought assistance from school ICT services to reset passwords or relied on rescheduled meetings to accommodate network-related issues. One of the students said:

> *Network connections sometimes became a problem. For Microsoft Word and Teams, we had a little challenge when we had to change our passwords. In that period of time, we couldn't get access to them. So we went to ICT at school to help us reset our password and we were able to use them again.*

Students mentioned that the duration of online lessons, typically lasting one hour, sometimes made it difficult to absorb all the necessary information, especially when coupled with network problems. Lecturers addressed this by rescheduling meetings for better convenience. One of the students had this to say:

> *The only challenge I faced was time. The duration of the lessons would be 1 hour and sometimes I would face network problems and then end up not getting as much information as I needed from the instructor.*
>
> *Yes, connectivity, our lecturer would reschedule our meetings to our convenient time to make sure we are not left behind and we understand every crucial aspect of the lessons.*

Network issues were common, particularly in certain living environments. To counteract this, lectures were often recorded, allowing students to review missed content at a later time. One of the students said:

> *The most common challenge was network issues due to the environment that I live in. Classes were recorded most of the time so if I missed a class or was disturbed due to network, I later watched the recording of the online class.*

Some students found it challenging to motivate themselves to participate in online cooperative learning since it was not easily monitored. This was addressed by encouraging active learner-centered approaches and tracking attendance through registers during online sessions.

> *Some did not cooperate because it's an online thing and no one is going to know if they participated or not. However, such issues were addressed by using a learner centered approach and/or asking learners questions. Lastly, you overcome attendance challenges by putting a register during online learning and teaching.*

Enhancing Future Online Cooperative Learning for Economics Students

The findings revolve around suggestions and opinions on how to enhance the online cooperative learning experience for economics students in the future. Here are key improvements and changes proposed by students.

Students recommended extending the duration of online sessions to provide more comprehensive coverage of the material and facilitate better understanding. One of the students had this to say:

> *Extending time will allow us to grasp the concepts of economics in online platforms.*

Some students emphasize the importance of spending more time on online sessions to ensure students are adequately prepared for the future, particularly in light of advancements in artificial intelligence.

> *I'm not so sure but spending more time on online sessions will allow us to be competent in the future due to the takeover by artificial intelligence systems.*

Suggestions included the use of interactive virtual simulations and practical scenarios related to economics. These simulations aim to provide hands-on learning experiences, enabling students to apply economic principles in real-world situations. One of the students had this to say:

> *Incorporating interactive virtual simulations and eventualities associated with economics can supply students with hands-on knowledge of experiences. These simulations can help economics students apply financial standards in practical situations, fostering a deeper appreciation of the subject matter*.

Simplifying complex economics concepts, such as drawing economics graphs, is proposed to make learning more accessible and understandable. One of the students emphasized this and said:

> *It's only a few things one should be changing like drawing economics graphs should be made easy.*

Some students emphasized that encouraging and motivating students to actively engage with online experiences to gain valuable skills and knowledge is important and necessary. The student had this to say:

> *Students must be motivated to engage themselves with online experiences so they can gain experience.*

Starting classes a bit earlier to allow students to socialize and prepare mentally, breaking content into manageable pieces, providing accessible learning materials, and prioritizing personal connections to maintain focus and motivation. The student said:

> *Start class a bit early to allow students to socialize, help students maintain focus and be motivated, break content down into manageable pieces, present accessible learning materials, and prioritize personal connections*.

Many students reported positive experiences and adaptability to online cooperative learning, finding it convenient and engaging. They appreciated the flexibility to learn in their preferred environments and the ability to revisit content. Students found online tools like Microsoft Teams, PowerPoint, and Microsoft Word to be highly effective for facilitating collaboration and learning. These tools enabled real-time communication, document sharing, and interactive discussions. Students encountered challenges such as network connectivity issues, time constraints, and distractions. To overcome these challenges, they sought technical support, rescheduled meetings, and relied on recorded sessions to catch up. In terms of improvements, students suggested extending session durations, incorporating multimedia elements, introducing interactive simulations, and simplifying complex concepts. They also highlighted the need for better connectivity in rural areas and emphasized the importance of motivation and engagement strategies.

DISCUSSION OF FINDINGS

Positive Experiences and Adaptation to Online Cooperative Learning

Many students expressed that their online cooperative learning experiences were good and without interference. This suggests that the transition to virtual learning was relatively smooth, allowing for uninterrupted education. Students found the use of technology for online cooperative learning to be interesting and engaging. These findings were in line with Mohammadjani and Tonkaboni, who argue that the online cooperative learning teaching method has a higher effect on students learning than the

lecture teaching method.[23] In addition, the findings showed that students appreciated the ability to learn in their preferred environments, which offered comfort and flexibility. These findings are aligned with Yoruk, who posits that the online cooperative learning method increases students' awareness of their environment and courses, self-efficacy, and self-confidence and helps students to socialize.[24] The findings indicated that online learning was seen as a great way to continue education during lockdowns and the pandemic. It ensured safety by allowing students to study from the safety of their homes without the need to halt their learning process. Students noted that online cooperative learning was effective and safe, emphasizing the importance of continuing education without putting lives at risk during the pandemic. Megahed and Mohammad, support these findings by asserting that the online cooperative learning method is an effective teaching approach that improves the self-esteem of students, and it is highly recommended instructional pedagogy to prepare students for lifelong learning.[25] However, the findings revealed that some students mentioned connectivity challenges, which could disrupt the online learning experience, and this has been argued by Wang and Cai, who asserted that much as online cooperative learning is possible, there are connectivity issues that affect it.[26] This highlights the importance of reliable internet access for effective online education. Online learning was described as both making things easier and more challenging. While it offered convenience, some aspects that traditionally require in-person interaction became harder in the virtual environment. For some students, the transition to virtual and online communication was a novel experience in 2022. While they found it intriguing, it also marked a significant adjustment.

Effective Online Collaboration for Economics Assessments

The first key finding highlights the collaborative and supportive nature of online learning environments. Students were actively engaged in discussions to assist peers who faced challenges. This peer support demonstrated a sense of camaraderie and a shared commitment to helping each other overcome obstacles. These findings are in line with Petrunich-Rutherford and Daniel, who observed that students who wholeheartedly engaged in group activities, exhibited collaborative behaviors, offered constructive feedback, and cooperated effectively with their peers were more likely to achieve higher test scores and superior course grades by the semester's end.[27] The second finding underscores the role of digital tools like Microsoft Teams and Microsoft Word in facilitating real-time collaboration. These platforms allowed students to conduct virtual meetings, share documents, and work together simultaneously on assignments, promoting efficient teamwork regardless of geographical distances. The findings are in line with Chen, Ke, and Chen, who claim that digital canvas now extends beyond the confines of mere content dissemination, nurturing collaboration through innovative conduits such as blogs, wikis, and social software.[28] The use of Microsoft Teams and WhatsApp as essential communication platforms further emphasized the importance of seamless communication in collaborative efforts.[29] These tools not only allowed for information sharing but also facilitated the organization of meetings and discussions, enhancing the overall collaborative experience. Students expressed satisfaction with the effectiveness of the online tools they used, particularly Microsoft Teams. This positive feedback highlights the importance of selecting reliable and user-friendly tools to foster productive group work in an online setting which is also supported by Petrunich-Rutherford and Daniel.[30]

Online learning was appreciated for its convenience and accessibility. Students could easily access information and conduct research using laptops and cell phones without the need for physical attendance. This flexibility contributed to a more convenient and adaptable learning environment. The inclusion of group assignments with sufficient time for data collection reflected a thoughtful approach to

[23] Mohammadjani and Tonkaboni, "A Comparison between the Effect of Cooperative Learning Teaching Method and Lecture Teaching Method on Students' Learning and Satisfaction Level."
[24] Yoruk, "Students' Ideas on Cooperative Learning Method."
[25] Megahed and Mohammad, "Effect of Cooperative Learning on Undergraduate Nursing Students' Self-Esteem: A Quasi- Experimental Study."
[26] Zhang, Wang, and Cai, "Reflections on International Cooperative Education among Universities in the Post-COVID-19 Era."
[27] Petrunich-Rutherford and Daniel, "Collaborative Quizzes: Impact on Student Performance and Attendance."
[28] Chen, Ke, and Chen, "Online Learning as a Panacea? An Empirical Study to Discuss Problem-Based Cooperative Learning in Taiwan."
[29] Van der Merwe, Fourie, and Yoro, "Learning Support Strategies for Learners with Neurodevelopmental Disorders: Perspectives of Recently Qualified Teachers."
[30] Petrunich-Rutherford and Daniel, "Collaborative Quizzes: Impact on Student Performance and Attendance."

accommodating the virtual learning format. This structure allowed students to collaboratively gather and analyze data, contributing to the success of their assignments. The introduction of an online class format for discussions and assignment instructions streamlined the collaborative process. This format ensured that students received comprehensive guidance and clarification, further enhancing their cooperative learning experiences. These findings were also supported by Chen, Ke and Chen through the literature.[31] Online meetings played a crucial role in clarifying assignment expectations and sharing insights among team members. These meetings provided a platform for effective communication, ensuring that all members were on the same page regarding project requirements. These findings highlight the diverse strategies and digital tools that students employ to foster effective collaboration in the online learning environment.[32]

Effective Online Tools and Platforms for Economics Cooperative Learning

The use of PowerPoint presentations to display study notes was highlighted as a valuable tool. This method enhanced the visual aspect of learning, making complex economic concepts more accessible. Visual aids like PowerPoint can simplify intricate topics and aid in better comprehension. Microsoft Teams emerged as a central platform for facilitating collaboration among students. These findings are supported by Petrunich-Rutherford and Daniel, who assert that LMS provides a space where students can seamlessly share ideas, experiences, and insights.[33] The platform fostered interactive discussions, contributing to a dynamic and engaging learning environment. Students expressed their satisfaction with the user-friendliness and accessibility of tools like Microsoft Teams and PowerPoint. These platforms were easily accessible, enabling students to actively participate in online classes and discussions.[34] User-friendly tools enhance engagement and efficiency in the virtual learning environment. The importance of personal devices such as laptops and cell phones, along with a reliable WiFi connection, cannot be overstated. These tools enabled students to access online class platforms, take notes, and actively engage with course content. Reliable connectivity is a fundamental prerequisite for effective online cooperative learning. Microsoft Teams was noted for its ease of operation and login process. An intuitive and straightforward interface can significantly reduce technical barriers, ensuring that students can focus on learning and collaboration rather than struggling with the technology itself.[35] These findings collectively highlight the critical role that technology and user-friendly platforms play in fostering effective cooperative learning in economics.[36] They emphasize the value of visual aids, collaboration tools, accessibility, and reliable connectivity in creating a conducive online learning environment.

Overcoming Challenges in Online Cooperative Learning

The findings shed light on the challenges faced during online cooperative learning and the strategies students and instructors employed to overcome these challenges. The findings revealed that network problems were a recurring challenge that disrupted the online learning experience. Some students faced difficulties accessing Microsoft Word and Teams when changing passwords. These challenges were confirmed by Bayraktar, who asserts that online learning has benefits but also there are challenges.[37] To address this, students sought assistance from the school's ICT services to reset passwords, ensuring uninterrupted access to essential tools. Students highlighted the time constraint posed by online lessons, typically lasting one hour. This limited timeframe made it challenging to absorb all the necessary information, especially when coupled with network issues.[38] Instructors addressed this by rescheduling meetings to accommodate students' convenience and optimize their learning experience. Network issues, often related to the student's living environment, were a common hindrance. In response, lectures were

[31] Chen, Ke, and Chen, "Online Learning as a Panacea? An Empirical Study to Discuss Problem-Based Cooperative Learning in Taiwan."
32 Van der Merwe, Fourie, and Yoro, "Learning Support Strategies for Learners with Neurodevelopmental Disorders: Perspectives of Recently Qualified Teachers."
[33] Petrunich-Rutherford and Daniel, "Collaborative Quizzes: Impact on Student Performance and Attendance."
[34] Chen, Ke, and Chen, "Online Learning as a Panacea? An Empirical Study to Discuss Problem-Based Cooperative Learning in Taiwan."
[35] Van der Merwe, Fourie, and Yoro, "Learning Support Strategies for Learners with Neurodevelopmental Disorders: Perspectives of Recently Qualified Teachers."
[36] Yoruk, "Students' Ideas on Cooperative Learning Method."
[37] Bayraktar, "The Effect of Cooperative Learning on Students' Approach to General Gymnastics Course and Academic Achievements."
[38] Van der Merwe, Fourie, and Yoro, "Learning Support Strategies for Learners with Neurodevelopmental Disorders: Perspectives of Recently Qualified Teachers."

frequently recorded, allowing students to revisit missed content at a later time. This recording feature ensured that students didn't miss out on crucial information due to connectivity problems. Some students found it challenging to stay motivated and participate actively in online cooperative learning since their engagement was not easily monitored.[39] To address this, instructors adopted active learner-centered approaches, encouraging students to take ownership of their learning. Additionally, tracking attendance through registers during online sessions helped ensure student engagement. There were concerns that students might not fully cooperate in the online learning environment because of reduced oversight. However, proactive measures like learner-centered approaches and questioning students helped maintain their engagement. The use of attendance registers added an element of accountability, promoting active participation.[40] These findings highlight the multifaceted challenges associated with online cooperative learning, ranging from technical issues to motivation and participation concerns. They also underscore the adaptability and resilience of both students and lecturers in implementing strategies to mitigate these challenges effectively.

Enhancing Future Online Cooperative Learning for Economics Students

The findings present valuable insights into the ways students believe future online cooperative learning for economics can be enhanced. These suggestions highlight a commitment to creating a more effective and engaging virtual learning environment. Students emphasize the need to extend the duration of online sessions. This is supported by Bayraktar, who posits that extensive time should be allowed during online cooperative learning.[41] This extension is seen as crucial for providing a more comprehensive understanding of economics concepts. It acknowledges the importance of allowing ample time for in-depth discussions and learning, and some students express concerns about the evolving landscape of education, particularly with the rise of artificial intelligence.[42] They suggest that dedicating more time to online sessions will better equip students to face the challenges of the future, where competency in economics is increasingly valuable. The incorporation of interactive virtual simulations and practical scenarios is recommended. These simulations offer hands-on learning experiences (Merwe, 2020), enabling students to apply economic principles in real-world contexts. This approach fosters a deeper appreciation for the subject matter and enhances practical skills. Simplifying complex economics concepts, such as drawing economic graphs, is highlighted as a necessary improvement. Making such concepts more accessible and understandable is essential for ensuring that all students can grasp fundamental economic principles effectively.

Motivating and engaging students in online experiences is considered essential. Encouraging active participation and ensuring that students remain motivated to engage with course content is vital for effective learning. To enhance the online cooperative learning experience, students suggest starting classes a bit earlier to allow for socialization and mental preparation.[43] Breaking down content into manageable pieces, providing accessible learning materials, and prioritizing personal connections are all strategies aimed at maintaining focus and motivation. These findings collectively demonstrate a student-driven commitment to improving online cooperative learning in economics. The suggestions encompass various aspects, including session duration, practical application, accessibility, motivation, and engagement. Implementing these recommendations in online economics courses can contribute to a more effective and enriching learning experience for students in the future.

Discussion Summary

Many students reported positive experiences with online cooperative learning during the COVID-19 pandemic. They appreciated the convenience, safety, and adaptability of online learning. Students found various online tools and platforms to be highly effective, including Microsoft Teams, PowerPoint, and Microsoft Word. These tools facilitated real-time collaboration, communication, and document sharing. Students faced challenges such as network connectivity issues and time constraints. To address these,

[39] Yoruk, "Students' Ideas on Cooperative Learning Method."
[40] Chen, Ke, and Chen, "Online Learning as a Panacea? An Empirical Study to Discuss Problem-Based Cooperative Learning in Taiwan."
[41] Bayraktar, "The Effect of Cooperative Learning on Students' Approach to General Gymnastics Course and Academic Achievements."
[42] Chen, Ke, and Chen, "Online Learning as a Panacea? An Empirical Study to Discuss Problem-Based Cooperative Learning in Taiwan."
[43] Yoruk, "Students' Ideas on Cooperative Learning Method."

they sought technical support, rescheduled meetings, and utilized recorded sessions for catch-up. Students suggested improvements for future online cooperative learning, including extending session durations, incorporating interactive simulations, simplifying complex concepts, and enhancing motivation and engagement. These recommendations aim to create a more comprehensive and engaging virtual learning environment.

RECOMMENDATIONS

Based on the findings and discussions regarding online cooperative learning in economics, here are some recommendations to enhance the online learning experience for economics students: Academics and heads of departments in the University should consider extending the duration of online sessions to provide more time for in-depth discussions, clarification of concepts, and comprehensive coverage of course materials. Longer sessions can lead to a deeper understanding of complex economic topics. Actively encourage and motivate students to engage with online experiences. Implement strategies that promote active participation, such as discussions, group activities, and peer collaboration. Foster a sense of enthusiasm and ownership in the learning process. Ensure that learning materials are easily accessible and well-organized. This includes clear instructions, readily available resources, and user-friendly platforms. Accessible materials make it easier for students to navigate the online learning environment. Ensure that students have access to technical support and assistance in case of network connectivity issues or technical challenges. Promptly address technical problems to minimize disruptions to the learning process. Continuously assess the effectiveness of online cooperative learning methods and tools. Collect feedback from students to identify areas for improvement and adapt the curriculum and teaching strategies accordingly.

CONCLUSION

In the aftermath of the COVID-19 pandemic, an analysis of students' experiences with online cooperative learning within the domain of economics uncovers a nuanced landscape of both opportunities and challenges. A significant number of students reported valuing the flexibility, accessibility, and collaborative nature of online learning modalities, which facilitated engagement with peers across diverse geographical locales. Nevertheless, this study identifies prevalent issues such as inconsistent internet connectivity, diminished opportunities for direct interpersonal interactions, and obstacles in achieving group cohesion, which collectively undermine the efficacy of cooperative learning in an online setting. While a subset of students demonstrated adaptability and success within this digital framework, a contrasting group reported struggles attributed to a lack of personal connection and the absence of tangible support mechanisms. Overall, findings suggest that a hybrid pedagogical approach, integrating both online and conventional instructional methodologies, might present the most comprehensive and effective strategy for enhancing cooperative learning experiences in the field of economics.

LIMITATIONS

First, the sample size and potential selection bias yielded restrict the generalizability of the results, as a small and non-random sample does not accurately represent the diverse student population. Additionally, as students' perspectives are subjective, biases in their responses had to be acknowledged, along with the potential influence of social desirability. The study's exclusive focus on a single institution also did not offer a comprehensive understanding of online cooperative learning. It is crucial for researchers to pave the way for future research that may address these concerns through more extensive and diverse approaches.

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