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Messengers in providing debates within a remote online learning of university students

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ABSTRACT

The study aims to investigate the effectiveness of using messengers for debates within remote online and blended learning environments for university students. The research design incorporates a mixed-methods approach, combining quantitative data collection and analysis with qualitative insights. By examining the benefits, challenges, and educational achievements associated with utilizing messengers for debates, this study seeks to provide valuable insights for educators and institutions striving to enhance student engagement and learning outcomes in digital learning contexts. It is concluded that using online debates via messengers in class helps students to increase knowledge, memorize, understand and use what has been learned (students should be able to show an understanding of the points being discussed), conduct some analysis of existing messages, see things differently and express their opinion, build social competency and embrace lifelong learning.

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1. INTRODUCTION

The crises that university professors faced during the pandemic and later during the war in Ukraine, when it was necessary to conduct classes online, but not all students and even the instructors had stable internet connection or electricity, led to the need to change the format of educational sessions in order to continue the learning process and maintain its quality under such conditions. Of course, they could have simply given assignments and checked them asynchronously, but they wanted to preserve the interactive nature of the classes and create a safe and creative environment for students that would promote the development of their critical thinking. This was precisely the reason for the emergence of our research. This study explores the potential of utilizing messaging applications, such as WhatsApp, Slack, Facebook Messenger, Telegram, and WeChat, to facilitate online debates and foster the development of students' critical thinking skills. Messaging applications are widely available tools that can be particularly helpful during challenging times. You do not need a stable internet connection to use them. These apps enable real-time document and file sharing, synchronous and asynchronous discussions (both written and oral), and facilitate group work, ensuring equal participation.

Students can engage in debates, demonstrate their understanding, collaborate with peers, and educators can easily access and engage with them. Furthermore, these messaging apps allow participants to follow links and watch lecture or lesson videos for future reference, join lessons at their convenience, and engage in asynchronous activities. Feedback is essential for learners to assess their progress and receive guidance. Teachers can offer personalized feedback through these platforms, direct learners' progress, and scaffold their learning. Students can also assess their learning and that of their peers, making informed judgments. Messengers are so useful in these conditions because they offer a low-bandwidth and accessible platform for conducting online classes. In areas with unstable internet connections or electricity, messengers allow students and instructors to engage in educational sessions without the need for continuous high-speed internet. By utilizing messaging applications, universities can preserve the interactive nature of classes, fostering a safe and creative environment that promotes critical thinking. The specific research questions the study aims to answer is: how effective are online debates conducted through messaging applications in developing students of different specialties critical thinking skills?

2. PROPOSED METHOD

Existing literature on remote online learning [1]–[8] has shown the benefits and challenges of this approach and its actualization during COVID-19 pandemic. Studies have highlighted the flexibility and accessibility of remote educational online delivery, both synchronously and asynchronously, so "online learning can be termed as the panacea for the crisis" [4], which is not only pandemia but natural calamities and military conflicts as well. Dhawan [4] conducted a strengths, weaknesses, opportunities, and challenges (SWOC) analysis of online learning where strengthen skills (problem-solving, critical thinking, and adaptability) and an innovative pedagogical approach are defined as opportunities.

According to researchers mentioned above, there are such benefits of remote online learning for learners as geographical accessibility, choice of ways to access course material (including digital resources and devices as smartphones and tablets), a degree of flexibility and self-motivation through self-directed learning [3], membership in a virtual community, especially asynchronously (for instance, Lin and Gao [5] study indicated students' stronger sense of community towards interacting, discussing, and sharing ideas, while synchronous learning, via the use of online communication apps and platforms, when applied collaboratively and interactively, can also support the learning theory of social constructivism).

As for the challenges, that is always the reverse of the medal, students' low motivation based on their unfamiliarity with online resources is mentioned, on the other hand, online learning provides such extensive time and flexibility that students seldom manage to carve out time for it [4], [9]. In addition, the lack of face-to-face communication and accessibility to certain types of technology [1] are mentioned as well. The last can lead to digital inequalities in obtaining devices for remote learning both for an online learner and as an instructor so suggestions for rapid response and iterative course design options need to be proposed [6]. The scholars also pointed out that COVID-19 and remote learning have accentuated the use of communication apps to support synchronous and asynchronous online distance learning. However, in the context of the "new norm" when delivering education, even more consideration must be given to digital applications and online platforms' "pedagogical fit" toward supporting distance learning. For example, exploration of the growth of EdTech start-ups for online learning (ZOOM Classroom, Unacademy, Coursera, Kahoot, and Khan Academy) was on focus of study Dhawan [4] and is defined as it cannot fully substitute for a teacher, but has the potential to enrich and augment instructional methods.

Lin and Gao [5] research reveals the advantages of engaging in courses through two remote online learning modalities. For example, synchronous remote online learning frequently fosters active interaction, while asynchronous online learning environments allow students to progress at their own speed, moreover, it "gives teachers and students more room to breathe" as teachers can create learning materials with adaptability, and students can utilize various digital tools to align with their individual timetables, granting them more space to explore and engage [2]. In general, it is crucial for higher education practitioners to cultivate a strong online student community and create a nurturing environment for distance learning in both formats.

The results of the survey of lecturers of the Berdyansk State Pedagogical University (Ukraine), conducted by the teaching excellence center "Ars Docendi" in January 2022, have shown that the remote online learning is seen as a necessity to quarantine restrictions. At the same time, it was recorded that a significant number of respondents (73%) had difficulties using digital tools. Implementing remote online learning is seen as positive but requires preparation. On the other hand, an annual survey of Berdyansk State Pedagogical University students elicited that in times of pandemics and wartime, they lacked communication with peers. Thus, teachers are focused on transforming passive tasks into active ones and involving students in collaborative work online in a remote learning format. Whereas the necessity of implementing remote online as a legal and full-fledged mode of education is obvious not only in Ukraine but all over the world the

question of benefits and challenges is worth considering. The results of lecturers' and students' surveys are used as a pre-stage of our study.

In conclusion, to the authors' mind, the main benefit of remote online learning is flexibility, and even more – the possibility of delivering education wherever learners are. At the same time, the challenge is seen in the digital adaptation of the traditional methods (for instance, debates) so they will not lose meaningfulness and be convenient for learners and educators in a new 'digital' use in the context of either remote online learning [10], [11]. This particular study is focused on the transformation of a traditional version of debates to a digital format via messenger apps in order to use it in remote online learning.

The potential effectiveness of debates as a pedagogical tool for improving speaking skills and fostering language development has been widely discussed by [12]–[20]. Debates are considered a contemporary and high-impact approach that engages learners and helps them enhance their communicative abilities, which are essential in modern society. Moreover, debates offer an authentic setting for students to employ the target language in a purposeful and effective manner. When engaging in debates, students participate with the clear intent of defending their stance and challenging their opponents' arguments. To achieve this objective, they must employ precise and sophisticated language to articulate their ideas persuasively. Through debates, learners can truly immerse themselves in meaningful and communicative language use [20]. The research conducted by Arung [12] concludes that after receiving instruction in debate techniques, students demonstrated noticeable improvements in their speaking skills, evident in their speaking test scores. The average achievement increased from 64 in the first cycle to 78.4 in the second cycle, indicating enhanced motivation and interest in speaking, fueled by their engagement in debates.

Jeong and Joung [21] have explored structured online debates as a means to enhance cognitive learning. The scholars noticed that participating in classroom debates can lead to various outcomes, including developing skills such as argumentation, research, critical analysis, memory improvement, speech planning, organization of arguments, active listening, giving feedback, and presenting counterarguments. In remote online learning, traditional debates can be transformed into an online format using appropriate algorithms and digital tools, particularly messengers. Several researches [22]–[31] are actively seeking ways to reimagine the learning environment and the use of mobile apps, including mobile messengers, is considered a potential solution. Ghimire [32] highlights that applications like Messenger can transform traditional teaching and learning concepts by offering a new, interactive, and innovative space for group discussions. Unlike specialized learning systems or online tools, most students are already familiar with popular messenger applications, making them easy to integrate into the educational process without the need for additional training. Moreover, the use of messengers eliminates the need for expensive software and allows for seamless content sharing, including videos, audios, texts, tests, games, online worksheets, and pictures.

Integrating online messengers in the classroom offers several benefits for students, such as increasing knowledge, aiding memory retention, practical application of knowledge, deeper understanding of the subject matter, new perspectives, development of social competence, and fostering a lifelong and holistic approach to learning. Messengers enable learners to leverage their prior knowledge and individual learning approaches, promoting active and useful learning experiences through collaborative synchronous and asynchronous practices. Additionally, messengers facilitate the receipt and utilization of feedback on students' work, further enhancing the learning process. Telegram is considered as one of the most convenient messengers for synchronous and asynchronous learning. Telegram offers user-friendly accessibility and versatility, allowing seamless usage across various communication devices like smartphones, tablets, and computers. Moreover, users can easily share and access a wide range of content formats, including documents, images, audio, and videos [27].

Yinka and Queendarline [31] conducted a descriptive survey involving 300 students to explore Telegram as an asynchronous, student-centered teaching method that enables information exchange among a network of people beyond time and location constraints. The researchers concluded that students actively utilize Telegram for both teaching and learning, and they found it to be a valuable complement to traditional learning approaches in tertiary institutions. However, before utilizing any messenger to organize online debates or other activities, teachers must evaluate online teaching activities based on language potential, meaning focus, learner fit, positive impact, and practicality. It is crucial to consider the following questions: Do the lesson objectives focus on form? Where and when will students focus on form during this activity? Will students have ample opportunities to use the language meaningfully? Is the activity suitable for the students' age group? Learner fit should also account for individual differences, such as age, learning style, and stages of development [33].

Additionally, teachers must assess the positive impact of using online tools/activities on students' lives and learning achievements, and express these outcomes to students. Teachers should strive to understand the level of change and impact they have created, enabling them to allocate resources effectively and continuously improve the long and short-term impact of their teaching practices. Moreover, practicality

should be considered, including the availability of resources, the potential need for parental, financial, or institutional support, and the ability to increase student achievements.

Having faced challenges during the crisis, we sought to find a way to continue using debates that promote the development of students' critical thinking, even under conditions of poor internet connectivity, whether in written form or through voice messages. While there are plenty of studies dedicated to the effectiveness of traditional debates for fostering students' critical thinking or the use of messengers in education, there is a lack of research on the effectiveness of using debates through messengers (in written or voice form). So, this study aims to demonstrate the effectiveness of using Telegram messenger in providing debates within remote online learning for university students and empirically test the level of educational achievements of students based on using the messenger in providing debates, using selected indicators.

3. METHOD

The study employed a mixed-methods research design, incorporating both quantitative and qualitative data collection and analysis. This design was chosen to provide a comprehensive and holistic understanding of the effectiveness of using messengers for debates in online learning. The researchers selected a representative sample of university students engaged in remote online learning to ensure the study's findings could be generalized to a broader population. Including students from different educational programs, such as secondary education (English language), secondary education (physics), and social work) allows the study to explore the effectiveness of messenger debates across various academic contexts, encompassing natural, humanitarian, and social disciplines. This diversity in disciplines and student backgrounds enhances the relevance and applicability of the study's findings, as it reflects the real-world scenarios where messenger debates might be implemented across various academic contexts. Quantitative data were collected through surveys and questionnaires administered to the selected participants. These instruments included Likert-scale, multiple-choice, and open-ended questions to capture quantitative and qualitative responses. Qualitative data were collected through semi-structured interviews and focus group discussions, enabling participants to share their experiences, perspectives, and suggestions in-depth.

Online debates can take place via different messengers (Facebook Messenger, Telegram, WhatsApp, and Viber), but our choice is Telegram because this messenger is the most widespread in our country and students do not need to download an extra app. The appropriate time for online debates is 15-20 minutes. A teacher offers the topic for discussion according to the discipline's content. It can be "online exams are the most reliable way to assess learning", "the importance of social-emotional learning for students' well-being", and "is there a relationship between space and time?". Three variants of online debates are proposed, involving different modes of communication and levels of engagement. The debates aimed to promote critical thinking skills and active participation among students, encouraging them to analyze, evaluate, and construct arguments.

3.1. Variant 1 (strict)

Students are divided into 'team for' and 'team against' randomly, using online apps. The debate must start with a proposer (from 'team for') who presents an argument in favor of the statement and reply to an opposer (from 'team against'). These should not be complete arguments, but the idea is to start the debate. In this case, teams work in breakout rooms (in Zoom) and discuss the arguments together, or they work synchronously in different charts in the messenger. Only the presenter is allowed to send arguments to the opponent. A 'team for' colleague will launch the debate on behalf of their debate team and a colleague from 'team against' will respond for their team and so on in turns. After the initial proposition from 'team for' and opposition from 'team against', the team takes turns to continue the debate for 15-20 minutes. There are some requirements to the messages that authors would like students to incorporate into their messages, where appropriate: i) reply to keep the debate organized and in the correct order. Take turns, 'team for' then 'team against' and so on; ii) do not just add one's thoughts but refer to what others have said by quoting or referring to the message or what someone said; iii) justify the arguments. The student can use arguments from his own team or the opposition team, as well as any other material, readings, or resources; vi) make sure that everyone keeps up to date with the debate. It will be quite fast and generate a lot of discussions, so do work together in the live session as a team; and v) the student should contribute messages that demonstrate the appropriate depth of thinking and criticality. The debate will close after 15-20 minutes maximum.

3.2. Variant 2 (free debate: asynchronous)

Platforms: Facebook Messenger, Telegram, WhatsApp, and Viber. Debate duration: flexible. Structure: students also work in 'team for' and 'team against' groups. They do not necessarily discuss everything in real-time but rather add their thoughts and arguments asynchronously within the chat groups, referencing previous arguments made. The requirements for the messages are the same as in the strict debate

variant, where students justify their arguments and refer to each other's statements. The debate unfolds over time, and students contribute their thoughts at their convenience within the specified duration.

3.3. Variant 3 (video or audio group chat via messenger)

The teacher can conduct 3-minute debates in pairs. Students choose one topic at a time or the teacher can make pairs randomly (for instance, use http://wheelofnames.com). One student represents 'team for' and presents an argument in favor of the statement and is replied to by an opposing student who represents 'team against'. Agree on time limits such as 3 minutes with possible extensions of 1-2 minutes. Use format for topic talk, such as, who, what, when, why, and how with intro/middle/ending. Take turns for as long as both are comfortable or decide beforehand. At the end of the debate in every variant the participants can vote to see which team or a student (if they worked in pairs) provided the strongest and most convincing arguments. They could reflect on what they have learned about the topic with the help of online debates. As a more advanced teaching approach for giving and getting feedback, the teacher can use metacognitive feedback loop. The teacher can get learners to think about how they arrived at their answers or understanding. Use a Socratic line of questioning to help learners discover the path they traveled upon.

Stein and Wanstreet [34] proposed the following guidelines to students for how groups should engage in a collaborative chat:

i) determine the intention of the question. What should you have addressed by the end of your discussion?
ii) engage with the content by including your experience and thoughts within the question's context;
iii) while you are chatting, designate a member to search for relevant material on the Web that might assist with your discussion. Search for documents that would reinforce the points or expand the argument. In addition to interacting with each other and the assigned content, interact with material and human resources;
iv) consider a two-to-one allocation based on a 60-minute chat, leaving at least 20 minutes to write your collective post. Write at least a one to two-paragraph group draft response before concluding your chat;
v) your recorder will need to clean up the text, include relevant links, and post to the whole-class discussion board;
vi) respond to at least one group posting. The purpose of the response post is to challenge, clarify, expand, and illuminate the group's thinking. Your comments should be informed by questions that might arise from reading the post. If you agree with the thinking, state why. If you challenge, cite evidence for your view. Opinions should be supported by your experiences and with content related to the question we are examining;
vii) each group member should read the responses from other class members regarding your group's original post;
viii) reconvene your chat group, discuss the feedback received, review your original thinking, and repost your new and improved understanding of the issue.

Thus, the proposed three variants of online debates create learning situations when students are engaged in argumentations requiring high cognitive processing levels from Bloom's taxonomy, such as analyzing, evaluating, and constructing. Students should have some knowledge and understanding of the topic and the ability to conduct a proper analysis of the topic. Also, when creating an explanation posting, students should be able to show an understanding of the points being discussed and identify the relevant information that may clarify the statement. In an evidence or critique posting, students should conduct some analysis of existing messages and add information from other resources, synthesize multiple elements, and identify the abstract relations between available information and their opinion. So, students are expected to be engaged in different levels of cognitive processing in constructing different types of postings and multiple levels of cognitive learning can be achieved only by applying each type of debate.

3.4. Procedure

The study was conducted from the beginning of 2021 to the end of 2022 in three stages. The research base of the study was Berdyansk State Pedagogical University (Ukraine). 80 students from three educational programs (secondary education (English language), secondary education (physics), and social work) participated in it. The debates were provided within a remote online learning format (synchronous and asynchronous). The participants of the study were informed about the purpose and the structure of the research and assured that their names would not be used in the study reports. Participation in the study was voluntary. Prior to the debate, students were given instructions to independently gather information and conduct research to support arguments for either side. Since the students were unaware of the side they would be assigned to, they had to collect information for both sides, an essential process that expanded their content knowledge. At the beginning of the debate session, students were randomly assigned to either side of the debate. The students were presented with debates on a weekly basis throughout the entire year.

In our research, students were invited to participate in a short survey as part of the course evaluation. The survey utilized a 5-point rating scale, where 1 represented strongly disagree, 2 represented disagree, 3 represented neutral, 4 represented agree, and 5 represented strongly agree. The survey consisted of three statements related to the debates: i) the debates during the course stimulated my critical thinking about the subject matter more than the assigned textbook and lecture format; ii) I found the debate activities highly beneficial to my learning; and iii) the debates helped me establish connections between the subject matter and real-life experiences. The collected data was used to show the percentage of each rating for each question was calculated and reported in the study. Besides the quantitative survey questions, students' qualitative feedback from post-debate discussions and written feedback was also included for analysis. Two authors of this paper carefully reviewed the qualitative feedback and discussed it until they reached a consensus on the effectiveness of using debates via messengers.

4. RESULTS AND DISCUSSION

In light of the research questions posed in this study, the research findings were summarized and subsequently discussed in qualitative and quantitative data.

4.1. Qualitative data

The study was conducted over a period of 2 years in three stages with the aim to develop students' critical thinking by means of debates via messengers in a remote online learning format (synchronous and asynchronous). There were 80 students from three educational programs participated in it. Stage 1 of the study was conducted in the spring semester of 2021, when the authors decided to use debates via Telegram. Four groups of students from three educational programs (secondary education (English language), secondary education (physics), and social work) were selected to participate. Each group of students was divided into two subgroups, experimental (EG) and control (CG) groups. Teachers developed several debating activities to use online via messengers as shown in Table 1, discussed the instructions for students, the ways of assessments of students' work, the length of synchronous online debates, and the frequency of their use. The level of fundamental knowledge of students who were selected to participate in our experiment was determined at the first stage of the experiment based on the results of previous learning achievements, interviews, and test tasks. The systematization and generalization of the data the authors gained showed that the results of the basic training level of the students of the control and experimental groups were close on average.

Table 1. Participants' structure

Educational programs	University lectures, N	Students, N (number of participants)
Secondary education (English language)	2	42 (group 1: 22 (EG–11; CG–11); group 2: 20 (EG–10; CG–10))
Secondary education (physics)	1	12 (EG–6; CG–6)
Social work	1	26 (EG–13; CG–13)

Stage 2 of the study was conducted in the 2021-2022 academic year. At this stage of the experiment, experimental and control groups with the same number of participants were formed using a random selection of students. Evaluation of students' educational achievements during the experiment was carried out based on formative and summative control, the content of which was correlated with the content of training in every discipline. At the same time, teachers took into account the results of systematic observations of the educational process, conversations, questionnaires, and interviews of students regarding the features and main results of experimental learning. To test the hypothesis, every teacher obtained one group of students involved in the debate intervention (at least once a week) and a second group of control students who had their traditional classes based on coursebooks without any debate. Before the debate, students of the experimental group were given materials on topics related to the subjects they learned and instructed in preparing for online debates. Teachers used 15–20-minute synchronous debates on their courses once a week or their asynchronous variant using ordinary messages, voice messages, or group charts. It should be mentioned that in the teaching-learning process, many students joined the class enthusiastically. They paid attention to the lesson, although many of them were confused with the debate technique because they had never practiced debating before.

Stage 3 of the study was conducted in the autumn semester of 2022, when teachers evaluated the results of their work, surveyed students, and tested the results of students' achievements in their disciplines in both groups (experimental and controlled). At the end of the experimental training, the authors conducted a control measure in the experimental and control groups as seen in Table 2, according to the following

indicators: i) the depth and nature of mastering the material according to the content of the study; ii) the ability to analyze the studied phenomena in their relationship and development; iii) the nature of oral answers to the questions (argumentativeness, clarity, brevity, logic, and consistency); iv) the nature of the written answers to the questions (argumentativeness, clarity, brevity, logic, and consistency); v) the ability to apply theoretical provisions when solving practical problems; vi) the ability to analyze the reliability of the obtained results; and vii) the ability to conduct a discussion.

Table 2. Control measures in the experimental and control groups

Groups	The level of educational achievements of students according to the selected indicators						
	1	2	3	4	5	6	7
Secondary education (English language), group 1							
Control group	9	11	16	17	20	22	21
Experimental group	17	21	31	32	33	36	41
Secondary education (English language), group 2							
Control group	8	13	15	17	17	21	18
Experimental group	21	27	29	30	31	36	38
Secondary education (physics)							
Control group	9	14	17	19	23	30	27
Experimental group	21	28	33	36	41	47	57
Social work							
Control group	12	25	23	24	31	28	38
Experimental group	21	43	43	47	56	48	63

Findings suggest that using debates via messengers in higher education for students of different specialties, including secondary education in English, secondary education in physics, and social work, can have a positive impact on various educational achievements and critical thinking skills. Secondary education (English language), group 1, the experimental group consistently showed higher success rates in all criteria, ranging from 62% to 67%. The use of debates via messengers appears to enhance students' ability to conduct discussions and provide answers with greater argumentativeness, clarity, brevity, logic, and consistency. Secondary education (English language), group 2, the experimental group achieved the biggest success in criterion 1, "depth and nature of mastering the material," at 72.41%. This indicates that students in the experimental group exhibited higher proficiency in comprehending and engaging with the study content compared to the control group. Secondary education (physics), group 3, the experimental group demonstrated the biggest success in criterion 1, "depth and nature of mastering the material," at 70.00%, and also showed substantial success in criterion 7, "ability to conduct a discussion," at 67.86%. However, there was a lower success rate in criterion 6, "Ability to analyze the reliability of the obtained results," at 61.00%. Social work, group 4, the experimental group achieved the biggest success in criterion 4, "nature of written answers to questions," at 66.25%. This indicates that students in the experimental group provided written answers with higher argumentativeness, clarity, brevity, logic, and consistency compared to the control group. The experimental group in social work also demonstrated higher success rates in most criteria.

Comparing the results of the experiment across the four groups, it can be concluded that the experimental groups consistently outperformed their respective control groups in various criteria. This suggests that using debates via messengers is effective in enhancing students' critical thinking, analysis skills, and ability to engage in discussions in different academic contexts. However, it is essential to consider individual factors, group dynamics, and specific program characteristics when interpreting the results. Overall, the findings support the idea that debates via messengers can be a valuable educational tool to foster the development of critical thinking skills and promote interactive learning experiences in higher education across different disciplines.

4.2. Qualitative data

According to the data obtained from the survey. Most respondents of the experimental groups told that debates during the course stimulated their critical thinking about the subject matter more than the assigned textbook and lecture format (74%). They found the debate activities highly beneficial to their learning (94%) and the debates helped them establish connections between the subject matter and real-life experiences (54%).

The experimental training results show that using online debates via messengers, even during remote and sometimes asynchronous learning, improves the systematicity of students' critical thinking and their knowledge of the discipline. The obtained information is confirmed by the results of observations of the

students of the experimental and control groups, which proved a significant difference in the levels of educational activity in the lesson and independent work, the effectiveness of the acquired knowledge, and the ability to self-assess. Similar results for the positive impact of online debates via messengers on students' knowledge, skills, and educational achievements were found in other studies [12], [13], [20], [23], [30], [31]. However, the research also identified challenges associated with this approach. Students' low motivation due to unfamiliarity with online resources, the lack of face-to-face communication, and limited accessibility to certain technologies were among the challenges reported, as well as in other studies [25], [26], [28], [29]. Moreover, the study revealed the existence of digital inequalities in accessing devices for remote learning. As the sample size is rather small, the survey results cannot be generalized as the sample (n=80) selected cannot exemplify the entire population at large. Rather, this study should be considered an exploratory investigation that aims to identify possible issues and trends for further research.

5. CONCLUSION

In conclusion, this study sheds light on the promising potential of using messenger applications like Telegram for conducting online debates in higher education, especially in the face of challenges posed by the pandemic and remote learning. The research findings underscore the positive impact of messenger-based debates on students' critical thinking skills, knowledge acquisition, and communication abilities. These results have important implications for educators and institutions, highlighting the value of integrating such technology into the learning process to engage students more effectively, promote active learning, and enhance their cognitive abilities. The study employed a mixed-methods research design, collecting both quantitative and qualitative data from 80 university students. The results indicated that the experimental groups consistently outperformed the control groups in various criteria, demonstrating the positive impact of using messenger debates in enhancing students' critical thinking, knowledge acquisition, and communication skills.

The implications of this research go beyond the immediate context of the study, emphasizing the accessibility and adaptability of messenger platforms for educational purposes, even in regions with limited connectivity. Additionally, the study's findings highlight the importance of addressing digital inequalities and providing support to students who may struggle with online resources. While acknowledging its limitations, including the small sample size, this study sets the stage for further investigations into the effectiveness of messenger-based debates in various educational settings. Ultimately, it underscores the potential for technology to enrich the educational experience and nurture critical thinking skills among students, paving the way for more innovative approaches to remote learning and online engagement.

REFERENCES

[1] G. Baxter and T. Hainey, "Remote learning in the context of COVID-19: reviewing the effectiveness of synchronous online delivery," *Journal of Research in Innovative Teaching & Learning*, vol. 16, no. 1, pp. 67–81, Mar. 2023, doi: 10.1108/JRIT-12-2021-0086.

[2] S. J. Daniel, "Education and the COVID-19 pandemic," *Prospects*, vol. 49, no. 1, pp. 91–96, Oct. 2020, doi: 10.1007/s11125-020-09464-3.

[3] N. L. Davis, M. Gough, and L. L. Taylor, "Online teaching: advantages, obstacles and tools for getting it right," *Journal of Teaching in Travel & Tourism*, vol. 19, no. 3, pp. 256–263, Jul. 2019, doi: 10.1080/15313220.2019.1612313.

[4] S. Dhawan, "Online learning: a panacea in the time of COVID-19 crisis," *Journal of Educational Technology Systems*, vol. 49, no. 1, pp. 5–22, Sep. 2020, doi: 10.1177/0047239520934018.

[5] X. Lin and L. Gao, "Students' sense of community and perspectives of taking synchronous and asynchronous online courses," *Asian Journal of Distance Education*, vol. 15, no. 1, pp. 169–179, 2020.

[6] M. Lynch, "E-learning during a global pandemic," *Asian Journal of Distance Education*, vol. 15, no. 1, pp. 189–195, 2020.

[7] K. Syauqi, S. Munadi, and M. B. Triyono, "Students' perceptions toward vocational education on online learning during the COVID-19 pandemic," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 9, no. 4, pp. 881–886, Dec. 2020, doi: 10.11591/ijere.v9i4.20766.

[8] M. Waruwu, Y. Dwikurnaningsih, and S. T. Satyawati, "Online-based activities to improve students' critical thinking, problem solving, and communication," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 12, no. 3, pp. 1645–1653, Sep. 2023, doi: 10.11591/ijere.v12i3.24719.

[9] F. I. Kusuma, N. Suryani, and S. Sumaryati, "Mobile application-based media learning and its' effect on students' learning motivation," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 11, no. 3, pp. 1353–1359, Sep. 2022, doi: 10.11591/ijere.v11i3.22481.

[10] N. Y. Dmitrenko, O. V. Voloshyna, S. S. Kizim, K. V. Mnyshenko, and S. V. Nahorniak, "Smart education in the prospective teachers' training," *CTE Workshop Proceedings*, vol. 10, pp. 414–429, Mar. 2023, doi: 10.55056/cte.568.

[11] R. S. Gurevych, N. Y. Dmitrenko, A. I. Petrova, O. A. Podzygun, and N. R. Opushko, "Use of an e-textbook for pre-service teachers in autonomous learning of English for specific purposes," *Information Technologies and Learning Tools*, vol. 89, no. 3, pp. 64–77, Jun. 2022, doi: 10.33407/itlt.v89i3.4941.

[12] F. Arung, "Improving the students' speaking skill through debate technique," *Journal of English Education*, vol. 1, no. 1, pp. 70–76, 2016.

[13] D. Burek and C. Losos, "Debate: where speaking and listening come first," *Voices from the Middle*, vol. 22, no. 1, pp. 49–57, 2014, doi: 10.58680/vm201426063.

[14] D. Paulette and J. C.Wolf, *Speech communication made simple*. Pearson Education, 2013.
[15] R. L. Healey, "The power of debate: reflections on the potential of debates for engaging students in critical thinking about controversial geographical topics," *Journal of Geography in Higher Education*, vol. 36, no. 2, pp. 239–257, May 2012, doi: 10.1080/03098265.2011.619522.
[16] R. Kennedy, "In-class debates: fertile ground for active learning and the cultivation of critical thinking and oral communication skills," *International Journal of Teaching and Learning in Higher Education*, vol. 19, no. 2, pp. 183–190, 2007.
[17] W.-J. Kim and J.-H. Park, "The effects of debate-based ethics education on the moral sensitivity and judgment of nursing students: a quasi-experimental study," *Nurse Education Today*, vol. 83, p. 104200, Dec. 2019, doi: 10.1016/j.nedt.2019.08.018.
[18] L. Guoqiang, "Improvement of speaking ability through interrelated skills," *English Language Teaching*, vol. 2, no. 3, pp. 11–14, 2019.
[19] A. el Majidi, R. de Graaff, and D. Janssen, "Students' Perceived effect of in-class debates in second language learning," *European Journal of Applied Linguistics and TEFL*, vol. 7, no. 1, pp. 35–56, 2018.
[20] A. el Majidi, R. de Graaff, and D. Janssen, "Debate as a pedagogical tool for developing speaking skills in second language education," *Language Teaching Research*, p. 13621688211050619, Oct. 2021, doi: 10.1177/13621688211050619.
[21] A. Jeong and S. Joung, "Scaffolding collaborative argumentation in asynchronous discussions with message constraints and message labels," *Computers and Education*, vol. 48, no. 3, pp. 427–445, 2007, doi: 10.1016/j.compedu.2005.02.002.
[22] M. Al-Emran, H. M. Elsherif, and K. Shaalan, "Investigating attitudes towards the use of mobile learning in higher education," *Computers in Human Behavior*, vol. 56, pp. 93–102, 2015.
[23] I. M. Alfaki and K. Alharth, "Towards a digital world: using social networks to promote learner's language," *American International Journal of Contemporary Research*, vol. 4, no. 10, pp. 105–114, 2014.
[24] Aicha Blehch Amry, "The impact of WhatsApp mobile social learning on the achievement and attitudes of female students compared with face to face learning in the classroom," *European Scientific Journal*, vol. 10, no. 22, pp. 116–136, 2014.
[25] R. Fojtik, "Ebooks and mobile devices in education," *Procedia - Social and Behavioral Sciences*, vol. 182, pp. 742–745, May 2015, doi: 10.1016/j.sbspro.2015.04.824.
[26] P. C. Giri and K. Rana, "Lessons learned from teaching English through Facebook live for future," *International Journal of Technology in Education and Science*, vol. 6, no. 1, pp. 14–31, Jan. 2022, doi: 10.46328/ijtes.309.
[27] Z. H. Iksan and S. M. Saufian, "Mobile learning: innovation in teaching and learning using Telegram biographies of authors," *IJPTE : International Journal of Pedagogy and Teacher Education*, vol. 1, no. 1, pp. 19–26, Mar. 2017, doi: 10.20961/ijpte.v1i1.5120.
[28] A. Jeong and S. Frazier, "How day of posting affects level of critical discourse in asynchronous discussions and computer-supported collaborative argumentation," *British Journal of Educational Technology*, vol. 39, no. 5, pp. 875–887, Sep. 2008, doi: 10.1111/j.1467-8535.2007.00789.x.
[29] S. So, "Mobile instant messaging support for teaching and learning in higher education," *The Internet and Higher Education*, vol. 31, pp. 32–42, Oct. 2016, doi: 10.1016/j.iheduc.2016.06.001.
[30] Y.-T. Sung, K.-E. Chang, and T.-C. Liu, "The effects of integrating mobile devices with teaching and learning on students' learning performance: a meta-analysis and research synthesis," *Computers & Education*, vol. 94, pp. 252–275, Mar. 2016, doi: 10.1016/j.compedu.2015.11.008.
[31] A. R. Yinka and N. N. Queendarline, "Telegram as a social media tool for teaching and learning in tertiary institutions," *International Journal of Multidisciplinary Research and Development*, vol. 5, no. 7, pp. 95–98, Jul. 2018.
[32] S. P. Ghimire, "Use of social media in English language learning and teaching in Nepal," *NELTA ELT*, vol. 5, no. 1, pp. 1–7, 2021. [Online]. Available: https://neltaeltforum.wordpress.com/2021/07/27/use-of-social-media-in-english-language-learning-and-teaching-in-nepal/.
[33] M. Pienemann, "Learnability and syllabus construction," in *Modelling and assessing second language acquisition*, K. Hyltenstam and M. Pienemann, Eds., Clevedon, UK: Multilingual Matters, 1985, pp. 23–75.
[34] D. S. Stein and C. E. Wanstreet, "Discussions in online and blended learning: a tool for peer assessment," in *Assessment in Online and Blended Learning Environments*, S. Koç, X. Liu, and P. Wachira, Eds., Charlotte, NC, USA: Information Age Publishing, Inc., 2015, pp. 253–267.

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