

# Analyzing the Issues of Using Problem-Based Learning in an Online Platform from a Private Lecturer's Perspectives

Ihsan Noor Fauzanie Rahman\*, Rojab Siti Rodliyah

English Education Department, Post Graduate School Program, Universitas Pendidikan Indonesia

\*Corresponding author. Email: [ihsannoorfauzan@upi.edu](mailto:ihsannoorfauzan@upi.edu)

## ABSTRACT

The covid-19 disease has reduced direct engagement between professors and undergraduates in physical meetings. The alternative way to cover the missing part is by using the technologies as a tool to keep communicating, such as Zoom, Google Meet, and WhatsApp. This study intends to discover the difficulties and limitations and how Mia (Private Lecturer), who works as a facilitator or instructor to her students, handles and discovers a way to fill the emptiness in virtual learning. This research used a thematic content analysis to select the subtext, define the content categories, sort materials into categories, and conclude the results. The findings reveal that the private lecturer has encountered external and internal issues that prevent her from giving her best service as an instructor in a virtual classroom. As an elder lecturer, Mia could not keep up with the alteration of education's way of teaching. The difficulties and limitations of Mia as the lecturer were operating the technologies and the virtual classroom, such as Zoom as the primary podium for applying problem-based learning in a particular subject, which did not work for her to apply.

**Keywords:** Covid-19, Higher education, Problem-based learning, Virtual learning.

## 1. INTRODUCTION

Problem-based learning (PBL) has been employed in advanced education (Barrows, 1996). When anything is tried to be implemented digitally, problems might arise and prevent students and lecturers from continuing with the activity in class and cause them to lose sight of what they are learning. Unfortunately, the pupils of today's age must deal with the worst scenario. They could no longer feel as if they were actively participating in school or university, which would force them to manage things digitally.

In PBL, students gain knowledge of a topic by solving a flexible issue. Hmelo-Silver's research (2004) demonstrates that students exercise thinking techniques and subject-matter expertise. Experience-based education has a long history of being supported by problem-based learning strategies. According to psychological theory and research, teaching pupils to solve problems allows them to study novels and to gratify reasonable policies. According to Fogarty (1997), PBL entails eight steps including (1) classifying the difficulty, (2) labelling the trouble, (3) harvesting data, (4) drafting a provisional guess, (5) conducting an investigation, (6)

perfecting the problem that has been defined, (7) coming to a conclusion about collaborative solutions, and (8) testing solutions to problems.

Online learning lacks face-to-face instructor-student communication (Allen & Seaman, 2007). For some teachers, particularly older teachers, online learning creates challenges for them. For example, a study conducted by Rahayu and Wirza (2020) revealed that older teachers in Indonesia have problems in producing, explaining, and giving e-learning feedback to students. As a response to this, teachers must collaborate to define challenges, explore diverse views, propose solutions, weigh repercussions, and ponder on conclusions (Harrington, 1995; Hmelo-Silver, 2000; Hmelo-Silver & Barrows, 2006; Leinhardt & Steele, 2005; Mayer & Wittrock, 2006). Apart from that, online teachers are faced with other challenges, like lack of technology skills, insufficient infrastructure, and limited high-speed internet connection that support them from delivering online teaching (Ramij & Sultana, 2020; Yusnilita, 2020). Online learning also makes it difficult for them to measure student participation (Sumanth, 2021). While some teachers are excited about online education, many think they could learn more through traditional education

due to poor preparation and effectiveness (Sareen & Nangia, 2020).

According to Zhong (2020), poor admission, the obtainability of cyberspace, a deficiency of equipment and scholars' digital learning skills, and inappropriate interaction with instructors hampered the deployment of online learning. Many students and instructors may have endured emotional or psychological difficulty at home or in their living environment, preventing them from participating. We do not know the best online home-schooling approaches (Petrie, 2020). Hazzan (2002a) recognized many concerns with online learning, including the absence of in-person contact between professors and pupils. Fein and Logan (2003) found that online teachers may struggle with design, delivery, and follow-up. O'Malley and McCraw (1999) found that pupils enrolling in virtual classrooms felt they could not learn as much as in face-to-face sessions. Nambiar (2020) corroborated that apprentices judged cyber lessons to lack prominence.

This qualitative approach addresses these relevant analysis concerns: What are the difficulties and limitations of online learning for the private lecturer when implementing the problem-based learning method? Furthermore, how does the private lecturer overcome her difficulties and limitations when implementing the problem-based learning method in online learning? This study also seeks to understand the challenges, restrictions, and methods faced by the participant in this study when implementing problem-based learning during the pandemic.

## 2. METHOD

This study investigates a lecturer's difficulties and restrictions while implementing problem-based learning during the pandemic. It employed a qualitative design to describe and analyze 'human and communal performance in how people perceive it within a given public setting' (Ary, Jacobs, Sorensen, & Razavieh, 2010, p. 420). The research participant was a private university lecturer located in Bandung, Indonesia. Mia (pseudonym) is a 55-year-old private professor who has teaches sixth graders in PBL. The data in this study were collected from observation, interview, questionnaire, documentation, and triangulation. This qualitative study uses context involvement, direct observation, in-depth interviews, and documentation analysis (Sugiyono, 2008).

The researchers used a Zoom interview to learn about Mia's experiences as an online PBL facilitator. An interview consists of a question-and-answer session between an interviewer and interviewee. In an interview, 'data is obtained face-to-face or by phone' (Ary et al., 1985, p. 342). The interviewer must engage directly to acquire data, and face-to-face or computer

communication is possible. Creswell (2008) classed interviews as one-on-one, focus group, telephone, and E-mail. In this study, the researchers utilized a one-on-one interview to acquire data. Thematic content analysis was used to analyze data. The analysis involved selecting the subtext, establishing the content categories, sorting materials, and concluding the outcomes (Lieblich, Tuval-Mashiach, & Zilber, 1998). Relevant texts or elements of the story were picked and put in new subtexts or files. The files were then synthesized and interpret using the common-sense assumptions to information. Materials were sorted into categories using actual phrases or quotes to pertinent topics from the same or many tales. Lastly, the results of analysis are presented.

## 3. FINDINGS AND DISCUSSION

Online learning was unavoidable during the Covid pandemic and thus increasing the needs to use and transfer knowledge to the students smoothly. The expectation was prodigious for these virtual platforms; however, the results would be something that would answer the anxieties of everyone in the world, including in Indonesia. One thing that impacted this online learning was the relationship between the students and teachers in a class. The role of the educator could not be as significant as how it was supposed to be when it was offline, especially for the older teachers. This one was in line with the study from Indonesia showing that more senior teachers were confronted complications in generating appealing matter, defining, and providing pointers via internet schemes (Rahayu & Wirza, 2020).

This study found that Mia experienced issues on fostering the students: how to explore their problems, state and integrate what they knew about them, and so on. Sometimes, her instruction was not entirely explicit for the students due to signal issues, so her education flow could not be delivered quite well to her students. The communication between her and her students that required collaboration was getting cut off because of the signals' problems so that the message itself could not be transmitted well. The findings were as in line with previous studies study where 'educators are challenged with countless multifaceted snags that involve partnership with their classmates as they border the concerns, deliberate manifold standpoints, converse resolutions, anticipate penalties, and ruminate on verdicts' (Harrington 1995; Hmelo-Silver, 2000; Hmelo-Silver & Barrows, 2006; Leinhardt & Steele, 2005; Mayer & Wittrock, 2006). In addition, the study discovered that Mia did not know what to do when the signals' disturbed the flow of her communication with her students as well as how to fix it had made the writer opine that she was not ready for the virtual classroom. This suggests that teachers are confronted with difficulties through online courses due to lack of practical services (Yusnilita, 2020).

This study uncovered that Mia had several limitations that generated numerous difficulties and prevented her from providing the best service for her students in an online class. Her willingness to meet their students physically instead of doing the problem-based learning activities virtually, especially when it was about reviewing things together, demonstrated that the technology itself was not for everyone. Her students sometimes crossed the lines from what had been instructed. The lack of proficiency in monitoring the students' performances in an online class was because of the lack of training that the educator got from the institution, so most of the educators would prefer to give up on an online course and decide to meet their students physically. The finding is in line with the study of Kulal and Nayak (2020), revealing that college tutors have an unenthusiastic view of far-off education due to disenchantment with the institute's drill and sustenance.

The findings of the study also figured out that Mia's eyes would get tired if she stared too long at the screen. She was incapable of reading online papers and had made the researchers opine that employing too long technologies could affect one part of a body as it would turn into obstacles. This suggests that personal complications that a teacher has become obstacles in e-learning (Joshi, Vinay, & Bhaskar, 2020). A study by Crawley, Fewell, and Sugar (2009) elaborated that many instructors struggle with the delivery of the content and engagement of their students due to lack of visual and face-to-face contact with their students, thus feeling less control over how to adjust their classes. Mia was the only instructor of problem-based learning on a private campus where she taught in this segment. Not having adequate knowledge of technology had stationed her in a massive problem for this virtual teaching activity.

Likewise, Mia further elaborated that the implementation of PBL did not rely on virtual applications (e.g., Zoom and WhatsApp). She thought that using those applications would not provide the full utilization of PBL in the class as she had to do it together with her students physically. A study by Kulal and Nayak (2020) showed that teachers felt that virtual classes are unable to replace the emotional bond that existed between pupil and teacher in conventional classes. Another study by Jacques-Aviñó, López-Jiménez, Medina-Perucha, de Bont, and Berenguera (2021) revealed that at a particular period, teaching real-world and development effort are not well matched for cybernetic erudition. There were several things that Mia did to make sure that the online-problem-based-learning could work like the conventional meeting. For example, she created two groups and put them in a breakroom on zoom. Her attempt did not work because she also had problems on managing them, and then the students' interaction to discuss did not meet the expectation of her, not even close to what she wanted it to be.

In addition, Mia stated that one person could take lots of time revising their tasks in an online PBL classroom. Imagine if 30 students in a class got split up by 15:15 in a breakroom. Nevertheless, it still could not be handled well by Mia. Even though a teacher is successful in getting every pupil to arrive at the exact time inside an online course, fundamental issues include poor lip-synching with linguistic cues, time lags, poor audio, visuals, spin, etc., pose profound obstacles (Coverdale-Jones, 2000; Hampel & Stickler, 2005; Wang, 2004). She continued that problem-based learning was not all about teamwork but also peer work that if it was done in an offline mode, the students could discuss the moment they were in a class with their friends; nonetheless, in an online manner, the students could not do anything but wait for their turn to be reviewed by the facilitator.

Online learning creates much time consumption, particularly in checking students' tasks. This is similar to the case of virtual PBL classroom where lecturers and tutors found it laborious to perform their teaching practices (Pallavi, 2020). It consumes much time to prepare materials for online learning, and soon, a major difficulty is that it is difficult for instructors to grade and provide comments on children's weekly assignments (Sun, Lu, Xu, Sun, & Pan, 2020; Nugroho & Mutiaraningrum, 2020). Nevertheless, it was in contrast with a study conducted by Mukhtar, Javed, Arooj, and Sethi (2020), who stated, that the viewpoint of Pakistani medicinal facility affiliates exposed that virtual coaching procedures are a supple and actual foundation of tutoring.

Mia complained a lot when it came to the unavailability of doing a direct interaction with her students. She said that when it was offline, she could speed up the process of re-evaluating things while meeting her students in the canteen after the class to discuss more things that had not been cleared yet for the students and gave them more insights towards what they should do in the PBL classroom. However, the online class has reduced this interaction. The heart of the relationship between the lecturer as the facilitator and the students was a good interaction between them, which seemed that she could not get in an online mode lost component). Research by Nambiar (2020) also Orhan and Beyhan (2020) showed that interaction is among the crucial variables in digital genres for instructor and learner contentment. Due to the extensive contact and involvement, actual schooling was more effective for instructors than distance classes. This alone exposed the difficulty and the limitation that Mia had when she was implementing the online PBL as an instructor for her students in a class.

Mia came up with a basic idea of meeting her students outside the class schedules. She did that with her students as she was the one who arranged the time and place, for example, a physical meeting at Caffé A at 1.00 PM with

Randy and friends from class C (Pseudonyms). In this section and based on what Mia specified previously, if the students agreed to have a face-to-face meeting with her, the writer would assume that the students had seen virtual learning as a burden and brought many quandaries to them in problem-based learning method, as in line with a study that was organized by Nambiar (2020) who established that undergraduates noticed the onscreen discussions to shortage worth, which was trailed by extra discovery from the preceding study (O'Malley & McCraw, 1999) as they specified that learners engage in virtual classrooms, they first believe they will not acquire the same amount as they did in traditional schools. The writer would argue that if there were no other things that she could do to overshadow her fragilities on the online platform, then the only solution for her to solve her incapacity was by meeting her students directly, as in line with Hazzan (2002b), who demonstrated varied worries regarding the e-learning procedure, for instance, the insufficient direct communication for both instructors and pupils. This was also followed by Fein and Logan (2003), who affirmed that in online teaching, the teachers could determine the complexity in three stages: concept, distribution, and then materials obey.

From the difficulties, limitations, and how Mia preferred the physical meeting over the online one, it is argued that implementing problem-based learning in a virtual platform, such as Zoom or things that are related to it, would not work only if the educator had the skills in operating technologies. For Mia, as a senior teacher, she has challenges in following the modern era, and surely prefers traditional way of teaching in physical contact juts like before the pandemic. That is why Mia selects another option to have personal meetings with her students outside the actual schedule from the private university to correct and lead her students to where they should be and cover her shortcomings in using technologies as the leading platform of her teaching.

#### 4. CONCLUSION

Based on the findings, it can be concluded that the difficulties and limitations of Mia were in the usage of the technologies and operating the virtual classroom, such as Zoom, as the fundamental phase for the implementation of PBL in a specific topic that she could not use. As it was said – one of the reasons was because of her lack of knowledge about how the technology worked due to the age gap and the different eras where she lived, especially while using the problem-based learning method that could be categorized as relatively challenging for someone who was not entirely familiar with the modern era (Elder). Because of that reason as well, Mia could not fully develop and give her best performance to facilitate her students in an online meeting, which led her to find another solution for the activities, especially when she had to give her students

the feedback that they deserved by arranging another meeting outside of the actual schedule to communicate directly head-on. Surprisingly, her students agreed to her suggestion and demanded to proceed with the activity if the situation had not returned to normal.

#### REFERENCES

- Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. Needham: Sloan Consortium.
- Ary, D. et al. (1985). *Introduction to research in education*. New York: Holt Rinehart.
- Ary, D., Jacobs, L. C., Sorensen, C., Razavieh, A. (2010). *Introduction to Research in Education* (8th ed.). Canada: Nelson Education.
- Barrows, H. S. (1996). Problem-based learning in medicine and beyond: A brief overview. *New Directions for Teaching and Learning*, 1996(68), 3–12. <https://doi.org/10.1002/tl.37219966804>
- Coverdale-Jones, T. (2000). The use of video conferencing as a communication tool for language learning: Issues and considerations. *IALL Journal of Language Learning Technologies*, 32(1), 27 – 40.
- Crawley, F. E., Fewell, M. D., & Sugar, W. A. (2009). Researcher and researched: The phenomenology of change from face-to-face to online instruction. *Quarterly Review of Distance Education*, 10(2), 165-176.
- Creswell, J. W. (2008). *Educational research, planning, conducting, and evaluating qualitative and quantitative approaches*. London: Sage Publications.
- Fein, A. D., & Logan, M. C. (2003). Preparing instructors for online instruction. *New Directions for Adult and Continuing Education*, 100, 45-55.
- Fogarty, R. (1997). *Problem based learning and other curriculum models for the multiple intelligences' classroom*. Australia: Hawker Brownlow Education
- Hampel, R., & Stickler, U. (2005). New skills for new classrooms: Training tutors to teach languages online. *Computer Assisted Language Learning*, 18 (4), 311-326.
- Harrington, H. L. (1995). Fostering reasoned decisions: Case-based pedagogy and the professional development of teachers. *Teaching and Teacher Education*, 11(3), 203-214. [https://doi.org/10.1016/0742-051x\(94\)00027-4](https://doi.org/10.1016/0742-051x(94)00027-4)
- Hazzan, O. (2002a). Prospective high school mathematics teachers' attitudes toward integrating computers in their future teaching. *Journal of*

- Research on Computing in Education*, 35(2), 213-225.
- Hazzan, O. (2002b). The reflective practitioner perspective in software engineering education. *Journal of Systems and Software*, 63(3), 161-171.
- Hmelo-Silver, C. E. (2000). Knowledge recycling: Crisscrossing the landscape of educational psychology in a Problem-Based Learning Course for Preservice Teachers. *J. Excell. Coll. Teach*, 11, 41-56.
- Hmelo-Silver, C. E. (2004). Problem-Based Learning: What and how do students learn? *Educational Psychology Review*, 16(3), 235-266. <https://doi.org/10.1023/b:edpr.0000034022.16470.f3>
- Hmelo-Silver, C. E., & Barrows, H. S. (2006). Goals and Strategies of a Problem-based Learning Facilitator. *Interdisciplinary Journal of Problem-Based Learning*, 1(1).
- Jacques-Aviñó, C., López-Jiménez, T., Medina-Perucha, L., de Bont, J., & Berenguera, A. (2021). Social conditions and mental health during COVID-19 lockdown among people who do not identify with the man/woman binomial in Spain. *PloS one*, 16(8), e0256261. <https://doi.org/10.1371/journal.pone.0256261>
- Joshi, A., Vinay, M., & Bhaskar, P. (2020). Online Teaching amidst COVID-19 in India: An Outlook. *Asian Journal of Distance Education*, 15(2), 105-111. Retrieved from <http://www.asianjde.com/ojs/index.php/AsianJDE/article/view/454>
- Kulal, A., & Nayak, A. (2020), A study on perception of teachers and students toward online classes in Dakshina Kannada and Udupi District, *Asian Association of Open Universities Journal*, 15(3), 285-296. <https://doi.org/10.1108/AAOUJ-07-2020-0047>
- Leinhardt, G., & Steele, M. D. (2005). Seeing the complexity of standing to the side: Instructional dialogues. *Cognition and Instruction*, 23(1), 87-163. [https://doi.org/10.1207/s1532690xci2301\\_4](https://doi.org/10.1207/s1532690xci2301_4)
- Lieblich, A., Tuval-Mashiach, R., & Zilber, T. (1998). *Narrative research: Reading, analysis, and interpretation* (Vol. 47). Sage. <http://dx.doi.org/10.4135/9781412985253>
- Mayer, R. E., & Wittrock, M. C. (2006). Problem solving. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of educational psychology* (pp. 287-303). Mahwah, NJ: Lawrence Erlbaum.
- Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, limitations, and recommendations for online learning during COVID-19 pandemic era. *Pakistan journal of medical sciences*, 36(COVID19-S4), S27-S31. <https://doi.org/10.12669/pjms.36.COVID19-S4.2785>
- Nambiar, D. (2020). The impact of online learning during COVID-19: Students' and teachers' perspective. *The International Journal of Indian Psychology*, 8(2). doi: 10.25215/0802.094. Retrieved from <http://www.ijip.in>
- Nugroho, A., & Mutiaraningrum, I. (2020). EFL teachers' beliefs and practices about digital learning of English. *EduLite: Journal of English Education, Literature, and Culture*, 5 (2), 304-321. doi: <http://dx.doi.org/10.30659/e.5.2.304-321>
- O'Malley, J. R., & McCraw, H. (1999). Students' perceptions of distance learning, online learning, and the traditional classroom. *Online Journal of Distance Learning Administration*, 2.
- Orhan, G., & Beyhan, O. (2020). Teachers' perceptions and teaching experiences on distance education through synchronous video conferencing during Covid-19 pandemic. *Social Sciences and Education Research Review*, 7(1).
- Pallavi, K. P. (2020, August 4). Students playing porn clips, no tech knowledge: how teachers are dealing with online classes. India Today, Retrieved from: <https://www.indiatoday.in/lifestyle/what-s-hot/story/students-playing-porn-clips-no-tech-knowledge-how-teachers-are-dealing-with-online-classes-1707752-2020-08-04>
- Petrie, C. (2020). Spotlight: Quality education for all during COVID-19 crisis (Hundred Research Report #01). United Nations. Retrieved from: <https://hundred.org/en/collections/qualityeducation-for-all-during-coronavirus>. doi:10.5194/se-2020-20-ac1
- Rahayu, R. P., & Wirza, Y. (2020). Teachers' perception of online learning during pandemic Covid-19. *Jurnal Penelitian Pendidikan*, 20(3), 392-406. doi: 10.17509/jpp. v20i3.29226.
- Ramij, Md. G., & Sultana, A. (2020). *Preparedness of online classes in developing countries amid COVID-19 Outbreak: A Perspective from Bangladesh*. Available at SSRN: <https://ssrn.com/abstract=3638718> or <http://dx.doi.org/10.2139/ssrn.3638718>
- Sareen, S., & Nangia, A. (2020). Online teaching during COVID 19: attitude and challenges faced by

- schoolteachers. *International Journal of Disaster Recovery and Business Continuity*, 11(1), 3012-3018. doi: 10.1016/j.iheduc.2011.11.006.
- Sugiyono. (2008). *Metode penelitian kuantitatif kualitatif dan R&D*. Bandung: ALFABETA.
- Sumanth (2021, March 2), "Difficulties faced by teachers while shifting to online learning amid Covid-19 pandemic". India Today. Retrieved from: <https://www.indiatoday.in/education-today/featurephilip/story/difficulties-faced-by-teachers-while-shifting-to-online-learning-amid-covid-19-pandemic-1774722-2021-03-02>
- Sun, P., Lu, X., Xu, C., Sun, W., & Pan, B. (2020). Understanding of COVID- 19 based on current evidence. *Journal of medical virology*, 92(6), 548-551.
- Wang, Y. (2004). Supporting synchronous distance language learning with desktop videoconferencing. *Language Learning & Technology*, 8(3), 90 – 121.
- Yusnilita, N. (2020). The impact of online learning: student's views. *ETERNAL (English Teaching Journal)*, 11(1), doi: 10.26877/eternal.v11i1.6069.
- Zhong, R. (2020, March 17). The coronavirus exposes education's digital divide. Retrieved from: <https://www.nytimes.com/2020/03/17/technology/china-schools-coronavirus.html>.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

