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Enacting Project-Based Learning for Higher Education: An Autoethnographic Study of Online Learning During the Pandemic

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Abstract

This study is a reflection on my personal experiences with the higher education online teaching and learning process. It is an autoethnography study in which data were garnered from virtual participant observations, journals, an open-ended questionnaire and interviews about student projects during the COVID-19 pandemic. I leveraged project-based learning as pedagogical device. Thus, the students worked collaboratively on an online training project (webinar) as part of a course on education and training management. I served as both a teacher and a participant in the online training performed by the students. Through virtual participant observation, this project allowed me to learn new insights and skills. I used social capital theory to reflect upon and develop my teaching practice to stimulate students' creativity, engagement, and collaboration. The project generated student ideas, creativity, knowledge and skills. The power of collaboration is a primary key in fostering students' ideas, and skills are profoundly needed to accomplish such projects. This study has implications for higher education teachers to rouse students' creativity and vary their teaching methods in the context of project-based learning (PBL) as a prospective best practice.

Keywords

autoethnography, collaboration, creativity, online project-based learning, webinar

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This study is a reflection on my personal experiences with the higher education online teaching and learning process. It is an autoethnography study in which data were garnered from virtual participant observations, journals, an open-ended questionnaire and interviews about student projects during the COVID-19 pandemic. I leveraged project-based learning as pedagogical device. Thus, the students worked collaboratively on an online training project (webinar) as part of a course on education and training management. I served as both a teacher and a participant in the online training performed by the students. Through virtual participant observation, this project allowed me to learn new insights and skills. I used social capital theory to reflect upon and develop my teaching practice to stimulate students' creativity, engagement, and collaboration. The project generated student ideas, creativity, knowledge and skills. The power of collaboration is a primary key in fostering students' ideas, and skills are profoundly needed to accomplish such projects. This study has implications for higher education teachers to rouse students' creativity and vary their teaching methods in the context of project-based learning (PBL) as a prospective best practice.

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Introduction

The classroom was eerily silent, broken only by the faint hum of my MacBook Pro. On the screen, a grid of muted faces stared back, cameras off, and expressions unreadable. The vibrant energy of a lively classroom, once filled with curiosity and discussion, had been replaced by the sterile glow of a Zoom meeting. Each unanswered question and darkened screen chipped away at my confidence, leaving me questioning how to truly connect with my pupils in this virtual world.

It was clear something had to change. I needed a way to reignite their interest, foster collaboration, and bring back the sense of community that had been lost. That's when the idea of a webinar project emerged-a bold addition to my Project-Based Learning approach. It was a leap into the unknown, a strategy born from necessity and hope. Little did I know, this decision would not only transform my teaching but also reshape my perspective on student engagement and collaboration in an online environment.

The ongoing COVID-19 pandemic has forced higher education to adjust to new learning processes. E-teaching and e-learning have become complementary alternatives that kept educational activities running smoothly (Oloyede et al., 2021) and offered viable options for maintaining educational continuity during the COVID-19 outbreak (Bilecen, 2020). However, the worldwide government's policy of using online learning as a substitute to slow the spread of the pandemic had its issues (Blankenberger & Williams, 2020). For instance, the pandemic disrupted the learning process and had the potential to deplete human resources if it persisted for an extended period of time (Azorín, 2020). Prior research reported that online learning can mediate students' learning autonomy, meet their educational needs, and help them enjoy the learning experience (De Paepe et al., 2018; Stone, 2019). However, some students become extraordinarily passive and fail to participate in such environments (Song et al., 2019). Not all students feel comfortable with this interface and struggle due to slow Internet access at home (Demuyakor, 2020). Dymont et al. (2017) doubt its effectiveness. Moorhouse (2020) highlights two technical problems with online learning environments: learning becomes lecturer-centred and creates a broader interaction gap between lecturers and students. However, with worldwide lockdowns and the inevitable use of online learning, all educators needed to adjust to new academic environments to help students achieve learning goals (Azorín, 2020).

The United Nations Educational, Scientific and Cultural Organization (2020) notes that the crisis presented an opportunity to rethink the overall delivery of education through comprehensive and inter-sectoral approaches based on collective experiences and practices from various sectors. Slavin (2010) highlights the importance of educational environments in which students are actively engaged both with learning tasks and one another. Given that online learning requires students to remain actively engaged with both learning tasks and their peers, it is essential to adopt new and flexible teaching and learning methods (Oloyede et al., 2021). Under these circumstances, implementing project-based learning (PBL), which integrates knowing and doing (Markham, 2011), can stimulate learner creativity (Hanif et al., 2019; Markham, 2011; Ummah et al., 2019) that must be activated through experience (Markham, 2011). PBL as a student activity is also believed to enhance learning (Postholm, 2008a). Open-ended, project-based, or arts-based learning are all likely to encourage students to engage more mindfully or deeply in a learning experience (Henriksen & Shack, 2020). During the implementation of PBL, it is reported that students have higher levels of motivation for learning when compared to other traditional methods of teaching and learning (Edström & Kolmos, 2014).

For students, creativity is widely regarded as a 21st-century skill, capacity, and quality (Florida, 2002; Zhao, 2012) central to higher education (Jahnke et al., 2017). As a lecturer, I believe PBL is worth trying during online learning to ensure that learning is not primarily focused on the lecturer and that the interaction gap is minimised. Based on Stover's (2014) findings, PBL assignments that incorporate the creation of demanding technology projects can be implemented in distance education; such efforts also impact students' cognitive development and improves their skills. Another study revealed that problem-based prompts, project-based prompts, and heuristics used in asynchronous online discussions can help promote creativity as well (Corfman, 2017).

As a critical process of self-determination (Habermas, 1973), reflection is essential in professional development (Yip, 2007) and for an individual's set of skills (Lynch, 2000) because it can promote student learning (Taylor & White, 2001), enables professionals to incorporate theory and practice (Usher & Bryant, 1987), and emotionally evaluate the teaching experience and reconstruct more effective teaching practices (Widodo & Ferdiansyah, 2018). Furthermore, studies emphasize that reflection helps in developing deeper critical thinking, decision-making skills, and the capacity to adapt teaching strategies based on Schon, Kolb, and Gibbs models of reflections (Gibbs, 1988; Kolb, 1984; Schon, 1991). Schon's model of

reflective practice and Kolb's experiential learning cycle suggest that reflection is integral to professional development and lifelong learning. Thus, not only does my reflection contribute to personal growth but also to the body of research on how educators adapt to challenges and develop effective teaching strategies, especially during disruptive events like the pandemic (Helyer, 2015; Issa et al., 2020). Prior research also reported that people consciously reflect in order to understand events in their lives and as a consequence hopefully add and enhance meaning (Helyer, 2015). Within the scholarship of higher education, particularly in the context of online teaching and learning. The transition to online education during the pandemic has prompted a re-evaluation of traditional teaching methods, and reflective practices provide insight into this shift. By documenting experiences as teachers in the learning process, this study adds to the literature on the adaption of PBL to digital environment and the efficacy of such approaches during times of crisis (Davidoff & Jayusi, 2024).

Research has shown that PBL fosters active knowledge construction and collaboration, which are crucial for both online and traditional setting. However, its implementation on online environments presents unique challenges, such as maintaining student engagement and interaction. Thus, through my reflections, this study contributes to the body of knowledge that explores how PBL as a pedagogical device can be adapted to remote learning contexts while achieving its educational goals. Through extensive research, no prior studies were identified that specifically address the use of webinar assignments as a reflective component of PBL in online higher education contexts. To the best of my knowledge, this study offers a unique contribution by reflecting on my experiences and strategies as a university teacher during the COVID-19 pandemic. It focuses on utilizing webinar projects as an integral part of PBL within online learning environments and critically examines the effectiveness of this approach. Guided by this objective, the study seeks to address the following research questions:

1. How do I reflect on my teaching experience and strategy as a university teacher during the COVID-19 pandemic?
2. How was the webinar project as a PBL method effective in stimulating students' creativity and collaboration?

Literature Review

This section reviews existing research on reflective practices by employing autoethnography in higher education, collaborative work on PBL in online environments, and social and capital theory on collaborative learning. By examining these bodies of literature, this section frames the conceptual foundations of the study and identifies gaps that the current autoethnography addresses. The review will draw on key theories of reflection, experiential learning and crisis pedagogy which underpin the data collection and analysis of teaching practices during the COVID-19 pandemic.

Autoethnography in Teacher Learning and Self-Reflection

Reflection is crucial for teachers as it enables them to review their teaching through introspective recollection, which fosters the development of critical thinking skills that transform teaching into a consciously planned cognitive process (Watts, 2019). By reflecting, teachers can assess the alignment between their intended goals and the outcomes achieved (Schön, 2017). Learning through reflective practice is regarded as transformative teacher education as well (Liu & Ball, 2019). Teachers who practice reflection may implement effective new methods of instruction by continually examining their own beliefs (Biesta et al., 2015), challenging their assumptions about daily instruction (Nolan & Molla, 2018), and taking

actions to improve their teaching. In addition, teachers construct their professional knowledge and skills within instructional contexts (Camburn & Han, 2017), using them to adapt their visions and behaviors to the environment (Darling-Hammond, 2017). Hence, enhancing the understanding on how to facilitate teachers' reflective practice may be valuable for teacher education programmes, introduction programmes for beginning teachers, and school development in general (Johannessen, 2024).

Professional development is an essential component of modern university institutions worldwide (Jääskelä et al., 2017; Phothongsunan, 2018; Suwaed & Rohouma, 2015). This growing emphasis on continuous professional learning is driven by the need for educator to stay updated with new pedagogical approaches and technologies. Central to this development is teachers' reflective practice, where teachers critically analyse their own teaching methods and the beliefs underpinning them (Postholm, 2008b; Schön, 2017). Reflective practice is a cornerstone of professional learning because it fosters deeper understanding and self-awareness. Schön's work on reflective practice emphasizes how professionals can learn from their experiences by reflecting both during and after their actions (reflection-in-action and reflection-on-action). This process enables educators to adapt and refine their teaching strategies in real time, making them more effective and responsive to students' needs. Webster-Wright (2009) and Svendsen (2016) stressed the importance of personal reflection on learning experiences as well as collaborating with other to generate critical thinking. They argue that personal reflection is not enough on its own; collaboration with peers is equally crucial for generating critical thinking and shared insights. By engaging in discussions with colleagues, educators can challenge their assumptions, receive feedback, and explore new perspectives that contribute to their growth. Collaborative reflection thus serves as a powerful tool for professional development, as it encourages the sharing of experiences and ideas within a community of practice. This combination of personal reflection and collaboration fosters an environment of continuous learning, where educators are not only self-reflective but also engaged in collective efforts to enhance teaching and learning outcomes. Institutions that prioritize professional development create a culture of lifelong learning, enabling educators to keep up with evolving educational demands.

Recent research highlights the diverse applications of autoethnography as a reflective and transformative methodology in education and leadership contexts. Svendby (2021) uses autoethnography to critically examine personal teaching practices, revealing how cultural unawareness of diversity impacts the learning environment. Similarly, Medero (2023) employs the method to explore leadership practices in volunteer tourism organizations, emphasizing the role of cultural humility and transformational leadership in fostering self-awareness and stronger relationships. Trahar (2013) demonstrates how autoethnography facilitates critical self-reflection on teaching beliefs and values, enabling university academics to better address diverse student needs in European higher education.

Zacharias and Shleykina (2021) extend this application by investigating collaborative autoethnography, showing its capacity to promote shared reflection and collective professional growth among educators. In teacher development, Kim and Lee (2021) illustrate how autoethnography allows a novice teacher to reflect on their journey toward assessment literacy in elementary physical education, connecting personal experiences to broader cultural, micropolitical, and sociological factors. Zou (2024) uses the method to analyze the evolving identities and emotions of an international accounting teacher, highlighting a reflexive process that enhances student engagement during the COVID-19 pandemic. Finally, Evans et al. (2022) capture the lived experiences of participants in a collaborative teacher development initiative, using autoethnography to identify key principles—such as foundational skills, stakeholder coherence, and professional autonomy—for fostering professional enquiry in education. These studies collectively underscore the versatility and depth of autoethnography as a research

method. By connecting personal experiences to broader social and cultural contexts, the method provides a powerful lens for self-reflection, professional growth, and systemic change. The inclusion of collaborative approaches, as seen in Zacharias and Shleykina (2021), extends the method's utility beyond individual reflection, fostering collective insights among educators. However, a common limitation across these studies is the potential for subjectivity inherent in autoethnographic methods, which may require supplementary methods to strengthen reliability and generalizability. Nonetheless, the findings make a significant contribution to understanding how autoethnography can transform teaching practices, leadership approaches, and professional development in diverse educational settings.

Collaborative Work on Project-Based Learning

While ongoing discussions about effective education persist, particularly regarding learning processes, resources, and the role of teachers, contemporary pedagogical research increasingly acknowledges the importance of fostering social, collaborative, and interactive learning experiences (Parker et al., 2022). Means et al. (2014) underlined the significance of peer collaboration in their examination of optimal online instruction strategies. This view indicated the importance of collaborative and interactive learning environment in today's learning which has beneficial effects to both students and teachers. University achievement assessments show that motivation and achievement rise when students engage in collaborative groups rather than studying alone (Johnson et al., 2014; La Rocca et al., 2014). Research indicates that students' sense of their own contributions to group activities promotes active participation and improves their learning within a team setting (Adesina et al., 2023). Other research reveals that collaborative learning in the classroom, high social self-efficacy, and leadership are all essential components of student achievement (Dunbar et al., 2018). Collaborative learning environments increase student motivation, confidence, and feelings of responsibility, as well as higher test scores and stronger connections with classmates (Bartle et al., 2011) and enhanced learning outcomes (Lindsay & Redmond, 2024). Larson et al. (2018) found that group work encourages individuals to put in greater effort during activities. This type of collaborative learning environment promotes higher-order cognitive processes and deeper learning (Baepler et al., 2014), helps students build confidence (Awidi & Paynter, 2019; Baepler et al., 2014), and enhances critical thinking skills (Alotaibi, 2013). Engagement, as described by Capone and Lepore (2022), occurs when students are both emotionally and cognitively invested in their learning experiences. Lumpkin et al. (2015) explored students' perceptions of how learning activities influence engagement and found that active participation in such activities significantly enhances learning outcomes. Furthermore, Barkley and Major (2020) argued that student engagement is driven by a combination of motivation and active learning, emphasizing that fostering motivation directly contributes to improved engagement and better academic performance. Teachers' support is also an essential component for students' engagement. The research highlights that when teachers address students' fundamental psychological needs, it fosters greater engagement, boosts motivation, and encourages collaborative behaviour (Cents-Boonstra et al., 2021).

PBL has been recognized as an effective pedagogical approach for instructors to assist students in the acquisition of interdisciplinary knowledge, problem-solving skills, modes of thinking, and collaborative practices by addressing problems in a real-world setting (Meng et al., 2023) to develop such skills through authentic practice (Hadgraft & Kolmos, 2020). The PBL method has been widely adopted at all levels of education (Lu et al., 2022); nevertheless, its use in online training, which aimed to increase student collaboration and creativity at the university level during the pandemic, was likely limited. Given the importance of knowledge sharing and meaning-making in collaborative learning (Stahl & Hesse, 2009), engaging

students in online collaborative projects like PBL is critical. They provide various opportunities for collaborative learning by establishing a perceptual space in which individuals can exchange their expertise. It also enables students to learn from and with one another (McCollum, 2020). Stover (2014) revealed that incorporating PBL tasks improved pupils' cognitive development in distance-learning settings. Stover also reported that students believed the skills they developed while working on PBL assignments were valuable and transferable and would help them stand out in other situations and increase their marketability.

For effective implementation of PBL in online environments, it is essential to use collaborative, active, and student-centered learning strategies (Saghafian & O'Neill, 2018). However, Saghafian and O'Neill (2018) also noted that the online setting introduces specific challenges that are less prevalent in traditional face-to-face environments. Meng et al. (2023) highlight the challenges educators face in implementing PBL in online environments, particularly in designing appropriate problems and effectively engaging students in virtual settings. Similarly, Cho and Cho (2014) point out that online PBL often struggles with reduced student interaction and engagement, which can result in feelings of isolation and decreased motivation. These issues underscore the importance of developing strategies to enhance student participation and foster meaningful connections in digital learning spaces. Additionally, Khandakar et al. (2022) found that online teamwork is frequently disrupted by unequal participation, where some students do not contribute, while others take on a disproportionate share of the workload, often resulting in conflict within teams. A review of the literature on PBL by Chen et al. (2021) identified several recurring challenges at various levels: individual (students and teachers), institutional, and cultural. These included inadequate facilitator training, difficulties in assessing student work, lack of differentiation in task allocation, and insufficient development of essential skills (e.g., teamwork, self-directed learning, and project management) before engaging in PBL. Furthermore, there is often limited institutional support for implementing PBL effectively. However, these obstacles are not insurmountable and instead highlight areas for future research and development to enhance the successful delivery of PBL in online environments.

Social Capital Theory on Collaborative Learning

Social capital is defined as positive relationships between members of a group that are founded on trust, shared norms, and reciprocity. The network developed as a result of due to their interactions can be viewed as a resource (Korniodos, 2016) that becomes a model for relationship-centered engagement (Rydström et al., 2017). Social capital theory may also provide concepts and methods for studying knowledge cultivation and sharing processes (Oztok, 2013), which facilitate knowledge interchange and make facilitating knowledge interchange and making information acquisition efficient and quick (Michailova & Hutchings, 2006). Online students need to interact with one another and build a sense of belonging since this promotes involvement and an enriched learning experience, hence lowering attrition rates (Peacock et al., 2020). Leuenberger and Reed (2016) highlight the role of social capital, defined by networks and relationships, in fostering informal cooperation and collaboration within groups. Their findings show that strong social networks enable stakeholders to work together effectively toward shared goals. Expanding on this, Boadi et al. (2022) examine how network structures in higher education support the development of innovative ideas and knowledge creation. Their study emphasizes the importance of both bonding social capital (strong ties) and bridging social capital (weaker ties) in fostering collaborative knowledge-building among students. Similarly, Han et al. (2022) explore the influence of social capital on students' knowledge-sharing behaviours and learning outcomes, revealing that higher levels of social capital enhance students' willingness to share knowledge, thereby improving collaborative

learning experiences in higher education. Salimi et al. (2022) further investigates the impact of online social capital on academic performance, finding that robust online networks facilitate knowledge exchange, enhance academic outcomes, and promote a collaborative culture among students. Collectively, these studies accentuate the critical role of social capital in fostering collaboration, knowledge sharing, and academic success in higher education settings.

In other words, social capital fosters a collaborative culture requiring students to collaborate, openly share their ideas and resources, and trust each other (Bakker et al., 2006; Johnson, 2013; Korniodos, 2016). These favourable interactions are essential for effective peer collaboration and support. Students benefit from working together since they do not feel sequestered and can assist one another (Oztok, 2013). Students with higher social capital are likelier to invest their time, collaborate voluntarily and share resources. In this way, social capital promotes problem resolution (Daniel et al., 2003), assists members in sharing a common purpose, and fosters supportive relationships through which motivation levels rise and learning resources are negotiated. Learning is then promoted through the existence of close contacts (Oztok et al., 2015).

Research Method

Research Context and Setting

This study was conducted at a private university in Jakarta, Indonesia, where I teach undergraduate students. As a university lecturer specializing in educational management and training courses, I have always been interested in creating meaningful and engaging learning experiences that bridge theoretical knowledge and practical application. My relationship to this inquiry stems from a deep commitment to understanding how innovative teaching strategies can enhance student engagement and learning outcomes, particularly in an online learning context during pandemic.

The research involved three classes over three semesters. In the first semester, I introduced a webinar project to students, and I observed notable changes in their attitudes, including increased class attendance and more active participation. Inspired by these results, I assigned the same project to the next two semester's class, incorporating small adjustments to presentation content and student roles. Ferdiansyah et al. (2020) explain that understanding student learning experiences in higher education helps lecturers to reflect on the proper way to implement learning opportunities such as assignments and exams. This iterative approach allowed me to reflect on and refine the project based on observed outcomes. Such reflective practice is grounded in the ideas of "self-observation, self-revelation, and self-understanding" as highlighted by Karl Jasper (1883–1972), as cited by Yip (2007, p. 285). In certain situations, self-reflection can increase self-awareness, bring to light self-consciousness, and reveal unconsciousness (Yip, 2007). Ruch (2000, p. 286) also asserts that reflective practice is "a process of self-articulation of a situation and internalisation of professional knowledge into actual situations and contexts". Therefore, self-reflection regarding previous teaching and learning experiences is profoundly important for professional development, as I have done so far in my classes.

For the webinar project, the class of 45 students (20 males and 25 females) was divided into six group of seven or eight members. Each group collaborated to design flyers, select topics, and assign team roles, including spokesperson, host, moderator, documentarian, and administrator. They used platforms such as WhatsApp to distribute flyers and invited peers to join via Zoom or Google Meet. During the 120-minute sessions following their mid-semester exam, students conducted their webinars, which included presentations, Q&A sessions, and

peer evaluations. Attendance and evaluation forms were distributed via Google Forms to gather feedback, and I reviewed each group's work in advance to ensure a smooth process.

My investment in this study lies in its potential to contribute to both my professional development and the broader discourse on effective online teaching practices like PBL to enrich students' educational experiences. By integrating self-reflection with pedagogical innovation, I aimed to better understand how specific activities such as the webinar project enhance students' learning experiences and engagement. In addition, by reflecting on these teaching practices, I aim to contribute to the growing body of knowledge on effective online learning methods and inspire educators to adopt creative approaches in their own classrooms. My intention with this project is two folds: first, to critically analyze and document the effectiveness of using PBL through webinars in online higher education, and second, to offer practical and reflective insights to educators seeking to implement similar strategies. By sharing my experiences and reflections, I hope to encourage a dialogue among educators about the value of innovation, collaboration, and self-reflection in teaching and to provide valuable insights for educators navigating the challenges of online teaching. Ultimately, I aim to contribute to the development of more engaging, inclusive, and effective learning environment for students in higher education.

Research Approach

This study employed autoethnography as a research methodology to deeply investigate and reflect upon the researcher's personal teaching strategies and experiences in the context of management education and training. Autoethnography, more than just a methodology, is a philosophical framework that emphasizes the intersection of self-other interactions and meaning making within specific cultural contexts (Zou, 2024). It invites introspection, facilitates the exploration of personal significance, and connects individual experiences to broader social dynamics (Besio, 2020). Ellis (2004) and Jones (2005) point out that autoethnography is a method of study and writing that aims to methodically describe and analyse personal experience to comprehend cultural experience.

Although autoethnography shares processes such as data collection, analysis, interpretation, and writing with other qualitative methodologies (Chang, 2013), it is distinct from methods like narrative inquiry and life history research. Narrative inquiry gathers narratives from participants, such as verbal, written, or visual data, to explore the complexity of human experiences (Trahar, 2009). In contrast, autoethnography focuses on self-narratives rather than retelling stories of others (Soon-Yong et al., 2010). Similarly, while life history research delves deeply into an individual's life, it often overlooks the cultural dimensions shaping that life (Kim & Lee, 2021). Grounded in narrative inquiry, autoethnography analyzes autobiographical narratives to uncover cultural experiences (Malin & Hackmann, 2016), privileging the researcher's voice and subjective perspective (Schmid, 2019).

In this study, autoethnography was chosen because it allows the researcher to deeply engage with personal experiences and emotions that might be inaccessible through traditional interviews (Ngunjiri et al., 2010). Reflecting on teaching practices and strategies during three semesters of online management education (2020–2021 academic year), the methodology enabled the researcher to critically examine the use of PBL in online learning, specifically through webinar assignments. This reflective approach aligns with Ellis (2004) and Jones (2005), who describe autoethnography as a method for systematically analyzing personal experiences to understand cultural contexts.

Autoethnography integrates subjective reflection with cultural analysis. Jones et al. (2013) and Denzin (2014) highlight its potential to critique practices, add to existing research, and encourage reciprocal relationships with audiences by embracing vulnerability. It involves

reflexive self-observation, as emphasized by Bochner and Ellis (2016), wherein researchers create narratives grounded in personal and cultural contexts (Creswell, 2012; Ellis, 2004). Sambrook (2021) emphasised the usefulness of autoethnography in “facilitating learning in ‘softer’ management subjects” (p. 2), which is consistent with the growing acceptance, necessity for, and application of reflection in management education (Higgins, 2018).

Autoethnography proved particularly suited for this research because it aligns with the study’s objectives: to reflect on teaching strategies and evaluate the effectiveness of PBL in online higher education. By focusing on webinar assignments as a key component of PBL, this methodology enabled a nuanced exploration of the intersection between personal teaching practices and the broader cultural challenges of online learning. This approach not only allowed for critical self-reflection but also aimed to contribute meaningful insights into the practice of PBL in a higher education setting. Autoethnography provided a robust framework for this study, facilitating the systematic reflection of personal teaching practices while connecting these experiences to cultural and systemic contexts. By leveraging its reflective and transformative potential, the study offers valuable contributions to understanding and improving the application of PBL in online learning environments.

Data Collection and Analysis

In the words of Ellis et al. (2010), autoethnography’s researchers aim to provide beautiful, evocative and rich descriptions of personal and interpersonal experiences. They achieve this by identifying patterns of cultural experience supported by field notes, interviews and artefacts, and then presenting these patterns through narrative elements (such as character and plot development), showing and telling and changing the authorial voice. Yung (2020) notes that autoethnographers gather ethnographic data and develop a self-narrative through various sources.

To garner my data, I was a virtual observation participant by asking questions and keeping journal notes during each group’s presentation. My end-session reviews addressed webinar preparations, the use of formal language, interactive communications between the spokesperson, moderator and audience, technology use, flyer design and Power point presentations. I also obtained recording activities and reports from each group for the data collection. I distributed an online open-ended questionnaire over a WhatsApp group in a Google Form with the intention of thoroughly and truly hearing each student's voice on this PBL for my self-reflection.

The questionnaire comprised 19 questions: (a) whether the project was their first experience; (b) whether the project was a burden; (c) whether they enjoyed doing the collaborative project; (d) whether they were actively asking questions and providing feedback for other group presentations; (e) whether the project benefitted their online learning; (f) whether the project provided fun learning; (g) whether the webinars presented by other groups were applicable; (h) whether the project stimulated their creativity; (i) the types of creativity produced from doing the project; (j) how their creativity differed from other groups; (k) how they divided the tasks; (l) how they decided on their topics; (m) the obstacles to doing the projects; (n) their opinions on the webinars conducted by each group; (o) which themes of each webinar’s topic benefitted them; (p) which group had the best presentation; (q) which flyer had the most interesting design; (r) new things that students derived from collaborating and from the webinar; and (s) final messages and impressions about the webinar activity and the project.

I also interviewed students through the Zoom platform during a final meeting to hear their opinions on the PBL webinar activity. I informed them that I needed to reflect on my teaching strategy for the project to pursue professional development. This interview took approximately 90 minutes. Due to time constraints, not all students were able to share their

opinions; nonetheless, at this point, I was able to observe facial expressions and voice tones, which was a crucial factor to take into account for self-reflection.

I analysed and double-checked all data, as it became the foundation of the self-narrative. To analyse responses from the open-ended, online questionnaire, I sought overlapping themes and aggregated related information. I attempted to find some similarities between the questionnaires and the interviews since the questions were somewhat similar. I also highlighted and coded my journal, my observations and students' reports. Before drawing a conclusion from the findings, I interpreted the themes.

The first story theme drew upon my reflections on trial and error, my efforts to encourage the students' creativity and what I learned from the students' work. The second theme explored the effectiveness of PBL in online learning, which was a fundamental aspect to evaluate my teaching. The last theme focused on how the theory of social capital is related to collaboration as an essential part of PBL. Hayler (2011) emphasises that the main challenge of autoethnography design is "self-absorbed digression" within rich but disorganised data. I made narrative interpretations of the data and wrote them reflexively by openly having a discussion and dialogue about my role with students to verify the trustworthiness of my interpretations. I cross-checked the data with my students through two additional Zoom meetings and the WhatsApp group chat. The engagement of such analytical dialogue contextualised the narrative and inspired opposing perspectives for more rigorous analysis (Bochner & Ellis, 2016).

Ethical Consideration

Universities enforce ethical guidelines and procedures through ethics committees or institutional review boards to ensure research adhered to established standard (Ryen, 2011). In Indonesia, researchers must obtain ethical clearance from institutional ethics committees before conducting studies, especially involving human participants. These committees evaluate research proposals to ensure compliance with national regulations and international ethical norms. In educational and social science research, proposal must detail the study's objectives, methodologies, participant recruitment, and data management plans. In my university, we have a division, which is called Institute for Research, Community Service and Publication (Lembaga Penelitian, Pengabdian Masyarakat dan Publikasi, LPPMP). The ethical committees under this institute including the reviewers assess the research proposals to ensure respect for participants, informed consent, confidentiality, and risk mitigation. They assess the proposal whether our proposal is accepted and then, we can continue to conduct the research. We also have to fill the form of quality control and ask the approval from the head of faculty or the dean we work for and conduct a proposal seminar before submitting the proposal to the institute. Creswell (2012) pointed out the necessity of protecting the privacy of participants in any educational study by emphasizing that data collection must be ethical and respectful of both individuals and sites. Thus, in conducting this research, I adhered to strict ethical guidelines to ensure the protection of participants' rights and the integrity of the study. I took comprehensive measures to respect participants' autonomy, ensuring that they were fully informed about the nature and purpose of the study, with the option to withdraw at any point. All student participants' identifiers were anonymized to maintain confidentiality. I created a supportive environment where participants could share their experiences without fear of negative consequences or judgment, aligning with the principles of minimizing harm.

Given the autoethnographic nature of the study, I prioritized building reciprocal relationships with the participants. I ensured that they benefited from their involvement by providing them with a summary of the findings and incorporating their feedback to refine my teaching strategies. This reciprocal engagement not only fostered transparency but also allowed

participants to see the practical implications of their input. This approach aligns with qualitative research ethical standards, as it values participants' contributions beyond mere data collection and promotes a collaborative researcher-participant dynamic (Creswell, 2012; Ellis et al., 2011). By reflecting on my role and engaging participants in a participatory process, I enhanced both the credibility and ethical integrity of my research.

Findings and Discussion

My Reflections on My Teaching Strategy as a University Teacher

My Trial-and-Error Story. When I logged into our first Zoom session in the early weeks of online learning, I could hear my students' collective sigh of frustration. One of them, Lydia, a diligent student, reluctantly unmuted herself.

"Mam, I'm having trouble keeping up with the lesson," she admitted. "What we all do is only looking at the slides and listening to your explanation, it is somewhat difficult to stay focused."

Her words echoed concerns I had heard from other students and colleagues, pushing me to rethink my teaching methods. How could I make online learning more engaging and interactive? How could I make my students more creative?

By the third week, I introduced a new idea since the lesson is about educational and training management: instead of typical assignments, students would organize and host their own webinars or virtual training sessions. "Treat this as a professional event," I explained during a class meeting. "You'll select your own topic, but it must be practical and something to do with skill that you have, design the materials, and present them to your peers."

The chat erupted with mixed reactions among students who suddenly become interested with my instruction.

"Does that mean we are like professional speakers now, who give information about one practical skill?" Dwima, student talked directly.

"Yes," I said, smiling at the screen and I suddenly feel so content with a lot of comments from students. "And the audience will be your peers, and you'll need to approach it professionally and creatively."

The first attempts were far from perfect. During the first semester of this webinar project, Andi served as a moderator but often joked during transitions, which amused some students but distracted other serious students. Meanwhile, Nirmala only read the sentences in the power point without any explanation and her power point was just full of paragraphs.

Technical difficulties compounded the challenges. "Sorry Mam, the signal is up and down, I am thrown many times." Mira exclaimed in frustration.

Reflecting on the semester, I realized the issues extended beyond technical glitches; I had assumed my students already understood what professionalism in an online setting entailed. It was clear I needed to provide better guidance.

In the next semester, I adjusted my approach. I offered examples of formal communication using appropriate language and discussed brainstorming practical themes connected to everyday lives and global challenges.

"Here's an example of a professional webinar," I said during a preparatory session while showing YouTube. "Please notice the formal tone of the moderator, the slide design, the pictures selection for power point, and well-organized presentations."

Rendy raised his hand. "So, we have to avoid using slang and jokes?"

"Absolutely," I replied. "Think of this activity as presenting at an international conference."

By the third semester, everything began to improve. Andi, now a more experienced moderator, confidently introduced speakers with polished transitions. “Our next presenter will discuss how to start an Instagram online business in this pandemic era,” he announced, his tone professional and assured.

Nirmala showed remarkable growth too. Her slides were visually appealing, and she spoke with confidence. “Today, I’ll talk about the opportunities and challenges of business with digital technology,” she said, maintaining steady eye contact with the camera.

The session chat was lively with questions after her talk, and even some quite students actively participated. Yati, for example asked, “I love your explanation, and could you give an example some digital technologies that we can use for doing business?”

Watching their transformation, I felt a deep sense of pride. What started as a process of trial and error had evolved into something meaningful. My students not only honed their technical and presentation skills but also grew in confidence, collaboration, and creativity.

A webinar is a condensed version of a web seminar; it is an online, session that can involve presentations, meetings, workshops, lectures and instruction (Kalinina, 2015; Lieser et al., 2018). This format provides a rich opportunity for just-in-time learning (Pan & Sullivan, 2005). Karkar-Esperat (2018) suggests following certain online learning procedures including receiving technical training, providing clear instructions and instruction design, providing interactive learning activities and building a spirit of collaboration. Stone (2019) noted five factors impacting the quality of instruction: the fair inclusion of students, thorough preparation, interactive communication and relationships, proactive institutional support and engaged learning design. The outcome was similar to previous findings of Wang and Hsu (2008), who discovered that webinars could improve participants’ social presence, reduce anxiety levels and facilitate of interaction within a tailored environment.

My Encouragements to Facilitate Students’ Creativity. According to Beghetto (2021), teachers play a critical role in determining whether creativity is encouraged or stifled in the classroom by developing and managing different types of learning experiences. Just like in-person approaches, learning activities in online environments should be personalised to students’ interests and be relevant to their existing and future lives (Hira & Anderson, 2021; Hira & Hynes, 2019; Moursund, 2003).

In the online PBL setting, I encouraged students to select topics based on their prior knowledge and skills. Some groups discussed with me whether the topics were sufficiently related to skills-based training materials before the presentation. I provided some examples of topics that could communicate theoretical and practical skills. Theorists of PBL believe that learning is enhanced when students explore personal interests, build on existing knowledge and participate in hands-on and authentic activities (Chen, 2004).

The academic's responsibility should be to encourage student learning by assigning tasks, piquing students' interests and providing feedback and advice (Yan & Kember, 2003). I challenged the students to be as creative as possible throughout their webinars. After one group’s presentation, I offered compliments which spurred other groups to perform even better. Accordingly, this project led to student creativity and enhanced their collaboration. In the future, the ability to develop creative ideas through collaboration will be more critical because sharing, connectivity and interactivity are viewed as essential components of advanced information communication systems (Sawyer, 2007). I agree that ‘creativity is a result of nurture rather than nature’ (Kim, 2019), an argument whose veracity has been proven in my class.

A scant few of my students had ever designed a flyer. When I asked about their experiences on this element of the project, they provided the following thoughts:

This webinar project makes me become more creative since I worked with my group to design the flyer with catchy colour. Firstly, I watched YouTube how to design the flyer. After that I showed my draft to my friends and we discussed the colour and design. I did it for a few times until they loved my design. It is so satisfying after I know that I can do it by myself.

If the lecturer did not assign us about the project, I think my friends and I never cared about the designs, and the colour. This project made me more creative, imaginative and productive. I can combine colour which make it more attractive. All groups have different designs and colour, but I reckon they are all good. We need to appreciate them because they work hard to accomplish the project, right!

Based on these interviews, it also appears that these students had never had the experience of conducting online seminars. Projects such as these had never been assigned by other lecturers. For many students, this was their first time acting as spokespeople or moderators:

At first, I felt so nervous when I was assigned to be the moderator in my group, but I practiced a lot and watched news or television programmes on how to be a good moderator. It really challenged me as the lecturer encouraged us to be as formal as possible and I need to use formal language.

Even in other courses, other lecturers requested us to present the topic, and I am accustomed to speaking in front of my friends. This project, however, has a different vibe. I need to present the topic, which is related to knowledge and skill that can be practiced by other students. And the topic must be applicable, interesting and related with our course as well. In addition, I have to design my power point as attractive as possible since it is a part of the assessment and grade. I need to obtain 'A' in this course. That's why I worked hard to practice with my group's assistance to produce interesting presentation, that I have never done before in other courses. The presentation should be simple, precise and attractive and informative. It is really like national or international conference with professional management and people. I feel so satisfied with the project.

The role of the environment in encouraging creativity, and the ways in which educators can influence that environment are critical (Abdulla & Cramond, 2017). This means an individual's creativity can be strengthened, enhanced or developed by exploring, creating and trying new things (Henriksen & Shack, 2020).

Although there is widespread agreement that creativity is essential to teaching, learning and curriculum development in higher education, the definition of creativity is not always clear (Bleakley, 2004). Previous findings provide empirical evidence that there is no single definition of creativity since six facets, including self-reflective learning, independent learning, showing curiosity and motivation, producing something, showing multiple perspectives and reaching for original, entirely new ideas, are equally essential to conceptualise student creativity. Researchers have expressed that creativity is a complex good or service comprising many interconnected parts such as creative power, intelligence, expertise, design, inspiration, character, and surroundings (Batey & Furnham, 2006). Jahnke et al. (2017) emphasise that creativity is a subjective category with different forms depending on the discipline. Thus,

creativity is not a novelty but a synthesis that combines or extends existing understanding and skills (Kim, 2019).

What I Learned from Students' Collaboration and Creativity. My students may demonstrate different levels of creativity than others in several subjects, particularly in the creative and scientific realms. Conversely, seeing their hard work and collaboration to create interesting power points, eye-catching flyers and videos, design the certificate for participants and determine the topics was all about creativity as discussed in the literature (Bleakley, 2004; Jahnke et al., 2017; Kim, 2019). Fields and Bisschoff (2013) emphasise that diversified teaching and learning processes and programmes used in higher education made it difficult to measure creativity at the tertiary level. Creativity has been vigorously investigated at the group level because collaborations among people of different backgrounds facilitate creative thinking and improve performance (Shalley et al., 2004). This became my primary rationale for encouraging student creativity through group work.

As a virtual observer, webinar participant and teacher, I gained new experiences from the various presentation themes of my students. I observed how they assigned duties, discussed prospective subjects and assigned roles to each group member. To satisfy my curiosity, I questioned and clarified their explanations since all of the topics were intriguing and valuable. I was impressed at how knowledgeable they were about their topics and how well they could present content logically and clearly. Most students showed interest by asking questions, responding and contributing to the groups. In the end, they were well-prepared with only minor issues. Nothing is perfect, right?

According to the questionnaire, 100% of the students enjoyed the project, 96.9% did not feel burdened by the project, 90.6% stated that PBL benefitted them, 84.4% said PBL was fun during the pandemic, 84.4% said that PBL stimulated their thinking skills and 81.3% reported that PBL cultivated their creativity. The PBL was deemed to be applicable to student learning by 65.6% of respondents.

Surprisingly, two out of the six groups notified me that they had completed a rehearsal required for the webinar to run properly; to me, this indicated their commitment to the project. The assignment stimulated not only their critical thinking skills of creativity, collaboration and communication as components of the 21st century's 4C skills (Trilling & Fadel, 2009), but also their character and citizenship (Fullan & Scott, 2014), making it 6C skills. The students also practised being good moderators and spokespeople by reviewing YouTube and television programmes. This demonstrated their tenacity, perseverance, resilience and reliability (Fullan & Scott, 2014).

Some of the students' topics are presented in Table 1, such as 'Starting an Instagram Online Business in the Pandemic Era' and 'Socialisation and Counselling of HIV/AIDS to Reduce the Negative Stigma of People with HIV'. The issues addressed citizenship skills such as thinking like global citizens, reflecting on global issues based on an intense understanding of diverse values and demonstrating genuine concern regarding engaging with other individuals to resolve complex problems that affect human and environmental sustainability (Fullan & Scott, 2014). The students' creativity brought new perspectives and experiences to me; as such, I was able to evaluate my own teaching. Informative and important topics can inspire and benefit entire audiences. Creativity has become critical because 'creativity has become a force of great value when used to benefit humans and the whole world' (Livingston, 2010).

To encourage their classmates' questions, all groups distributed credit vouchers (ranging from \$2 to \$3.5) and a door prize. Before their Q&A session, one group even administered a 'quiz' to ensure that the participants had listened to their explanations. They welcomed the audience to provide feedback or ideas about their performance. One group also requested participants to sing the Indonesian national anthem. Their participation and

interaction during the webinar added to the atmosphere's impact and enjoyability. So, not only did the students they generate creativity and critical thinking skills, but they also made the class exciting throughout their webinars, which raised their adrenaline levels. Here are some excerpts from when I asked their perspectives on the project:

I am not a kind of self-confident person. Now I become more confident since all of us must take part the project. The project makes all my friends become active, creative. They are great at presenting the topics and they are knowledgeable. The topics are all different and interesting to be discussed which make us challenge to present a better presentation.

In my perspective, the webinar activities planned by each group were really thought-provoking and helpful, particularly for the social information being covered, including topics on the PPDB (school admission), HIV, fire and security. Frankly speaking, I was not aware of such topics beforehand.

Henriksen and Mishra (2015) discovered that common practices among successful and creative teachers include incorporating real-world learning into lessons and activities, taking intellectual risks, encouraging students to try new things and utilising cross-disciplinary learning experiences. Hearing and watching my students' presentations, and the way the spokespersons elaborated on their topics, made me amazed. They were skillful and competent.

For example, Group 3's spokespeople were HIV activists and members of the HIV community foundation. One of Group 4's spokespeople owned a small coffee shop and provided information on how to start a business and use social media to advertise goods, especially during a pandemic year. They also showed us how to create appealing products. Several group moderators had good public speaking skills and were able to provide a conclusion and review the speaker's explanation. They had the potential to generate dynamic communication. Hence, this project helped develop their true potential.

Table 1
Students' Projects

Group	Topics (Translated from Indonesian)	Platform	Form of Creativity
Group 1	Opportunities and Challenges of Business with Digital Technology in the New Normal	Zoom Meeting	Flyer, certificate, PowerPoint
Group 2	Preparation for New Student Admission in 2020–2021 for DKI Jakarta	Zoom Meeting	Flyer, video, PowerPoint
Group 3	Socialisation and Counselling of HIV/AIDS to Reduce the Negative Stigma of People with HIV in the Community	Zoom Meeting	Flyer, PowerPoint, video
Group 4	Starting an Instagram Online Business in the Pandemic Era	Google Meet	Flyer, certificate, product design, PowerPoint, video

Group 5	Training on Fire Prevention and Control Systems for the Community	Zoom Meeting	Flyer, video, PowerPoint
Group 6	The Importance of Basic Security Training for Security Users in Companies	Zoom Meeting	Flyer, video making, PowerPoint

Is it Effective to Use PBL through a Webinar?

The effectiveness of learning relies on technology, learning environment and teacher encouragement to generate student competence and skills. Technology will never be able to completely replace the classroom learning experience. Dowding (2004) emphasizes that technology should be used as a means to enhance teaching and learning. For example, during the pandemic, the usage of technology and platforms like Zoom and Google Meet facilitated the online learning process. This was supported by the results of a study which showed that accessibility to technology is one of the most important components in the effectiveness of online learning (Winter et al., 2021). Code et al. (2020) and Peterson et al. (2020) also emphasized that when there are limits on in-person learning, such as during the COVID-19 pandemic, technology makes teaching and learning continue to be possible.

Since each group of students was assigned to host their respective webinar, they needed to learn how to use the Zoom and Google Meet platforms, get acquainted with the features of the platforms and create Google Forms. Even though some of the students were familiar with the platforms, based on my past class observations, some had difficulties operating them. As a result, I first provided training on how to utilise the platforms in advance to ensure that everyone had shared knowledge of how and when to use the tools effectively. The students had the option of using any platform they chose.

In the words of Lieser et al. (2018), technology influences the learning environments in which students participate; thus, it is necessary to assess how teachers and students interact with the environment to ensure a pleasant learning experience. This PBL project's goal was to create opportunities for students to develop their learning beyond the class and to reflect the active 4Es Learning Cycle model through online collaboration and the webinar. The 4Es paradigm comprises the learning experience dimensions of engagement, exploration, explanation, and extension (Jenkins et al., 2009). Deejing and Chaijaroen (2011) suggest that learning environments supporting students' abilities to acquire and generate information independently are both effective and desired. In this context, effectiveness means the degree to which a programme or policy accomplishes its objectives (Mohammed & Kuyini, 2021).

The main objective of this project was to stimulate students' collaboration and creativity. In spite of obstacles such as slow Internet connections, difficulty in meeting up because of busy schedules and the strict regulation of campus and government authorities, the students found conducting this project to be beneficial and enjoyable. As each group presented diverse and interesting topics, the students obtained new knowledge, experiences and skills. Student learning is considerably aided by the sharing of knowledge in these situations, which motivates audiences to construct their own knowledge and conceptions (Driscoll, 2000). In addition to sharing their knowledge, the students learned how to collaborate on the assigned project. They even expressed gratitude and thanked me for asking them to do the project, as acknowledged by the below interviews:

I feel so grateful that my lecturer assigned us this project. We learned how to collaborate with other friends to do the project and learned to divide our tasks

wisely based on our competence and skills. It was really beneficial, especially for after we graduate later. I think I can start to open a business.

For me, the topic of running an online business really benefits me. From that presentation, now, I know how to start a business using social media such as TikTok, Instagram and Facebook. The spokesperson's explanation was very clear and systematic so that I could follow it. I am so thankful to Ms Mariah because you taught us this course in an interesting and fun way that was beneficial for all of us.

In line with learning outcomes, the PBL is an effective approach to developing 21st-century abilities since it promotes critical thinking, problem-solving, information and media literacy, interpersonal communication, cooperation, leadership and teamwork, innovation and creativity (Häkkinen et al., 2017). PBL has a significant relationship with collaborative iterative, disciplinary subject and authentic learning, all of which result in student engagement (Almulla, 2020). PBL improves student engagement by allowing students to share and discuss their knowledge and information (Almulla, 2020). Here are a few interviews on how students were engaged with their peers and shared ideas:

I belonged to Group 4 with seven members. I have an online business using Instagram with some of my classmates on a different product. Three of us become spokespeople. We divided our duties. For example, my part was explaining about some kinds of social media for online businesses and the advantages of using social media, such as Instagram, to promote products. My friend Andri had the responsibility to explain technically and show the step by step to start the business, and the other one. Ari, explained how to design the product. We designed the flyer together and discussed other elements. We did the rehearsal two days before our presentation.

I am a kind of shy person and do not talk much. But this project made me speak up and I feel pleasant because all my friends are talkative and smart. Bani and Rere (pseudonym) are HIV activists, and could share a lot about HIV with us before the presentation. Since I was assigned to be a moderator, I read information about the topic from many sources as well to lead the webinar well. Because of that I became more well-informed and improved my speaking ability.

In higher education, student involvement is seen as a critical condition for student success, with engagement defined as a serious interest in, active participation in, and commitment to learning (Bovill et al., 2011; Kuh et al., 2010). Both learning processes and outcomes improve when students take an active and participatory role in their education (Kuh et al., 2010; Kuh & Schneider, 2008) while also developing students as critical thinkers at the same time (Freire, 2003). Thus, the online PBL setting has a great impact to students as they actively participate in collaborative discussions with classmates. The success of collaborative learning and the effectiveness of instruction also depends on teachers' support to their students. As acknowledged by Shonfeld (2017), a teacher also performs the roles of an educator, counsellor, guide, motivator and moderator since she/he has an impact on the success of collaborative learning.

The Interaction of Social Capital Theory and Online Collaborative Learning

Students require resilient social capital to promote collaborative work since it generates a collaborative culture for their team to operate most successfully. As with the development of human and physical capital, utilised in multiple disciplines (Adler & Kwon, 2002), social capital is about the synergised collaboration to produce goods, services, skills, knowledge and thoughts that benefit individuals and groups (Luthans et al., 2004; Putnam, 2000). In line with this perception, students who accomplished the webinar project in this current research have gained reciprocal benefits since they shared ideas and skills and created eye-catching flyers, learning materials, and PowerPoints for their presentations. They also had daily interactions via WhatsApp and Zoom to complete the projects and establish bonds or close ties. When members have close relationships, they develop collaboratory respect which allows them to learn from each other's' opinions, even if it includes criticism (Oztok et al., 2015).

Previous researchers have found some impacts of social capital in online learning. Acar (2011) reports the prospective of social capital to increase participation in the learning environment while Rovai (2002) reveals the enhancement of perceived learning. Social capital in online learning, which is related to social inclusion (Cocquyt et al., 2017), also increases students' learning satisfaction (Lu et al., 2013), enhances the entire learning experience (Gilmore, 2020) and advances successful learning outcomes in general (Pitsoe & Letseka, 2016). Field (2005) denotes social capital as having an important role in people's ability to learn. As a result, social capital and adult education involvement are favourably related through collaborative work. The preceding research shows that social networking and social capital promote student participation and better learning experiences.

Conclusion and Implications

In summary, collaboration is the key to any successful learning endeavour, particularly in the context of PBL in higher education. Through PBL, students learn by creating their own understanding of the learning experience based on what they already know about the topic (Roessingh & Chambers, 2011). Several works mention its benefits, which include promoting dynamic interactions and learning activities such as questioning, explaining and justifying thoughts, argumentation, articulation and elaboration (Häkkinen et al., 2017).

Many education sectors experienced similar problems and obstacles during the COVID 19 pandemic, but helping the students overcome the problems was also our priority as educators. Thus, facilitating meaningful learning experiences through PBL was profoundly important to optimise student creativity, communication, collaboration, critical thinking, character and citizenship as part of the 6C skills for the 21st century.

Furthermore, creating effective, efficient and fun learning is the responsibility of educators. As Häkkinen et al. (2017) assert, it is important for educational systems to include 21st-century skills to prepare students to enter the world equipped to deal with challenging and multifaceted problems. Larger involvement of students in dialogue, as well as a greater emphasis on collaborative discourse and argumentation, have become crucial forms of engagement and learning in a society that demands productive modes of collaboration to confront difficult scientific and social concerns (Harney et al., 2017).

My research likely uncovered findings that have not been extensively covered in past research on online PBL. However, this study has found unique insights about how webinar-based assignment fostered heightened engagement and creativity in students during the pandemic. While previous research has discussed collaboration in PBL (Capraro et al., 2013), the specific role of online webinars as a tool for collaborative learning during a crisis is less frequently explored. Thus, my finding contributes to the literature by showing how the webinar

format support engagement, critical thinking, and self-efficacy in online learning environments. The enhanced participation and engagement observed in my study can be attributed to the flexibility and real-world applicability of webinars, which differs from traditional online learning environments.

There are also likely aspects of my findings that align with previous studies on PBL and online learning. Similarly, studies on online learning environments during the COVID-19 pandemic (Hodges et al., 2020) emphasize the challenges and adaptations teachers faced, reinforcing the importance of flexible learning formats like the one I employed in my class. My observations about the success of student collaboration, particularly the role-playing element in webinars, align with existing research that highlights the importance of interaction and clear task distribution in online group projects. On the other hand, certain findings from the existing literature may not have been evident in my study. For instance, while some studies have shown that online PBL can sometimes lead to disengagement due to a lack of face-to-face interaction (Diep et al., 2019), my findings may not have supported this issue. While much of the literature points to challenges in maintaining student engagement in online PBL, my study revealed that the use of webinar presentations fostered active participation, challenging the notion that online environments inherently diminish student interaction.

This study offers practical implications for educators in higher education such as the integration of webinars and role-based collaborative projects as an effective way to maintain engagement and develop soft skills like communication and teamwork. Professors and faculty members can leverage webinar projects to encourage peer-to-peer learning and increase student accountability, as students take on specific roles that simulate professional environments. Furthermore, by reflecting on your own teaching practices and making adjustments based on student feedback, you highlight the importance of adaptability in online teaching environments. Regular reflection on teaching practices, combined with feedback mechanisms like open-ended questionnaires, can help educators continuously improve online PBL methods.

One thing to remember is that autoethnographic research encourages practitioners to share, enlighten others and develop rather than claim to have all solutions. Autoethnography represents the choice of practitioners to comprehend rather than only explain (Lake, 2015). Thus, conducting an autoethnography study on this PBL webinar project generated more ideas and dialogues amongst lecturers and the head of the study programme, particularly in the course of management and training in tertiary education regarding assessments and evaluations in other classes. In teaching, the enrichment of teaching content and a variety of teaching styles and methods can be exploited to create meaningful learning experiences. Developing more research ideas about other creative projects needs to be taken into consideration for further studies.

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