COVID-19 RESULTED IN CLASSROOMS WITHOUT WALLS: WHAT CAN PEDAGOGICAL AND CONTENT KNOWLEDGE (PCK) OFFER?

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ABSTRACT

The pandemic resulted in countless tips about how technology can replace face-to-face instruction. This paper illustrates how pedagogical philosophies can impact online course decisions and how a PCK frame offers a gateway for thinking about epistemological access and social justice during Emergency Online Teaching (EOT). This research followed an intrinsic case study design including multiple data sets that were analyzed through inductive, deductive, and axial coding before generalizing patterns across students' reflective journals, FlipGrid recordings, daily tasks, and end-of-course feedback. The results showed that a collaborative online community of practice, self-directed learning, and integrated assessment provided student access and encouraged voice and engagement. Thus, post-COVID-19 PCK holds potential for instructional design and emancipatory online pedagogies in higher education.

Keywords: *Pedagogical and content knowledge (PCK), Emergency online teaching (EOT), self-directed learning, constructivist teaching, sociocultural learning, emancipatory and social justice pedagogies*

COVID-19 has resulted in universities rapidly turning to emergency online teaching (EOT) since there was no time for "careful instructional design and planning" (Hodges et al., 2020, p. 3). Hence, it could have resulted in "slapping classroom content online" (O'Neil et al., 2008, p. 18) or the idea that technological tools constitute "pedagogical practice" (McVay et al., 2008, p. 6). Nonetheless, EOT research has highlighted both the positive and challenging online experiences for faculty and students. However, a gap in the literature is how faculty created "conditions under which learners have a better chance to learn" and how online pedagogy can democratize new learning spaces (Parchoma et al., 2019, p. 13). In the Middle East, some research studies illustrated the positive EOT experiences for faculty and students but focused more on moving face-to-face content to an online interface (Alaghbary, 2021; Elashhab, 2021; Henari & Ahmed, 2021). Aromaih (2021) found that synchronous and asynchronous modes challenged participants' self-directed and autonomous learning because of the minimal communication with instructors. In addition, Jordanian instructors commented that they were ill-prepared for online pedagogy because it required a reconceptualization of their EFL teaching methods (Al-Khresheh, 2021). In Asia, Thai faculty commented that their pedagogical beliefs impacted their synchronous online classes, limiting student engagement with the course content (Siripol & Wilang, 2020). Even though significant, these studies downplayed their teaching philosophies and "the complexity of the relationships" between technology, pedagogy, and content, because they mainly reported on "oversimplified solutions or failure" (Koehler & Mishra, 2009, p. 66).

Interestingly, the vital link between pedagogy, content, and knowledge (PCK) in developed contexts has been explored much deeper. For instance, Scull et al. (2020) showed that innovative online pedagogy requires instructors to conduct

systematic revision and reviews of their course content, identify key concepts, and to strategically minimize course material without compromising the learning outcomes. In this way, instructors can renegotiate student access, academic success, and engagement in the "new" synchronous or asynchronous modes. Similarly, research in Spain, Canada, and Switzerland indicated that instructors must strategically create teacher presence and intentionally design tasks to mediate students' sensemaking of content and assessment tasks. Consequently, they highlight the importance of engaging with the relationship between curriculum, pedagogy, content, and technology domains to create quality online courses (Rapanta et al., 2020). However, these studies did not illuminate how PCK and instructors' teaching philosophies can contribute to or limit emancipatory only pedagogy. Whether we teach face-to-face or online, our pedagogy is never neutral and value-free, yet social justice and democratizing online spaces at most universities may not have been high on the agenda during the sudden shift to online pedagogy (Dyches & Boyd, 2017).

Since most university appointments place high capital on research outputs, there was probably more attention on getting faculty ready on the platforms to use, the available software, and technological resources (Bain & Mirel, 2006; Bokayev et al., 2021; Labaree, 2005). If teacher-centeredness underpins instructors' teaching philosophies, their technology integration would probably reflect rote learning that would deny students' voices, engagement, and active participation. Therefore, a gap in the literature is how instructors' pedagogical philosophies, values, and beliefs have impacted their technological decisions and activities (Abbitt, 2011; Niess, 2005; Ottenbreit-Leftwich et al., 2010). For this reason, the sudden transition to online pedagogy and learning might have resulted in upskilling instructors' knowledge of technology with perhaps fewer conversations about online pedagogy for social justice, inclusion, and student voice (Freire, 1974, p. 136).

PURPOSE

The pandemic resulted in countless tips and advice about how technology tools and resources can replace face-to-face instruction, yet there were limited conversations about the relationship between pedagogical and technological decisions (Bates, 2020; Nind, 2020). This omission of PCK was also stark in the research studies included in a recent review by Samawi and Al-kreimeen (2022). Even though technology can offer a "variety of technologies," it does not guarantee effective online pedagogy (Angeli et al., 2016; Benson-Kuschner & Ward, 2013, p. 170). The study shows how pedagogical content knowledge (PCK) can inform emergency online teaching decisions and its potential for social justice pedagogies. As a result, I pose the following research question: What did a PCK frame offer the switch to online pedagogy, and what do Kazakh student experiences reveal about democratizing the online classroom space?

THE RESEARCH CONTEXT AND COURSE REDESIGN

Since independence, Kazakhstan's primary, secondary, and higher education landscape has undergone rapid reform, such as implementing an ambitious trilingual education policy. The primary objective for the progressive educational reform is underpinned by new liberal market discourse associated with globalization, human capital theory, and the government's aim to be among the 30 most competitive countries in the world (Goodman & Abdimanapova, 2020). Unsurprisingly, to be a global competitor, English Medium Instruction (EMI) has been identified as a gateway to academic mobility, participation in international research, and global cooperation, resulting in 42 institutions currently offering EMI degrees (Karabay, 2017; Seitzhanova et al., 2015). However, research illustrates that the switch to EMI gave rise to institutional and student challenges, but there is a research gap about instructors' pedagogical and social justice strategies to address these EMI challenges (Maudarbekova & Kashkinbayeva, 2014; Tastanbek, 2019). This research study was in the context of one graduate school at an EMI, a research-intensive, well-resourced university in Kazakhstan. The university aims to be internationally renowned for combining education, research, and innovation. The institutional response to EOT has been commendable; for example, large-scale surveys measured student access to technology, bandwidth, and Wi-Fi which helped faculty conceptualize their online pedagogy. In this context, the decision was to move from 15-week face-to-face course delivery to one-month intensive postgraduate courses (see Figure 1). However, there was no systematic interrogation about PCK affordances and its potential for emancipatory online pedagogy.

Figure 1 Moving from Face-to-face to Online Teaching Mode

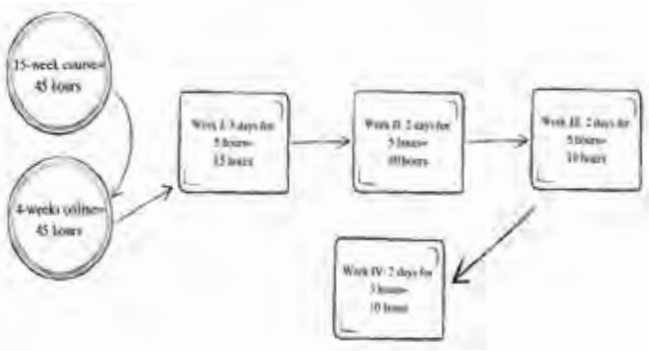
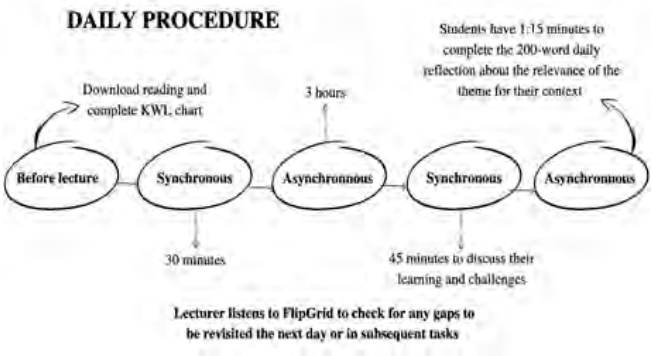


Figure 2 Daily Procedure

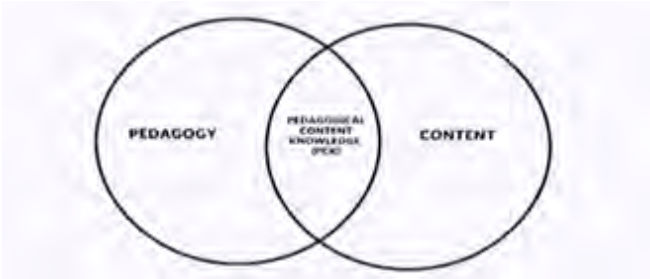


Given the intensive course design, I used a PCK frame to reflect on my teaching philosophy, which is informed by semiotic mediation (Halliday, 1978), zone of proximal development (Vygotsky, 1978), scaffolding (Bruner, 1990), and social constructivism (Kolb, 1984; Piaget, 1976). For this reason, an intentional, inquiry-based pedagogy underpinned my online pedagogy because it would contribute to scaffolding students' sensemaking through a "metacognitive, self-reflective and collaborative process" (Gazi, 2009, p. 69; Lunenberg, 1998). Recognizing this underpinning resulted in situated learning and scaffolded daily tasks; each online session started with a 30-minute plenary. After this, students had three hours of self and collaborative study tasks to be completed before the afternoon plenary. The activities were timed to take approximately one and a half hours, allowing students to work at their own pace, plan breaks, and chat with the lecturer or peers during conceptual challenges. Level one tasks, academic video clips (five to ten minutes), required note-making concerning concepts or themes connected with the scholarly articles. Finally, students answered high-order thinking questions about two readings, presented their understanding (using maps and storyboards) aligned with a specific course learning outcome CLO (see Figure 2), and submitted FlipGrid topic reflections about their online learning experience. In this way, a PCK frame facilitated my online pedagogy as "a process or series of suggested steps […] to plan, implement and evaluate [my intended] instruction" (Carr-Chellman, 2016, p. xiv).

LITERATURE REVIEW: PCK AND ITS RELEVANCE FOR EOT?

More than 30 years ago, Shulman (1986) introduced the Pedagogy and Content Knowledge (PCK) frame to illustrate how educational research and teacher training projected binary views about content and pedagogy as if they "exist in a vacuum" (Powell, 2018, p. 252). The PCK frame encapsulates the relationship between teachers' content knowledge (CK), pedagogical knowledge (PK), and their understanding of the curriculum, learners, educational contexts, and objectives (Shulman, 1987). Shulman argued that teachers are specialists because of "that special amalgam of content and pedagogy that is uniquely, their own special form of professional understanding" (p. 8). Therefore, a PCK lens can be a valuable framework to reflect on our online pedagogy, assessment, and instructional choices because, without a deep understanding, instructors might be challenged to meet the learning needs of diverse students. However, PCK has received little attention in university contexts because, in most disciplines, content knowledge has outranked pedagogic development (Fraser, 2016; Nind, 2020; Wagner et al., 2011).

Figure 3 Pedagogical Content Knowledge (Schulman, 1986; 1987)



Smith and Neale (1989) argued that teachers with good PCK know their students' needs, prepare practical lessons, and select resources and activities to develop their students' conceptual understanding. Also, PCK foregrounds teachers' pedagogical reasoning about "relating their subject matter to their pedagogical knowledge" (Cochran et al., 1993, p. 263). Johnston and Goettsch (2000)

concluded that language teachers' PCK is complexly intertwined with knowledge about language skills, the nature of language, and language learning. A recurring theme is that PCK includes teachers' skills to make content comprehensible as well as sequence and adapt content according to the diverse needs of their students (Cochran et al., 1993; Shulman, 1987; Veal & Makinster, 1999). New strands have been added to Shulman's original PCK, such as Technological Pedagogical Content Knowledge (Mishra & Koehler, 2006), Literacy Pedagogical Content Knowledge (Love, 2010), Sustainability Pedagogical Content Knowledge (Perry, 2013), and recently, Social Justice Pedagogical Knowledge (Dyches & Boyd, 2017). Interestingly, PCK has remained integral to these new proposals, indicating the relevance of Shulman's original concern with the importance of pedagogical knowledge to translate subject matter knowledge to students (Kind, 2009).

Research in content subjects such as mathematics and science has focused on experienced and novice teachers' PCK (Fraser, 2016; Karal & Alev, 2016; Luo, 2004). Other studies compared the PCK of teachers with teacher training versus those without training (Kissau & Algozzine, 2013; Schneider, 2015) or investigated which component of PCK (content knowledge or general teaching skills) is most prevalent (Evens et al., 2016; Lui, 2013). Another PCK research theme is studies that illustrate teachers' perspectives, PCK's influence on teaching, and the PCK factors that impede or strengthen teachers' pedagogy (Creasy et al., 2012; Kratz & Schaal, 2015; Morrison & Luttenegger, 2015; Nilsson & Karlsson, 2019; Zhang & Zhan, 2014). A dominant theme is that qualified teachers showed richer PCK, which can function as "a system of lasting and disposable dispositions, integrating past experiences," yet "at every moment [it is] a matrix of perceptions, appreciations, and actions and makes possible the achievement of infinitely diversified tasks" (Bourdieu, 1977, p.72). However, Nind (2020) found that with experience, instructors' PCK can be refined and developed, especially when it becomes "knowable to themselves and others" because it can reveal their values and beliefs of teaching.

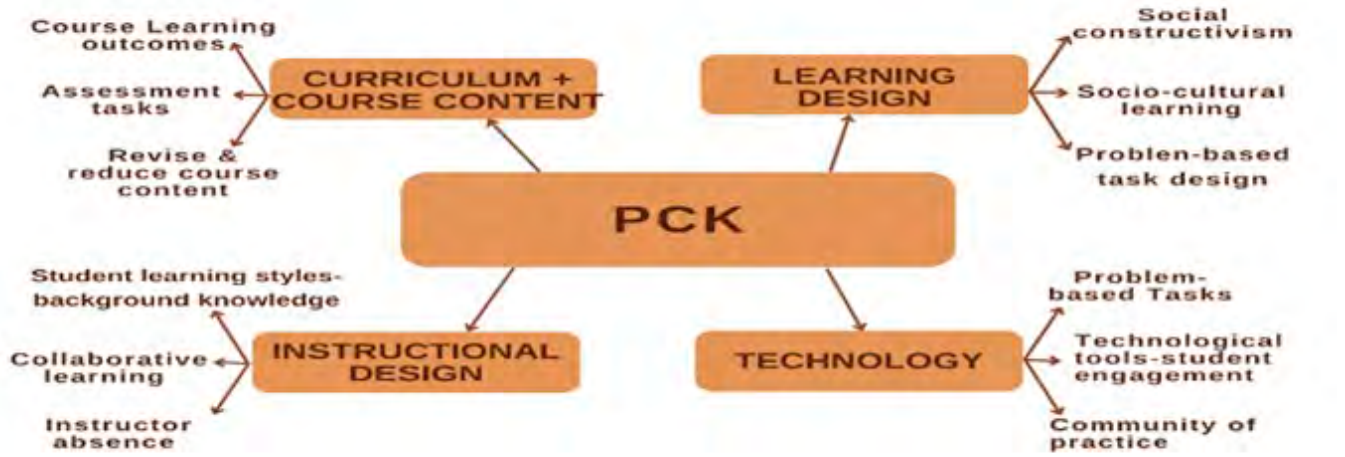
Despite being a powerful theoretical and practice-based concept, PCK has been critiqued as being complex, "complicated," and "problematic" (Barnett, 2003, p. 616; Shing et al., 2015). The PCK critiques probably arose due to the "inconsistent and often vague application of the PCK construct" (Abell, 2008, p. 1407). For instance, McEwan and Bull (1991) argue that "all subject-matter knowledge is pedagogical" and that "ideas are themselves intrinsically pedagogic" (p. 332), probably alluding that PCK is unnecessary. However, without pedagogical knowledge, conveying content would probably be one-dimensional, which could result in instructors teaching as they were taught (Fraser, 2016; Oleson & Hora, 2014). Regardless of the PCK limitations and critiques, there has been a growing interest in PCK in tertiary education (Benson-Kushner & Ward, 2013; Nind, 2020; Rapanta et al., 2020).

Benson-Kushner and Ward (2013) interviewed three experienced professors about their online pedagogy in the United States. This study found that two of the professors mostly drew on their content and technology knowledge resulting in a "variety of technologies [but that it] did not necessarily result in the effective use of technology to impact teaching or learning" (p. 170). In the same study, one participant with more experience in the pedagogy and content domains "used technology to support her pedagogical strategies," resulting in online learning that "blends theory into practice" (p. 167). They concluded that those with advanced technology skills but limited pedagogical knowledge were less able to mediate, scaffold, and support compelling online learning experiences. In Australia, interviews with four experienced academics that supported high levels of interaction in online learning and teaching highlighted the pedagogical and technical considerations of moving to an online environment during COVID-19 (Scull et al., 2020). The findings revealed that technological skills alone are insufficient for successful online pedagogy, even though they seemed to play a central role during the switch to EOT (Hodges et al., 2020). Therefore, the affordances of a PCK frame need systematic interrogation about how it can contribute to meaningful online pedagogies. It can also inform new conversations about inclusivity, social justice, and emancipatory online pedagogies (Dewey, 1998; Dyches & Boyd, 2017; Freire, 1974).

METHOD

The pandemic propelled education to a digital crossroads, so this study explored postgraduate

Figure 4 The PCK Frame



students' experiences with a PCK-framed online course. It followed a qualitative method rooted in an intrinsic case study design because the research was exploratory, guided by the researcher's "interest in the case itself rather than in extending theory" (Mills et al., 2012, p. 500). Such small case studies can illuminate our underpinning frameworks "for making choices about what we do and how" and are especially useful when we critically look at our scholarly practices or conduct context-directed research (Bell, 1997, p. 4; Charlesworth & McKinney, 2005).

DATA AND PARTICIPANTS

An intrinsic case study lens offered a space to view my online pedagogy design as an object of study and "a real-life, contemporary bounded system" that assigned worth to my students' perspectives about "a particular set of activities and [their] experiences" (Cousins, 2005, p. 421; Creswell, 2013, p, 97). For this reason, I used convenience sampling of fifteen Kazakh and Russian-dominant speaking postgraduate students registered for a Multilingual Education Degree during the first COVID-19 lockdown of 2020. This case study was bound by data from document analysis of student assignments, daily tasks, and feedback. Informed consent to analyze student assignments and reflections were obtained at the beginning and through a follow-up electronic communication three months after the course.

DATA ANALYSIS

I used multiple data sources and a three-phased data analysis approach to achieve validity and reliability because it provided various perspectives about students' online learning experiences (Yin, 2017). For instance, 90 randomly selected excerpts from daily tasks reflections, weekly FlipGrid topics, reflective journal assignments, and end-of-course feedback gave snapshots of students' experiences in real-time and retrospective data after the course. Firstly, I inductively analyzed the transcribed FlipGrid recordings and the other three data sets to identify broad categories that could be compared to the relationship between student experiences and my PCK frame (Figure 4). Secondly, I deductively coded the same data sets for categories that I could link with the underpinning theories (social constructivism, problem-based, and sociocultural learning) that were useful in establishing relationships with previous research, but they also provided me with some perceptions and student reactions that were validated in the broad inductive categories. The multiple data sets and coding procedures helped trace students' experiences holistically, counteracting my biases and ensuring that I am not "seeing only what [I] want to see" about students' experiences (Cousins, 2005, p. 242).

Finally, I conducted axial coding to find relationships between the inductive and deductive themes and to ensure that the data categories were thoroughly refined, grouped, and explored concerning the phenomenon (Strauss & Corbin, 1999). Therefore, the three-phase data analysis frame helped me to revisit and compare the inductive and deductive themes before I generalized patterns

across data. Consequently, I achieved analytical generalization through several broad themes, theoretical concepts, and connections that had emerged from the multiple data sets and cross-data comparisons to enhance internal validity and generalizability of the case (Yin 2017).

FINDINGS: STUDENT PERSPECTIVES AND EXPERIENCES OF A PCK-INFORMED ONLINE COURSE

This paper focused on how a PCK lens facilitated online course decisions and its potential for democratizing online pedagogy. The students have entered the course with a perception that learning "consists only of large amounts of factual knowledge or a mastery of steps or rules" (Fry et al., p. 12). However, socio-critical and humanizing principles created a relaxed online environment coupled with high expectations to shift students from being consumers of knowledge toward becoming producers of knowledge. As a result, I wanted to give students access to a new way of thinking about knowledge to transform their understanding of scholarly discourse and knowledge production. Interestingly, a recurrent pattern in the data indicated a change from their knowledge regurgitation habitus (Bourdieu, 1977). One student said, "The subject is intended to make us think critically. Overall, I enjoyed the course in terms of its content and tasks that made me THINK, really think!" Another indicated, "I never realized that a course lasting four weeks could be so deep in knowledge and understanding."

ONLINE COMMUNITY OF PRACTICE, COLLABORATION, AND STUDENT ENGAGEMENT

Drawing on PCK, I reflected on how technological tools could offer cognitive and social spaces to mediate tasks, connect students to materials and facilitate a dynamic, collaborative online space (Wells, 1996). Socially, I envisioned an online environment that would be a relaxed, safe zone for students to share learning experiences and their pandemic-related challenges. The asynchronous activities were intended to facilitate a social presence through immediate peer and instructor feedback, reminders of task guidelines, and content as building blocks to previous, present, and future learning, as well as collaborative tracking of progress (Lowenthal & Snelson, 2017). Cognitively, the short instructor videos, clips, and immediate FlipGrid feedback ensured my presence and content mediation. The student feedback revealed that the course design facilitated sensemaking in synchronous and asynchronous modes (Baran et al., 2013; Hosler & Arend, 2012). For instance, one student indicated, "I enjoyed the self-study and online collaborative methods more than lecturing as it is more comprehensive; besides, we always had discussions to share our ideas" (Student F).

Another one said, "One more thing I also would like to point out is the plenary and group discussions. They definitely were the source of new thoughts and ideas" (Student H).

Student J indicated, "I really appreciate the collaborative work of all the group mates and our professor on the different topics, as specifically, discussions allowed me to understand some points and concepts."

Another student remarked, "The friendly family atmosphere of the lessons made us feel comfortable. But the course puts deadlines on the same day as the lecture, which is good as it keeps us on our toes and does not let us procrastinate" (Student N).

Freire (1974) argued that students need to view themselves as "cognizing subjects, and not as an object upon which the discourse of the educator impinges" (p.37). The student reflections indicated that my constructivist and sociocultural philosophy facilitated an online environment that encouraged working individually and collaboratively, creating a community of practice. The data revealed that self-study, collaboration, accountability, and deadlines in the online space contributed to increased sensemaking and engagement with the course content (Rossner-Merrill et al., 1998). It suggests that they developed a "natural energy to create meaning for themselves [to make] learning more authentic, enjoyable, and intrinsically motivating" (Deboer, 2002, p. 407). Therefore, the course design contributed to students' autonomous, self-directed individual and collaborative learning (Cho & Shen 2013). This way, I could shift from hegemonic practices and unequal power relations to an online space promoting inclusivity, student voice, and engagement.

SCAFFOLDING ONLINE PEDAGOGY AND ACCESS

Designing online tasks where students can view knowledge as contextually constructed can extend students' thinking about the value of their local

or cultural knowledge and expose them to experiential learning (Dewey, 1998) and place-based knowledge (Davidson-Hunt & O'Flaherty, 2007). Such tasks can scaffold students' understanding and encourage them to be active co-constructors or deconstructors of knowledge (De Laat & Lally 2003; Vygotsky 1978). A student commented,

> The tasks were really helpful as we were not only involved in the reading process, but we were also practicing the theory, writing and sharing opinions and ideas on a particular topic, and aligning the topics to the Kazakhstani context, which enhanced our analyzing skills (Student G).

Another one said,

> I liked that the professor was interested to hear about the Kazakh context, which made me feel that my Kazakh culture and knowledge have value. It made the class more interactive, and sometimes we did not have enough time because everyone wanted to give their opinion during the plenary (Student X)

Student B felt that,

> It was interesting to read international research, discuss it with peers and critique it for relevance to our local context. I felt like a policy planner when we had to analyze language curricula from local schools to highlight their strengths and challenges. Then our group made recommendations for the Kazakh context. I felt smart then because we related the course readings to our context.

The excerpts above illustrated that the scaffolded tasks facilitated space to find meaning through the "interplay between experience and theory." Students could draw on theory to explain how practice (Kazakh context) can shape new thinking about theory. Interestingly, without knowledge about my teaching philosophy and how it informed my PCK, the student below commented on the importance of pitching online tasks that are not below or above students' zone of proximal development (ZPD) (Vygotsky, 1978). The student stated,

> The syllabus had been structured so that we could get various tasks, and at the same time, those tasks did not disturb us from acquiring the lesson materials. This is important as content acquisition is the last thing students care about when the task is too mundane or too proactive (Student C).

Also, they foregrounded that the scaffolded tasks encouraged self-directed and interdisciplinary learning (Henriksen et al., 2021). Student O remarked,

> I am fascinated with the number of concepts related to the curriculum we have studied, especially with their interconnection with each other. When considering one topic, I can think of many others that can be added as a complementing branch of the curriculum design.

Student M explained,

> The course helped me learn how to read scholarly papers differently than I used to before. I consider this a valuable asset of this course because it improved my overall academic reading skills and thinking and contributed to my development as a graduate student and novice researcher.

The above extracts highlight that a scaffolded approach to online pedagogy provided access to "conceptual gateways or portals" and that a PCK frame has contributed to a new way of thinking about knowledge and how it is constructed and developed (Meyer & Land, 2005, p. 373). In addition, the various inquiry-based tasks underpinned by Bloom's higher-order thinking domains (Krathwohl, 2002), awareness of learning styles, and students' ZPD encouraged active participation in their own learning (Dijkstra, 1997). Student B said, "I particularly loved the video tasks, which were an introduction part. With the help of the videos, it was much easier to get the main idea of the readings."

Similarly, another student remarked:

> Giving specific tasks when we were watching relevant videos and listening to academic audio clips built our understanding of theoretical concepts before we read the course articles, helped me understand much better, and turning theory into creative maps was new but made me realize how much I have learned even from other courses (Student A)

Student K mentioned:

> The discussion topics and tasks we had made me think critically and creatively in a curriculum-oriented direction. Especially when we were given creative assignments with drawing maps of our understanding, comparing and contrasting, and, of course, the questions and tasks about applying the relevance of studied concepts to the Kazakhstani context.

As a result, a PCK frame facilitated a systematic, purpose-driven, and intentional online space offering access through course content and problem-based and critical thinking tasks. Thus, technical knowledge would not be enough to reveal the value-ladenness of online course design (Naude et al., 2014, p. 220). The students' reflections highlighted the value of knowledge border crossing between cultural, local, and international discourse. Therefore, they experienced the online space as multi-dimensional, inclusive of real-life situations encouraging social and cultural engagement (Speiser et al., 2022). In this way, a PCK frame offered social justice because the participants developed an individual awareness of the value of their local context and that they can contribute to or critique the relevance of how research informs practice and how practice or local contexts can lead to new thinking (Dyches & Boyd, 2017).

ASSESSMENT DESIGN AND SENSEMAKING

Cho and Shen (2013) argue that online course assessments must be sequenced as developmental, self-paced, asynchronous activities to increase students' engagement and participation. The CLOs were intentionally aligned with the assessment tasks during the redesign process to encourage student engagement and access (Benson-Kushner & Ward, 2013). In the redesigned course, assignment one (participation and engagement) consisted of theory mapping, storyboards, and FlipGrid tasks; students' daily reflections were reworked as assignment two (analytical, reflective assignment infusing theory), and assignment three, a group project that required students to use theory in an authentic Kazakh context. Assignment four (individual) required a position paper (due a month after course completion). As a result, each assessment task provided a scaffold for subsequent and the final summative assessment (individual). One student said, "One of the strengths of the course is the good coordination between tasks and assessments."

Another remarked, "This course was well organized in terms of the content, written and audio/video materials, and the final assessments, which were the products of everything we discussed and learned during the course" (Student X).

Student E commented, "This course sets the bar for future online courses because the daily tasks, discussions, and reflections were connected with our assignments; it felt like we had all the knowledge for assignments, so I didn't stress."

The graduates' reflections illustrated a much deeper connection between the course learning outcomes, the learning tasks, and assessments which are argued to be "the essence of an online course [because] the organization of learning activities enable the student to reach certain learning outcomes" (Carr-Chellman & Duchastel, 2000, p. 233). Therefore, they illustrated that the integrated assessment tasks gradually developed their understanding, which is essential in online pedagogy because it can activate cognitive thinking and self-regulation (Rapanta et al., 2020). Finally, the mediated and intentionally sequenced assessments enabled students "to manage learning processes [to] systematically achieve goals" (Cho & Shen 2013, p. 290).

DISCUSSION

This study focused on the switch to emergency online pedagogy and what student experiences revealed about a PCK-informed frame for online course design. Turning my course design and pedagogical decisions into an object of the study showed that a rich PCK had a significant and influential impact on the student's online learning experience (Dyches & Boyd, 2017; Rapanta et al., 2020). It illustrated that PCK could be a valuable framework for reflecting on the relationship between our teaching philosophy and our online pedagogy, assessment, and instructional choices. First, a PCK frame can bring to the surface instructors' teaching philosophies and the "special amalgam of content and pedagogy" (Shulman, 1987, p. 8). Second, it has the potential to get instructors to shift from technology toward thinking about which tools would best support online pedagogy (Luka, 2014). Finally, PCK can offer a third space to critically reflect on how technology contributes to not only student learning but also how we can expose them

to thinking about their own thinking and social realities since the "real value of education is not in what one learns, but in how one develops" (Freire, 1974; Gandz, 1997, p. 125).

The data revealed that the participants experienced "a deep and meaningful (collaborative-constructivist) learning experience" (Akyol & Garrison, 2011, p. 15). Therefore, the study demonstrated a need to revisit how PCK could contribute to the quality of online pedagogy about how "specific learners in specific contexts" can engage with online learning and which tools would best support online teaching (Angeli & Valanides, 2013, p. 5; Angeli et al., 2016). Despite having limited technology skills, the students' experiences revealed that it did not matter which tool I used but what mattered was "how technology can be used as a scaffolding and sensemaking tool" (Rapanta et al., 2020, p. 935). The results counter other research arguing that teachers with poor technological skills would be challenged to deliver quality online courses (Abd Samad et al., 2018; Baber, 2021; Mohalik & Sahoo, 2020). For instance, the participants did not experience self-directed and autonomous learning as challenging because of the minimal communication with instructors (Aromaih, 2021). The findings also suggest that being ill-prepared for online pedagogy is not only about a reconceptualization of EFL teaching methods (Al-Khresheh, 2021) but requires a systematic unpacking of teaching philosophies. Consequently, this study concurs with research in the USA (Benson-Kushner & Ward, 2013) and Australia (Scull et al., 2020), which showed that those with advanced technology knowledge but with limited pedagogical knowledge were less able to mediate, scaffold, and support practical online learning experiences.

Another interesting finding was that the redesigned course provided the "conditions under which learners have a better chance to learn" (Parchoma et al., 2019, p. 13). In this way, the course infused "technology to support […] pedagogical strategies" that blended "theory into practice" (Benson-Kuschner & Ward, 2013, p. 167). Therefore, the study illustrated that pedagogical knowledge had the most significant impact on course redesign and that a "variety of technologies [would] not necessarily result in the effective use of technology" (Benson-Kushner & Ward, 2013, p. 170). This paper illuminated that even though online pedagogy creates "classrooms without walls," the tools we utilize need to be interrogated for how they can empower or limit students' thinking; we must be "mindful of the walls that we construct" in online spaces (Charlesworth & McKinney, 2005, p. 123). More interesting, the data suggested that a focus on technology only would be insufficient if we strive for inclusivity, autonomy, and development of students' "meta-cognitive, self-reflective and collaborative" capacities (Freire, 1974; Gazi, 2009, p. 69; Lunenberg, 1998). As a result, we must plan an appropriate pedagogy first, then reflect on technology's underpinning values and how they could advance or limit students becoming "consciously aware of [their social] context and conditions as a human being" (Freire, 1974, p. 74). In this way, our online pedagogy exposes students to learning about the content and how to question and critique it.

Finally, there is a renewed focus on integrating technology to conceptualize excellence in higher education pedagogy (Kilgour et al., 2019; Misra & Koehler, 2006). However, the sudden disruption from traditional pedagogical modes in higher education requires a critical reflection on the technological tools we use so that we can uncover how to move from using technology that merely transfers course content. If faculty professional development focuses simply on using technology, we will probably fail at democratizing online education and providing epistemological access (Morrow, 2003). Even though this was a small case study, this paper is significant because it showed how a shift from technological tools to PCK holds promise for online course design because it resulted in increased student engagement and collaboration. It can be argued that a PCK-frame offered "promising opportunities for […] liberating the educational climate that thinkers such as Freire have discussed" (Dyches & Boyd, 2017; Schwartzman, 2007, p. 42).

CONCLUSION

The sudden integration of technology disrupted "the status quo, requiring teachers to reconfigure not just their understanding of technology" but, more importantly, to think about the relationship between technology, pedagogy, and content (Mishra & Koehler, 2006, p. 1030). Even so, the sudden switch to online pedagogy might have resulted in faculty thinking less of scaffolding students' development and giving more attention

to how technology can facilitate the delivery of course content. Yet, this was probably more difficult for novice faculty when they "undertook the challenge of teaching from home" because they would have limited dialogic space to voice their limitations and concerns (Power & Warren, 2021, p. 34). However, Nind (2020, p. 198) and Fraser (2016) made a compelling argument that once inexperienced instructors' PCK is "excavated by stimulating metacognitive processes, awareness of PCK is supportive of its further development." PCK can be a dynamic frame for novice faculty or those with limited teaching experience to develop further Freire's ideas about moving from banking education to social justice online pedagogy because it can illuminate that "technology choices are not necessarily pedagogically based" (Benson-Kushner & Ward, 2013, p. 161).

LIMITATIONS, IMPLICATIONS, AND FUTURE RESEARCH

Even though I found the PCK frame helpful, it was so much part of the body or habitus; compartmentalizing it into content and pedagogical knowledge was challenging. Nonetheless, a PCK frame deepened my awareness of my teaching philosophy and facilitated my selection of technological tools and illustrated that even online spaces carry social and political weight. I realized that my online course had the power to limit access and produce or reproduce students' thinking about their realities. (Barab et al., 2007). However, a limitation is that this exploratory case study included a small sample and did not highlight student development in thinking through sample tasks and interviews. Nonetheless, this study is relevant and timely because huge investments are made in technology training rather than exploring how a PCK lens can offer a metalanguage to speak about online pedagogy and how content can be mediated to optimize student engagement and critical thinking in online spaces.

To sum up, this paper holds implications for the scholarship of teaching and learning (SoTL), about turning our university pedagogy into objects of research worthy of critical analysis, synthesis, and scrutiny. Despite the case size, this research has pointed out that PCK can help advance online instructional quality in higher education because it can bring faculty's PCK to the surface. Doing so can facilitate debates about how online pedagogy can provide or deny access, contributing to discussions about creating inclusionary, socially just, and emancipatory pedagogies. Future research could explore how the exhumation of PCK can bring to the surface the invisible and visible pedagogies of university online course design.

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