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Digital Dialogue: Emancipatory Dialogical Practices in Virtual Collaborative Problem-Based Learning

Chelsie Ruge
University of Denver

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This qualitative multiple case study examined two online professional studies graduate-level courses that employed collaborative problem-based learning to engage with social-justice related themes, one that explored inclusive educational practices, and one that explored the negotiation of global environmental treaties. The purpose of this study was to investigate how students engaged in emancipatory dialogical practices and determine the factors that influenced their ability to engage with one another and with the content in humanizing and emancipatory ways.

Paulo Freire's (1970) writing on emancipatory dialogue as a transformative pedagogical practice served as a theoretical framework. Existing scholarship positions Paulo Freire's principles, including engagement with generative themes, problem-posing, dialogue, and praxis as well-aligned with the philosophical underpinnings of collaborative problem-based learning (Armitage, 2013). This study set out to gather empirical data that would explore the nature of that connection in an online professional studies course, including the ways that students engage in dialogue with one another and gain insight into how teachers can support the practice of productive emancipatory dialogue that would orient students toward critical consciousness and praxis in their lives.

A qualitative cross-case analysis elucidated the characteristics of emancipatory dialogue as they played out in these two online courses, revealing insights into the way students engaged in generative theme exploration, problem-posing dialogical exchange, anti-dialogic exchange, and praxis. The findings also suggest internal and external factors that influence the degree and nature of liberatory group dialogue. Internal factors include community, accountability, evidence-based approach, and power balance, all of which support democratic group dynamics that foster dialogic exchange. External factors include instructor role, technology, scaffolding, and assignment design.

These findings indicate a promising association between collaborative problem-based learning methods and fostering emancipatory dialogical practices among students. The themes reveal insights that may support educators in making pedagogical decisions that maximize the value of these practices and enable students to engage in emancipatory praxis beyond the classroom.

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Advisor: Dr. Kimberly McDavid Schmidt

Author: Chelsie Ruge
Title: Digital Dialogue: Emancipatory Dialogical Practices in Virtual Collaborative Problem-Based Learning
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Chapter 1: Introduction

Overview of Research Topic

The terrain of higher education is shifting dramatically. As if by the inertia of tectonic plates, new technologies, pathogens, and politics have restructured old borders and boundaries, and have split apart and thrown together human beings in ways we did not fully anticipate. Increased diversity in the U.S. education system and rapid innovation in online learning has caused people to connect across geographic and social boundaries to form new cultures of learning, new ways of communicating, and new approaches to sharing these evolving digital and physical spaces. This remixing of the cultural landscape has also served to highlight severe inequalities and systemic oppression in our institutions, none more so than our education system. Therefore, this moment is a critical nexus point in empowering students to develop the skills to engage with one another through genuine, humanizing dialogue to solve local and global problems. To this end, this study uses Freire's (1970) concept of *dialogics* (an emancipatory encounter between people to transform and humanize the word) in order to analyze the impact of online collaborative problem-based learning on graduate students' ability to: (a) identify critical generative themes, (b) develop *dialogue* skills, (c) engage in problem-posing, and (d) nurture praxis (reflection and action). The context of this study is fully online, graduate classrooms in a professional studies unit at a private Western University.

Increased Diversity in Higher Education

In the past decade, U.S. college classrooms have begun to better reflect the increasing diversity of the American population in terms of race, ethnicity, national origin, and disability status. Between 2012 and 2022, the percentage of students identifying as Black, LatinX, and Asian who pursued higher education degrees increased, as did the level of education of first- and second-generation immigrant students and students with disabilities, slightly closing persistent enrollment gaps (U.S. Census Bureau, 2022), despite the inequitable impacts of the COVID-19 Pandemic, which decreased Black student enrollment (Bureau of Labor Statistics, 2020) and restricted in-person access to U.S. college classrooms for international students (IIE, 2021). Since the pandemic, international graduate enrollment has risen a total of 33.9 percent, while other demographics stabilized, there were notable increases among LatinX and Native American student populations have increased, and (National Student Clearinghouse, 2024).

These statistics show that while the United States is a country rich in diverse peoples and varied lived experiences, it is also a country fraught with inequity and separation. This is especially evident in our education system where a generations-in-the-making accumulation of inequity has resulted in an "education debt" (Ladson-Billings, 2006). Ladson-Billings asks, "Where could we go to begin from the ground up to build the kind of education system that would aggressively address the debt?" For higher education, I posit online learning, when accessible and critically deployed to address inequities, is rich, underdeveloped territory.

Online Learning is Increasing and Changing

Rapid innovation in information and communications technologies have reshaped possibilities for teaching as well as the expectations students have for how they pursue higher learning. Early methods of technology-supported teaching focused on simply delivering instructional materials electronically, but new interactive tools and platforms have created a paradigm shift in higher education toward active and collaborative learning (Allen et al., 2016).

In fall 2020, 73% of postsecondary students (14.1 million) were enrolled in a distance education course, with 61% enrolled in exclusively online courses (NCES, 2021). These statistics were steadily increasing by 1-2% each year even before the COVID-19 pandemic tilted the landscape drastically toward online learning among the U.S. domestic population (Hussar et al., 2020), and loosening visa requirements allowed more international student participation in U.S. online learning opportunities (Lederman, 2022). New non-traditional learning paths like short-term credentials increased by 5.7% last year and are opening doors to new types of students and shifting the age and experience levels upward (National Student Clearinghouse, 2024).

These national statistics showing increases in student diversity and rates of online learning are, to a lesser extent, reflected in the population of the university in which this study takes place. Described in further detail in the methods section, this private R1 university in a major Western U.S. city has shown minor increases in racial and international student and faculty diversity in recent years (NCES, 2021). However, the continuing and professional studies unit in which the research was conducted has unique student demographics. This unit intentionally removes barriers in cost, degree options,

and flexibility. Additionally, it offers most of its courses online. As a result, this population has a higher representation of post-traditional learners with families to care for, multiple jobs, more geographic diversity, varied socioeconomic experience, veteran status, neurodiversity, and alternate or interrupted paths through their prior education experiences (University College, 2023). A more detailed breakdown of the demographics for this community can be found in this paper's methods section.

The Importance of Fostering Emancipatory, Dialogical Engagement in Online Environments

As conceptualized by Freire (1970), dialogical engagement is a mutually humanizing encounter between people, uniting reflection and action to transform and humanize the world. As higher education becomes more diverse and digitally-mediated in the context of intensified awareness of systemic inequities in higher education, it is critical that online higher education empower students to engage across difference and combat inequity (Valcarlos et al., 2020). Higher education institutions have long been characterized by critical scholars as "simultaneously sites of oppression and emancipation," by either perpetuating neoliberal values and knowledge production or by advancing knowledge practices that advance social justice (Valcarlos et al. 2020; hooks 2014). This duality not only holds true but is often amplified in online learning spaces. Issues of uneven access, poor quality instruction, under-resourcing, and segregation replicate in the digital environment (Selwyn et al., 2019). However, critical scholarship points to "digital education" (or online learning) as a potential locus of hope when educational efforts are focused beyond simply increasing uncritical tech use and digital skills and access, but focus on, "critical, participatory pedagogical practice" toward

emancipatory aims (Selwyn et al, 2019; Valcarlos et al, 2020). For example, online learning contains potential for democratization of knowledge-production, authentic displays of knowledge, choice, playfulness/risk-taking, and varied collaboration on a students' own terms (Ito et al., 2013)–all productive learning conditions when the learning goals are focused on upending oppressive classroom power dynamics, fostering critical awareness, and orienting and empowering learners toward social justice (hooks, 2014; Ladson-Billings, 2006; Valcarlos et al. 2020). Critically-oriented, collaborative learning practices are among those potentially emancipatory practices in online spaces, and merit further investigation.

Underlying these scholarly conversations is the theoretical framework of humanizing pedagogy, defined by Freire (1970) as a revolutionary form of education that "ceases to be an instrument by which teachers can manipulate students, but rather expresses the consciousness of the students themselves" (p. 51). Beyond a teaching approach, humanizing pedagogy is a theoretical framework and moral call-to-action in which students move from *objects* (passive receptacles of knowledge) to *subjects* (co-creators of knowledge and social change-makers) when the class environment supports extending their cultural assets, co-constructing knowledge that is relevant to their lives, and developing *critical consciousness* (Salazar, 2013), goals which are made more complex in online environments, and merit further study.

Critical consciousness (CC) can be defined as students' ability to critique and challenge dominant/oppressive systems and ideologies, examine their own biases, and take action to promote social change (Salazar, 2013). This process looks different for students from different backgrounds; those who have multiple marginalized identities and

those who have socially privileged identities--the latter group having more work to do to unveil biases and engage in sometimes painful unlearning (Waite 2021). Freire (1970) believed that the key to supporting students from all backgrounds (oppressors and the oppressed) in experiencing humanizing pedagogy and developing CC, was dialogical engagement, which involves identifying generative themes (consequential real-world issues), through a process of *dialogue* (a trusting, loving exchange of ideas across difference) and problem-posing (questioning assumptions) with the goal of *praxis* (reflection and action upon the world) (Freire, 1970).

Identifying Emancipatory Teaching Methods in Online Higher Education Classrooms

Despite the importance of emancipatory practices in online higher education and the value of supporting students in dialogical engagement on critical social issues, prior research on humanizing pedagogy is sparse and mainly conceptual in the existing scholarship on higher education (Mapaling & Hoelson, 2022) and online learning (Valcarlos et al., 2020). Because humanizing research in online postsecondary fields is new and under-researched, it is valuable to return to foundational theories of Humanizing Pedagogy for guidance on potential teaching methods that may be promising.

I argue that while there are many potentially emancipatory teaching methods, Freire's (1970) work centers methods that involve collaboration and problem-solving around authentic social justice issues, such as inequitable access to natural resources or education. For Freire (1970) dialogical engagement toward critical consciousness is not an individual endeavor, but necessarily collective. Freire (1970) warns against thinking of CC as an abstract individual awareness of injustice that can emerge from independent thought. "Self-sufficiency," he says, "is incompatible with dialogue" (p. 90). Instead,

Freire describes the development of CC as "thinking which only occurs in and among people together seeking out reality" (p. 108). The collaborative effort toward CC is an “act of love” or solidarity, (p. 50) This “radical posture of solidarity” is achieved when one “stops making pious, sentimental, and individualistic gestures,” but risks, entering into the situation of the oppressed and struggle together to examine systemic inequalities to transform the world (pp. 49-51). This is done through “dialogue,” a loving encounter between people, mediated by the world, to critically reflect and “rename” it, or create new, liberating truths and understanding. The goal is not to reach individual enlightenment or empowerment, but to work with others to change the social fabric. Much of the literature and practice of operationalizing humanizing pedagogy and Culturally Responsive Pedagogy focuses on uplifting individual students, nurturing their cultural strengths, and promoting individual achievement. The relational aspect is often not focused on creating alliances among students but on changing the power dynamics and fostering care between the teacher and the student. While this is crucial for reversing systems of oppression, these conceptualizations of humanizing pedagogy often miss the essential Freirean call to collective action that is necessary to transform the world rather than to risk simply helping the oppressed become one among the oppressors (Freire, 1970).

Collaborative Problem-Based Learning to Support Emancipatory Practice

Freirean collective, problem-posing dialogue is not necessarily one and the same as collaborative problem-based learning, but collaborative problem-based learning’s structure and goals do mirror some components of Freire’s dialogic process, providing opportunity for its use toward CC development. Problem-based learning originated in

medical schools in the 1960s to promote real-world application, adaptable contextual knowledge, and teamwork (Barrows, 1996). Since then, it has evolved into a body of literature on collaborative problem based learning (CPBL) that emphasizes student-empowerment and co-construction of knowledge (Arcos-Alonso & Arcos Alonso, 2021).

CPBL takes a social constructivist approach to learning, wherein students work in groups to co-create a deliverable to solve a real-world problem. As part of this process, students must engage in discourse, negotiation, and the integration of new ideas into one's own concept of reality to understand the root of the problem and reframe it toward a solution. Armitage (2013) asserts that problem-based learning is a conducive environment to support Freire's concept of *conscientization* because the nature of its dialogue-based structure democratizes knowledge, and its problem-posing mandate opens the door for multi-voiced, reflective and reflexive practices. When the problems addressed relate to generative social justice themes, and the peer engagement constitutes genuine, open-minded "dialogue" and reflection, CPBL can become a "practice of freedom" toward reconstructing their own practices and become moral agents shaping their political, social, and cultural realities (Armitage, 2013).

In addition to a theoretical justification, preliminary empirical research also points toward collaborative and problem-based learning as having high potential to integrate emancipatory learning practices. Jemal (2017)'s review of the literature on critical consciousness (CC)-focused pedagogies highlights "group processes" as a key tool for transforming perspectives, consciousness-raising through discussion, connecting personal and societal issues, and mobilizing students toward social action (p. 615). Scholars are just beginning to understand the developmental antecedents, or predictors, for the

development of CC in student communities (Ibrahim et al., 2022). However, initial research points to interpersonal and empathy-based skills in combination with intellectual skills of creativity, curiosity, and problem-posing (Ibrahim et al., 2022), which mirror the skills developed in CPBL approaches (Cherney et al., 2018; Means et al., 2009), indicating that CPBL may be a promising method to foster dialogical engagement in online learning environments. Research on *online* iterations of CPBL show that it has potential for greater learner interaction, student control, and cognitive outcomes (Chen & You, 2019).

The Impact of the Online-Context for Collaborative Problem-Based Learning (CPBL)

As society becomes more digitally connected while also facing huge social challenges and workforce shifts, it is even more essential for students to learn to engage in emancipatory ways in the specific context of online collaborative problem-solving, which Van Laar et al. (2020) identifies as a crucial 21st-century digital skill. While I argue above that there is a strong theoretical case for CPBL's potential to support emancipatory, dialogical practices, even if further research shows other methods to be more effective, it is still crucial that educators teaching in an online environment endeavor to foster humanizing skills development in this particular collaborative online environment because that is how they will be engaging with others in their lives outside of the classroom. Tessmer & Richey (1997) make the well-established case that the context in which something is learned is as important as the content, enabling students to effectively draw on those ideas, beliefs, and habits of practice when faced with similar conditions in the future. Therefore, online education, which levels geographic barriers and brings diverse learners together virtually, is uniquely positioned to allow students to

develop these collaborative, emancipatory, dialogue-based skills in an authentic digitally-connected environment that simulates the kind of encounters that exist in their lives beyond the classroom (Cherney et al., 2018; Ito et al., 2013). For example, online group work may mirror international work teams collaborating to resolve cultural inequities in climate change solutions. And virtual classroom discussion spaces may simulate lived virtual spaces where global citizens connect across a common interest or advocacy effort. Given the rich dialogical possibilities inherent in CPBL, and the value-add in developing these skills in a context that mirrors the digital and collaborative environments students will encounter in their lives, it is valuable to study whether and how dialogical engagement occurs in the online, higher ed CPBL environment.

Research Problems

Research Problem 1: Lack of Empirical Research on Emancipatory Practices in Higher Education

With increased racial, ethnic, and national diversity among college students today (NCES, 2021), educators need a more robust research-informed toolkit to support the creation of inclusive and participatory learning environments. However, prior research on humanizing pedagogy is sparse. A 2010-2020 10-year scoping literature review, found only 14 articles or books that explored humanizing pedagogy within higher education, and half of those were conceptual rather than an empirical study of a specific teaching methodology (Mapaling & Hoelson, 2022).

Research Problem 2: Poor Understanding of Successful Implementation of Emancipatory Practices in Online Learning

Rates of online learning are increasing, and the forms of online learning are evolving to meet the diverse needs of learners in the digital age (Allen et al., 2016). While the limited research on emancipatory practices in higher ed show promise, we need to better understand how online learning can be leveraged to not only create inclusive, emancipatory learning environments, but to equip students with the skills to engage with others in emancipatory, dialogical ways in a largely digitally-mediated world.

The outcomes most frequently cited in the literature on online learning are limited to retention, attitude, and content-focused learning outcomes (Bernard et al., 2014; Means et al., 2009). There is very little research on effective practices related to emancipatory, dialogical engagement in an online environment (identifying generative themes, problem-posing, dialogue, or praxis), such as collaborative, problem-based learning.

Research Problem 3: Lack of Research-Informed Methodologies for Leveraging Online Collaborative Learning to Foster Emancipatory Dialogic Practices

Despite the established efficacy of collaborative learning for equitably increasing outcomes and deeper learning in online settings (Cherney et al., 2018; Means et al., 2009), and its potential to support emancipatory peer-to-peer engagement practices (Armitage, 2013; Ibrahim et al., 2022; Jemal, 2017), it is rarely employed online. This is due to two things. The first is instructor anxieties about the complexities of coordinating student schedules and navigating unfamiliar technology when supporting online collaboration (Gillett-Swan, 2017). The second issue preventing the use of CPBL is a lack of data to inform best practices (Shearer et al., 2020). However, the field and the

tools of online learning are ever-changing, requiring an examination of the most effective approaches to successfully deploying collaborative approaches toward emancipatory goals.

Significance

As online learning continues to grow, and modes of online instruction diversify, failure to investigate how educators can leverage online techniques toward *emancipatory practices* is not only a missed opportunity to equip our students with skills in critical thinking, social awareness, and active citizenship, but will also lead to unequal achievement, isolation, lower motivation, and reduced retention.

In the absence of participatory teaching methods such as CPBL, online learners report that teaching methods employed in many online classes, such as independent lecture-viewing and materials analysis demonstrated through individual papers or quizzes, leave them feeling isolated from their classmates and disconnected from their learning (Kanuka & Jugdev, 2006).

As described in the following literature review, rich, humanizing, peer to peer engagement online can look like scaffolded and supported engagement over Zoom, a shared document in the cloud, or a virtual discussion board to negotiate ideas and produce a creative product, concept map, or slide presentation. While the absence of face-to-face engagement may mean there is less opportunity to benefit from visual and physical communication cues and sense of intimacy or empathy; on the other hand, digitally mediated peer engagement may hide visual markers of power such as skin color, age, or accent. Collaborating virtually can also allow for more reflection and time to process language, removing disadvantages for non-native speakers and encouraging more

confidence, reflection, research, and thoughtfulness in student contributions, leading to genuine peer learning and social presence (Cherney et al., 2018). Yet, when there is a lack of these types of peer learning and social presence opportunities in an online classroom, it can lead to low motivation and reduced retention rates (Lowe-Madkins, 2016), meaning we lose the valuable perspectives of diverse students in the classroom and in leading fields in the U.S. economy (Diemer et al., 2022).

Conversely, students are motivated and find meaning in collaborative methods focused on CC in particular, such as collaborative problem-based Learning (CPBL). CPBL is constructivist in nature, decentering received knowledge from a teacher and inviting students to engage with real-world issues by integrating different perspectives, critically analyzing social problems, and generating new knowledge and action-oriented solutions (Armitage, 2013). These methods may include formats such as dialogue groups identifying the underlying problems in current affairs, group debates that explore the intersection and divergence of law and ethics, or student dialogue to problematize textbook knowledge on economic concepts, using images to generate alternative definitions and shared experience-based definitions (Armitage, 2013).

These collaborative, emancipatory, methods have been shown to support college students' social cognitive career agency (Cadenas et al., 2020), as well developing healthier, community-engaged, and high-achieving individuals (Diemer et al, 2022), enabling minoritized students to better self-advocate and succeed beyond the classroom. Further, when oriented toward genuine connection and meaning-making, reflective and reflexive action, and problematizing social realities, collaborative online learning environments can move learning beyond skill acquisition and toward emancipatory

democratic practices (Armitage, 2013). Therefore, failure to examine the intersection of emancipatory and collaborative methods in online environments not only fails students but is also a missed opportunity to produce a society and workforce with skills to tackle important social problems through empathetic dialogue, problem-posing inquiry, and social justice-oriented praxis.

Personal and Professional Significance

My personal interest as a researcher of this topic comes from a problem encountered frequently in my own practices as a teacher, designer, and faculty coach in our University's Continuing and Professional Studies department. The coursework is primarily made up of online, graduate programming taught by adjunct faculty who are often practitioners in the applied fields in which they teach. While our faculty-practitioners see the value of collaboration skills in the workplace, and likewise, I have found it rewarding and enlightening to collaborate with diverse colleagues around challenging topics in our field, we struggle to replicate this experience with students in the online classroom. Students engaging in group work flounder, struggling to coordinate, making productive progress, and resorting to dividing the work or letting one student do the bulk of the work. They come away with superficial learning and no forward movement on developing dialogical skills (i.e., meaningful, reflexive, and transformative engagement). What's more, they also maintain an aversion to working with others in the future because they see it as an inconvenience, and they do not have hope that their collaboration will be equitable or that new and revelatory insights can be gained from them.

My role in this department is the Director of Learning Experience Design. In this role, I developed and manage the course design process and practices employed by the department, oversee the faculty onboarding, professional development, support, and feedback structures, and consult with academic directors and department leadership on curriculum development and ongoing program assessment. I work closely and collaboratively with Deans, Academic Directors, and the advising and student support teams to refine and realize our practices. I supervise a 10-person team of Teaching and Learning Specialists, Instructional Designers, and Digital Accessibility Specialist, who are eager supporters, learners, and idea-generators of efforts toward making our department an exemplar in inclusive teaching practices and equipping our students to be positive, change-makers and leaders in their fields and communities.

Over the past year, our department has intentionally engaged in the work of enhancing inclusive teaching practices by gathering data, engaging the expertise of outside experts, and resourcing working groups and pilot initiatives to enhance our knowledge and instructional practices. My dissertation work compliments this effort, and I have already had many enthusiastic conversations with colleagues who are eager to learn from my research and discuss how to evolve their own practices. I look forward to advancing those conversations, making tangible change in our department as a model for other online units and courses at our institution and beyond, and contributing to the field through conference presentations and publications.

Study Purpose & Research Questions

The purpose of this study is to reveal practices for creating humanizing learning environments that build learner's capacity for emancipatory peer engagement toward

social change. This will be done by focusing on one such teaching environment: exploring the processes and conditions that support emancipatory dialogical practices in courses using collaborative problem-based learning in a fully-online professionally-oriented graduate program at a private university in the Western United States. The main research question is: How do student groups in online professional studies courses collaborate in humanizing and emancipatory ways? The sub-questions are: In what ways, if any, do student groups engaging in collaborative learning methods demonstrate humanizing dialogic practices: the ability to (a) identify critical generative themes, (b) develop dialogue skills, (c) engage in problem-posing, and (d) nurture praxis (reflection and action)? And which internal and external factors (e.g., teaching processes, contexts, participant characteristics, interpersonal and interpersonal dynamics) contribute to the groups' ability to engage in humanizing dialogical practices?

Definition of Terms

Online learning refers to digitally-mediated distance education, where there is no required in-personal element, and the majority of required course instruction is conducted asynchronously, with learners having options for how to collaborate through internet-based means.

Collaborative problem-based learning is defined as instruction that employs group work wherein students co-create a deliverable to solve a real-world problem, requiring them to integrate diverse perspectives to achieve their goal. While the processes and conditions of CPBL teaching methods will be the central focus of this study, the full case context, including materials, instructor activities, learner prior experience, will be observed to explore the ways that dialogic practices are centered and supported.

Dialogic practices or dialogical exchange is defined as an emancipatory encounter between people to transform and humanize the world through the co-creation of knowledge on generative themes through dialogue and problem-posing thinking to uncover and take action against oppressive forces shaping society (Freire, 1970).

While this study will ground its analysis in Freire's (1970) work, it will also draw on related literature that has built on Freire's work to more fully understand how humanization occurs in a variety of educational environments. In a recent comprehensive systematic review of empirical studies examining critical consciousness development, Pillen et al. (2020) found that current research also draws from *transformative learning theory* (Mezirow, 1991, 1996) especially regarding the idea of disruptive events sparking further awareness. They also found that studies overwhelmingly conceptualized humanization as a continuous and cyclical process of becoming, and not an end goal (Pillen et al., 2020). Therefore, this study will focus on the learning process and observing the ongoing practice of humanizing dialogical engagement as an indicator of pedagogical effectiveness rather than on directly measuring student outcomes.

Research Design and Methodology Overview

This study uses a multiple case study approach to conduct a holistic exploration of the processes and conditions of the evolving field and context of online higher education to support digitally-mediated emancipatory, dialogical practices through collaborative teaching strategies. Four student group "cases" will be selected from courses in a continuing and professional studies department that engage generative social-justice-related themes and use collaborative problem-based learning. Data collection will include contextual data gathering, observation of group work, examination of student work

products, reflection forms, and follow-up interviews. Data analysis will include case context and description, within case analysis, and then cross-case theme analysis, resulting in descriptive vignettes, diagram of themes that outline the processes and conditions that support emancipatory practices, recommendations, and areas for future research.

Strengths and Limitations of the Proposed Study

A limitation of this study is the limited generalizability of case study research. A strength of this study is its cross-case analysis design that compares findings in different settings, helping identify case assertions that work more broadly. Another limitation is the presence of the researcher, whose purpose is to observe emancipatory collaborative practices and who is known to be an educator with a role at the University in which the study takes place may influence students' behavior.

Summary

As the digital age ushers in changes to the U.S. social fabric, expectations of higher education, and forms of online learning, there is at once a possibility and an imperative to explore different learning strategies that may support emancipatory practices. As learners prepare for lives in which they will collaborate across geographic and demographic borders to solve pressing social issues, critical, collaborative, and humanizing pedagogies offer the potential for an authentic practice of emancipatory, dialogical engagement. This cross-case study examines the processes and conditions that do or do not make collaborative problem-based learning in the online classroom a space where emancipatory practices are fostered.

This research has the potential to provide valuable insights that may inform faculty training, influence course design, and ultimately empower students with the skills to collectively be critical change agents while equipping them to be citizens of a more integrated and equitable society and global workplace.

Chapter 2: Review of the Literature

Theoretical Framework

Humanizing Pedagogy

To achieve the purposes of this study, the theoretical framework guiding this study and literature review is humanizing pedagogy. As articulated in Freire (1970), humanizing pedagogy is a revolutionary reconceptualization of education as a practice of liberation (freedom and justice) in response to the historical realities of exploitation, assimilation, and violence. Freire (1970) describes humanizing pedagogy as an encounter between the oppressors and the oppressed that honors the reality and consciousness of the oppressed and allows them to "unveil the world of oppression and through the praxis commit themselves to its transformation" resulting in mutual humanization (p. 54). This unveiling and transforming the world is what Freire calls *conscientização* or critical consciousness (CC). CC can be defined as the pursuit of "ontological clarity, or the why of becoming human" (Rodriguez & Smith, 2011, p. 98). It is a reframed way of being a person in the world guided by one's ability to perceive socio-historical reality as an oppressive construction susceptible to transformation through collective consciousness (Freire, 1970). Ontological clarity is achieved through problematizing reality or questioning prevailing ideology and one's own beliefs to unveil systems of domination (Salazar, 2013). Salazar (2013) builds on Freire's work to craft a framework of humanizing pedagogical principles and practices, which educators have a moral

responsibility to embrace: This includes respecting the reality of the learner, centering critical consciousness (CC) development, valuing and extending sociocultural resources and prior knowledge linked to new learning, respect, trust, and co-construction of knowledge, critical thinking and analysis, and challenging inequity to promote transformation.

Dialogics

This study's theoretical framework will focus on the liberatory process by which ontological clarity is pursued in education. Freire (1970) asserts that this process must be collective, and he articulates a concept of dialogical education (or dialogics), an egalitarian dialogue in pursuit of ontological clarity that then manifests in action upon the world as praxis (Freire, 1970). Freire (1970) poetically articulated praxis as a theory of *the word*, in which speaking "true words" and "naming the world" would transform or recreate it (p. 88). This language-based critical exchange of ideas between people in order to pursue liberatory truths and co-construct meaning has echoes of Socratic dialogue, which seeks to challenge assumptions through thought-provoking questions and debate between multiple perspectives (Peterson, 2011) and Bakhtin's dialogic imagination, in which all forms of written and uttered communication are constantly renegotiating meaning through the interplay of different perspectives (Bakhtin, 1982). However, Freire's (1970) dialogics differentiates itself in its use of dialogue toward critical, emancipatory truths and praxis, or action upon the world.

While a precondition for dialogics is eliminating hierarchies, it is important to acknowledge that engagement in a liberatory, dialogical educational environment is experienced differently by individuals entering the learning space with different identities

and levels of privilege. Waite (2021) articulates the process by which liberatory teaching practices such as centering counternarratives to unveil harmful, dominant sociohistorical narratives, must be preceded, for some students, by an often-uncomfortable unlearning of harmful "misperceptions" or "dysconscious racism," which to them is often invisible, such as the idea that education is "neutral." Countering this "dysconsciousness" through "intentional incorporation of liberatory praxis" can feel threatening to their self-concepts (Waite, 2021, p. 71). For other historically marginalized students, unlearning internalized racism and avoiding the trap of duplicating patterns of oppressing others in the pursuit of liberation can be marred by shame and struggle as well (Freire, 1970, p. 45).

In *Pedagogy of the Oppressed,* Freire (1970) is careful to assert that humanizing pedagogy is not a method with defined steps, but a framework with the following components : (a) engagement with critical generative themes, (b) active, democratic engagement with other people and their ideas through dialogue, (c) engagement in problem-posing, and (d) nurturing praxis (reflection and action).

Generative Themes

The first component of a dialogical education is identifying critical "generative themes" or "world-mediated" topics that support the constant human project of "creat[ing] history and become historical-social beings" (Freire, 1970, p. 103). That is, students must recognize that social structures, institutions, and the stories people tell about their past are socially constructed. In this way, humans assign meaning to an otherwise chaotic and complex pile of ideas, hopes, and experiences. Because meaning and social structures come from the human mind, they can either form around oppressive myths or liberatory truths. Humanizing pedagogy engages students in the project of co-

investigating a generative theme to practice developing liberatory truths, or “naming the world” to transform it (Freire, 1970, p. 81).

Problem-Posing

Freire (1970) suggests that the content of liberatory coursework should be investigating those generative themes through “problem-posing education” (p. 80). In problem-posing educational environments, teachers and students question accepted ideologies and structures and ask questions about their role in the world. In this way, the world emerges “not as a static reality, but a reality in progress” (Freire, 1970, p. 83). Problem-posing education is an alternative to the banking model of education where the teacher deposits knowledge into students’ minds. Instead, students form the habit of being a “subject” in the world with the power to decode and “name” the world. (Freire, 1970, p. 81).

Dialogue

Problem-posing learning must occur through *dialogue* with others. To reverse existing systems of oppression where naming the world was used for domination of one group of people over another, naming must instead emerge from shared power and be a profound act of love for the world and for people (Freire, 1970). For that reason, dialogue must involve respectful relationships between people. According to Freire (1970), a liberating (humanizing) pedagogy must be “forged *with*, not *for*, the oppressed” (p. 48) through trusting dialogue founded upon “love, humility, and faith” (p. 91). Roberts (2016) points out that while *dialogue* requires some common ground, engaging with others across differences (despite the challenges that may cause) is also critical "to prompt reflection, to disrupt the flow of events, to unsettle, and sometimes disturb" (p. 3).

hooks (1989) uses Black feminist ideologies to propose a similar model of "pedagogy as a practice of freedom," in which there is "a sense of struggle" around the "union of theory and practice," that is possible only when class communities can "overcome estrangement and alienation" that have become the norm in the contemporary university (p. 51). While dialogue may be unsettling, it must still occur within "trusting and caring relationships" founded upon "respect for the dignity and humanity of all students" (Salazar, 2013, p. 142).

Praxis

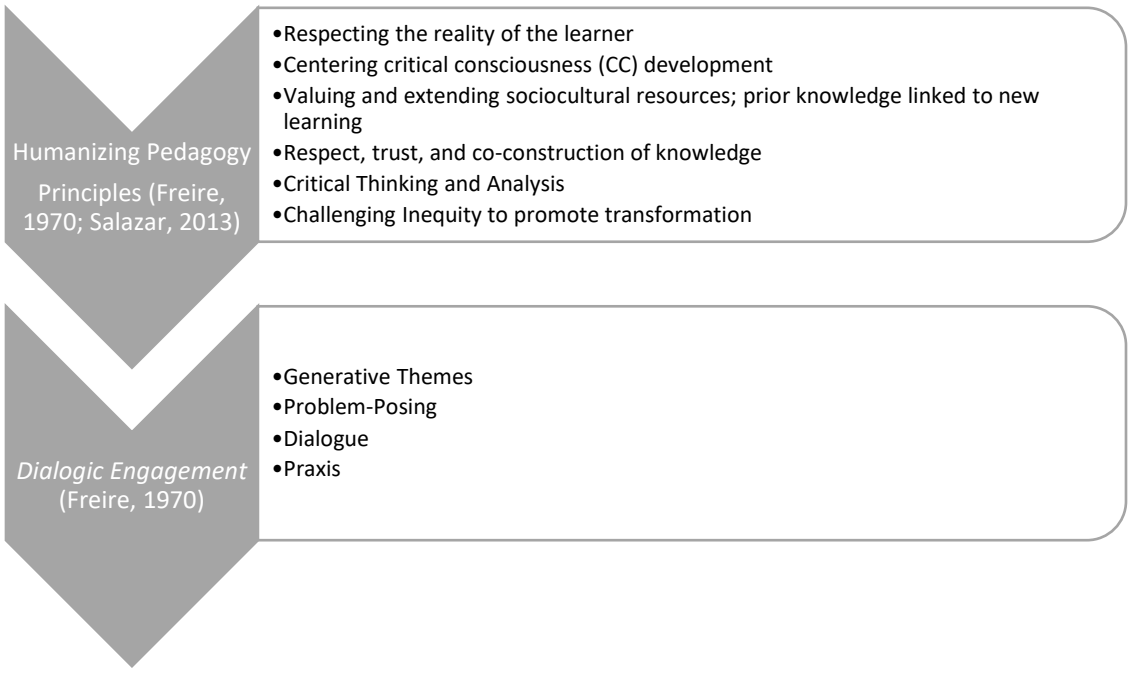
The final component is *praxis*. Praxis is a way of engaging with the world through habits of ongoing reflection and action to instigate social change and rename the world in a way that overcomes dominant and oppressive social structures (Freire, 1970). While such social justice-oriented learning has recently gained traction in Western pedagogical thinking following the publication of Freire's (1970) *Pedagogy of the Oppressed* (Grant & Gibson, 2013), it has deep roots in many indigenous and global traditions, such as the African philosophy of *Ubuntu*. This philosophy recognizes that self-realization occurs only through interconnectedness with others and action to improve conditions for the collective (Mino, 2020).

Since Freire's initial theorization, scholars have developed more measurable conceptions of praxis, which include,

> (1) critical reflection: structural awareness of social inequality and the ways in which historical processes perpetuate modern day disparities; (2) critical motivation: individuals' perceived ability and responsibility to enact social change, and (3) critical action: "the sociopolitical action taken to rectify inequality (Diemer et al., 2022, p. 409).

Figure 1

Theoretical Framework for Dialogic Engagement as a Practice of Humanizing Pedagogy



Background and Rational of the Literature Review

To begin investigating how student groups engage in emancipatory ways in online CPBL environments, it is important to analyze what the current literature on online learning methods has revealed about the topic. Over the last several decades, distance education has evolved from correspondence or televised learning to rich virtual engagement between teachers and students using sophisticated web-based technologies. Likewise, research has moved from simply comparing the outcomes of online and face-to-face learning to a nuanced study of the social and cognitive growth that occurs using varied teaching and learning techniques in an online space.

A 2008 U.S. Department of Education (DOA) meta-analysis of online learning practices revealed higher outcomes for online students than F2F students (ES 0.24 overall), but noted many statistically significant moderator variables related to teaching

practices, materials, and learner conditions (Means et al., 2009). This revealed that the pedagogy and strategic deployment of technology was more important than the technological medium itself, resulting in the need for further research of specific conditions and teaching practices.

More recent reviews of literature took up that charge and narrowed their focus on specific teaching practices in online learning. Of those related to the purpose of this study (online collaboration methods and the critical emancipatory practices), a few stood out. Jahng (2012) conducted a systematic review of varied-method research on small-group communication in post-secondary online courses from 2000-2009 (k=18), finding that learner characteristics, scaffolded collaborative learning processes, instructor role, and "membership" had the strongest impact on amount of engagement. Cherney et al. (2018) synthesized the varied-method research on online postsecondary small group learning (k=41) and found that group formation and group interaction processes impacted student learning. They noted inconsistent conceptual definitions, an overemphasis on content outcomes versus interaction or affective outcomes, and incomplete or superficial measures of student outcomes. The three studies recommended further investigation of deeper student outcomes.

Valcarlos et al. (2020) critically analyzed the literature on anti-oppressive pedagogies that seek to critique cultural imperialism… and teach in ways that work against inequitable forces" (defined in Freirean terms as reflection and praxis) in an online space (p. 347). From thousands of studies, only 10 addressed anti-oppressive pedagogy. The authors found that "anti-oppressive online educators sought to legitimate students' epistemologies, foster reflection and discussion, establish expectations of

critical awareness, and democratize educator and student roles" (p. 604). The authors assert that specific teaching techniques are not automatically anti-oppressive but require intentional connections between anti-oppressive theoretical frameworks and pedagogical decision-making.

While all prior meta-analyses suggested the need for more explicit connection between specific online teaching strategies and more clearly-defined interpersonal or anti-oppressive outcomes, and many findings indicated promising potential for environments that encouraged peer-to-peer engagement and critical dialogue, none of these analyses of the existing literature made explicit connection between online collaborative learning methods and emancipatory practices. Further, due to the rapidly changing nature of online learning tools and methods, as well as the populations it serves, frequent reviews of the existing literature are needed to monitor and validate research findings.

Purpose of the Literature Review

The purpose of this review of the literature is to both update the existing syntheses of literature in a rapidly changing landscape of online learning, as well as to explore how collaborative learning in online higher education courses impacts student outcomes, in particular as related to emancipatory dialogical practices.

Literature Review Questions

LRQ1: What is the extent to emancipatory practices appear in the literature on online collaborative problem-based learning?

LRQ2: What specific teaching methods and conditions support emancipatory, dialogical engagement?

Literature Review Method

The literature review questions were answered through a review of the literature over a 5-year period.

Inclusion Criteria

Relevant studies were identified through a comprehensive search of available empirical research from 2017 to 2022. The review was limited to five years, as older studies reflect results of significantly different online conditions and tools than are available today. 2017 marks a turning point in online higher education, as this year marked noted changes in the systematic and structured evaluation and research of online pedagogical methods. For example, Quality Matters' *The Changing Landscape of Online Education* (CHLOE) study was first published in this year (QualityMatters.org, 2024). Six inclusion criteria were used to identify articles relevant to this review's purpose, as seen in Table 1.

Table 1
Literature Review Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Pub. Types	Peer Reviewed Papers in Scholarly Publications in English	Conference paper, book chapters, papers in other languages
Pub. Year	2017 to 2022	Before 2017
Level	Postsecondary	K-12 or non-academic setting
Course Type	Fully online courses	Hybrid or Blended Learning that have a face-to-face component
Intervention Type	Collaborative problem-based learning	All-class discussions or other non-group activities, virtual simulations with no shared goal
Outcomes	Emancipatory or dialogical practices	Other outcomes including instructor-focused outcomes, enrollment or retention, etc.
Research Methods	Empirical Studies, including case studies, experimental, quasi-	Prescriptive advice or opinion, article reviews, theory-based

experimental, single group, or single-case research.	articles or discussion papers not rooted in empirical data

Electronic Database Search

A search was performed in Education Resources Information Centre (ERIC) and PsycINFO in order to capture relevant publications related to education and learning sciences. The search terms were identified by referencing subject codes and keywords determined by the thesaurus and comparison of terms from current meta-analyses. Search terms included synonyms for the inclusion criteria, including online learning (e.g., virtual or digital learning), higher education (e.g., postsecondary or college), collaborative (e.g., group or cooperative), problem-based (e.g., PBL or "problem solving"), and emancipatory or dialogical practices (e.g., emancipatory or liberat* or critical or "generative themes", or dialogue or "problem posing" or praxis or humaniz* or "social justice") The search terms were organized into categories by inclusion criteria, within which terms were connected with "OR", and each category was connected with "AND" so as to include only results that met all inclusion criteria. Because of the flexible nature of the research methods included, the initial search did not include search terms related to method. Instead, those were screened by hand.

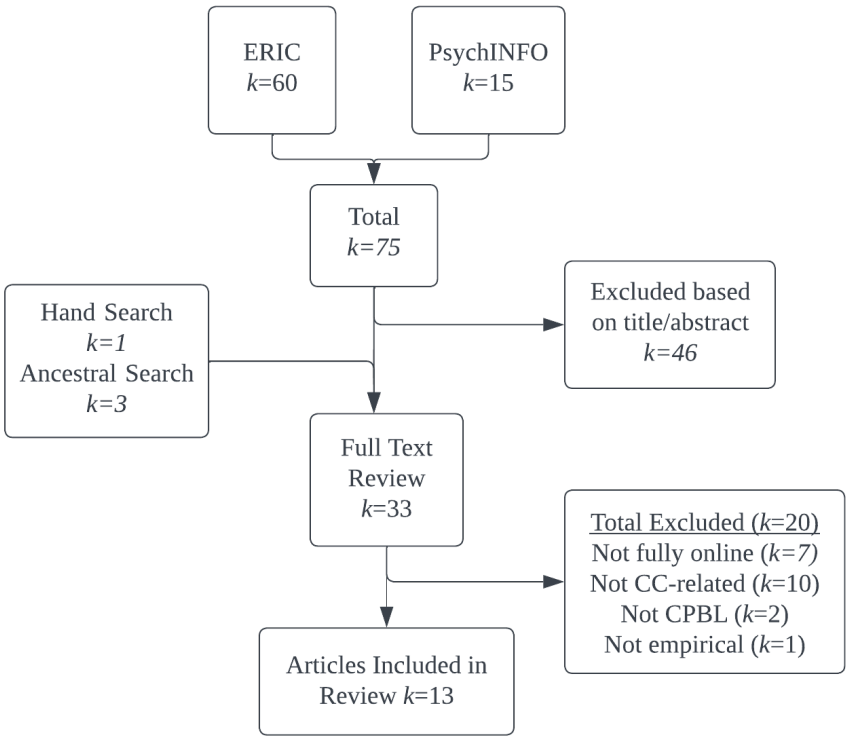
The search yielded 75 articles. Of these, 46 items were excluded based on disqualifying information reported in the titles and/or abstracts. The full text of the remaining 29 articles was examined to assess whether they met the inclusion criteria. Of these, 16 articles were excluded because they did not take place in a fully online context (k=6); did not use collaborative problem-based learning (k=1) did not relate to emancipatory practices (k=9).

Hand Search and Ancestral Review

After the initial search, an ancestral search of the reference section in two prior, relevant literature reviews (Cherney et al., 2018; Valcarlos et al., 2020), yielded three additional studies, all excluded upon full text review. In addition, results were incorporated from a hand search of the following journals from 2017-2022, *American Journal of Distance Education, International Journal of Computer-Supported Collaborative Learning, and the British Journal of Educational Technology.* These journals were selected based on the frequency of their appearance in the reference sections of relevant publications in the field, and on their impact factors in the field. This hand search identified one additional article, excluded upon full-text review.

A total of 13 published articles (Aifan, 2022; Alt & Naamati-Schneider, 2022; Arcos-Alonso & Arcos Alonso, 2021; Barber, 2020; Chaaban et al., 2021; Dowell et al., 2020; Iipinge et al., 2020; Katre, 2020; J. Lee et al., 2019; L. Lee et al., 2017; Liu & Shirley, 2021; Rambe, 2017; Zak et al., 2021) met inclusion criteria and were coded, as seen in Figure 2.

Figure 2
Literature Review Methods



Literature Review Results

Overview of Studies

The 13 studies reviewed had sample sizes ranging from 4 to 967 participants, for a total of 2,092 participants. The mean age of participants was 26 years old, with 63% undergraduates, and 37% graduate students. Eight studies reported gender distributions, with 60% female-identifying participants, and 37% male-identifying students. Two of the studies took place at all-female institutions. Thirteen countries were represented (duplicates noted), including Brazil, China (*k*=2), Canada (*k*=2), Germany, India, Israel, Namibia, Qatar, Saudi Arabia, South Africa, South Korea, Spain, and the United States

(k=4). Three of the studies involved the virtual collaboration of students across two or more countries. The course content areas included Education (k=4), Business (k=4), STEM (k=3), and Healthcare (k=2). All studies involved quasi-experimental design. Ten studies were mixed-methods case studies, most frequently employing surveys, coded analysis of student dialogue, interviews, and student reflections. One was quantitative only (Iipinge et al., 2020), and two were qualitative only (Alt & Naamati-Schneider, 2022; Arcos-Alonso & Arcos Alonso, 2021).

The instructional interventions all related to online collaborative problem-based learning but included different formats (75% synchronous or mixed, 25% asynchronous only), and a variety of specific teaching approaches such as Collaborative Online International Learning (COIL), Design Thinking, Values and Knowledge Education (VaKE), and simulations. They also employed varied learning tools and student deliverables, including PPT, Digital Concept Mapping, Google Groups, Digital Moments galleries, Virtual Reality, and video creation.

Emancipatory Learning-Related Findings

No studies were found that explicitly measured emancipatory or dialogical learning. Each of the studies, however, included one or more themes or variables that could be conceptualized as one of the four critical components of dialogical engagement. An analysis of the primary themes as well as interventions, moderating variables, and co-occurring outcomes are represented in Table 2.

Table 2
Literature Review Themes Analysis

Interventions				
COIL, Design Thinking, VaKE, Simulations, PPT, Digital Concept Mapping, Google Groups, Digital Moments galleries, VR, video creation				
Impacting Factors (moderating variables)				
Guided self-reflection (*k*=11), technology use (*k*=9), supportive teacher (*k*=7), structured collaboration (*k*=6), attitude (*k*=5), prior subject knowledge (*k*=3)				
Themes				
Generative Themes (*k*=8) • keywords: recognize impact of culture on knowledge, personal responsibility	Problem-Posing (*k*=5) • keywords: critical intervention, constructivist mindset, complexities of topic	Dialogue (*k*=13) • keywords: social perspective-taking, disagreement, intercultural communication, relationships, empathy, active listening, socio-moral reasoning, co-regulation	Praxis (*k*=6) • Keywords: social responsibility, ability to enact positive social change	Co-Occurring Themes 21st C skills (*k*=35) • keywords: teamwork/collaboration, communication, innovation, creativity, risk-taking, problem-solving, leadership, agency, time management

Generative themes were referenced in eight studies (Aifan, 2022; Alt & Naamati-Schneider, 2022; Arcos-Alonso & Arcos Alonso, 2021; Barber, 2020; Katre, 2020; J. Lee et al., 2019; L. Lee et al., 2017; Liu & Shirley, 2021), each describing how participants conceptualized themselves as socio-historical Subjects in a constructed reality. Four studies focused on the students' ability to recognize the impact and value of culture on knowledge construction (Aifan, 2022; Katre, 2020; L. Lee et al., 2017; Liu & Shirley, 2021). Four studies focused on the students' development of a personal relationship and responsibility toward becoming socio-historical change agents. Two studies included quotes that captured this theme well. Arcos-Alonso and Arcos Alonso (2021), described

how participants embraced the "responsibility of teachers and students in the generation of knowledge that …is permeable and sensitive to the changes occurring in the social and labor world" (p. 286). Barber (2020) poignantly describes the students' transformation, saying, "[The Digital Moments intervention] also helped them to begin to trust themselves; they began to believe there was an authentic self in each learner who could choose which direction to go" (p. 394)

Problem-Posing was addressed in five studies (Alt & Naamati-Schneider, 2022; Arcos-Alonso & Arcos Alonso, 2021; Barber, 2020; Katre, 2020; Rambe, 2017). While all studies discussed problem-based learning, less than half involved problems that required students to make a "critical intervention in reality" or question prevailing paradigms (Freire, 1970). Those that did invariably attributed student growth in this area to students developing a constructivist mindset and appreciation for the complexities of the topic through engaging with classmates who unsettled their own assumptions.

Dialogue was addressed in all 13 studies. Because the Freirean concept of dialogue is abstract and difficult to measure, the studies investigated several complex components of dialogue that approximate or make up dialogue. One key element is social perspective-taking leading to reflection on one's own beliefs (k=6). Another relates to how disagreement was productively managed leading to critical insights (k=6). Others included intercultural or inter racial communication (k=4), forming trusting relationships/ fostering belonging (k=3), empathy (k=*2),* active listening (k=2), socio-moral reasoning (k=1), and co-regulation (k=1). Alt & Naamati-Scheider (2022) best describe a positive experience of dialogue, saying,

> During the assignment, the students were provided with an opportunity to reexamine their ideas/beliefs, which, in turn, motivated them to reconcile the cognitive conflict by explaining their views to their group members. The students realized that there is a discrepancy between their existing knowledge and the point of view of others. This raised doubts about the validity of one's point of view. (p. 26)

While the other themes, when measured, significantly tended toward positive outcomes, dialogue was the most varying. Several studies (Barber, 2020; Chaaban et al., 2021; Iipinge et al., 2020; Rambe, 2017) cited some negative or unproductive dialogue engagements attributed most notably to situations in which heterogenous groups were not adequately supported by the facilitator and the learning was not properly scaffolded, resulting in microaggressions. On the converse side, the most impactful increases in dialogue were also found in heterogenous groups where the interactions were heavily scaffolded, such as in the three COIL interventions (Katre, 2020; L. Lee et al., 2017; Liu & Shirley, 2021).

Praxis was examined in six studies (Aifan, 2022; Iipinge et al., 2020; Katre, 2020; L. Lee et al., 2017; Rambe, 2017; Zak et al., 2021). While the outcomes mentioned above may be pre-cursors to the development of praxis, most studies stopped before measuring students' potential and inclination toward praxis, or reflection and action upon the world (Freire, 1970). Three studies measured students' sense of social responsibility (Aifan, 2022; Iipinge et al., 2020; Zak et al., 2021), and two examined students' ability to enact positive social change (Katre, 2020; L. Lee et al., 2017). Rambe (2017) expressed ambivalence toward the South African students' ability to truly challenge entrenched racial stereotypes due to lack of sufficient reflexivity and criticality, despite observed positive inter racial dialogue.

Co-Occurring Themes

Emancipatory, dialogical practices and other co-occurring skills were often grouped into umbrella terms such as "21st century skills," "lifelong learning abilities," "transversal competencies" or "necessary for adaptation in modern society." While important, these skills were more pragmatic in nature and less oriented toward liberatory social change. The list of skills frequently co-occurring with emancipatory practices were: teamwork/collaboration (*k*=10), communication (*k*=9), innovation (*k*=3), creativity (*k*=3), risk-taking (*k*=3), problem-solving (*k*=3), leadership (*k*=2), agency (*k*=1), and time management (*k*=1).

Factors of the Learning Environment Impacting Emancipatory Practices

While measuring the impact of teaching approaches and contexts on emancipatory learning, many studies noted which moderating variables and factors had the largest impact (positive and negative) on student outcomes. The biggest factors related to the use of technology (*k*=9). When the technology was intentionally integrated with the learning outcomes and positioned to enhance authentic student engagement, the outcomes were highest. When technology was poorly integrated (often because of an emergency shift online during COVID), the outcomes were lower. Guided self-reflection was a critical component of supporting student learning in 11 of the students. The studies using COIL (*k*=3) methods, where international learners collaborated in a structured virtual environment, also had positive outcomes. Other factors that could positively or negatively impact the learning environment were the active and supportive role of the teacher (*k*=7), scaffolded collaboration (*k*=6), strong prior subject knowledge that allows for nuanced thinking (*k*=3), and attitude (*k*=5), such as investment in the task and/or

collaboration, and curiosity. Given the sensitive and complex nature of social justice subject matter frequently found in these studies, the authors in this review emphasize the importance of highly skilled design and facilitation to support inclusive collaboration and critical awareness, such as guiding intercultural competence and ensuring equitable participation (Chaaban et al., 2021; L. Lee et al., 2017; Liu & Shirley, 2021; Rambe, 2017).

Discussion of Literature Review

Summary of Findings

This literature review supports prior findings that collaborative learning methods enhance student outcomes (related to subject-based content and skills) but extends and nuances the findings by exploring research on more recent collaborative technologies and teaching methods as well as determining that the limited research on emancipatory practices in collaborative learning have preliminary but promising results, indicating a need for further research. The purpose of this review of the literature was to determine the extent to which emancipatory practices appear in the literature on online collaborative problem-based learning. The findings show that while many of the component parts and precursors of emancipatory, dialogical engagement appear in the literature, few studies address the topic directly. The elements addressed include: Generative themes (k=8), problem-posing (k=5), dialogue (k=13), and praxis (k=6). Additionally, other practical 21st century skills often co-occur with emancipatory learning. The second research question asked what specific teaching strategies and conditions best support dialogical engagement. The findings of this review echo prior literature on other collaborative methods, listing influential factors such as prior knowledge, attitude, structured activities,

and instructor support, as well as noting that scaffolding inclusive collaboration and critical awareness is crucial.

Limitations and Future Research

This synthesis of existing literature reveals that there was a wide array of inputs, course structures, and outputs among the studies, revealing little agreement in the field as to the best ways to foster emancipatory practices. Further, several studies report limitations of the methodologies used, often relying on self-reported survey data, which did not always reflect actual observed behaviors (Chaaban et al., 2021; Rambe, 2017). Because this field is both new and varied, additional studies on online CPBL should be conducted with a specific focus on emancipatory practices.

Personal Significance for Future Study

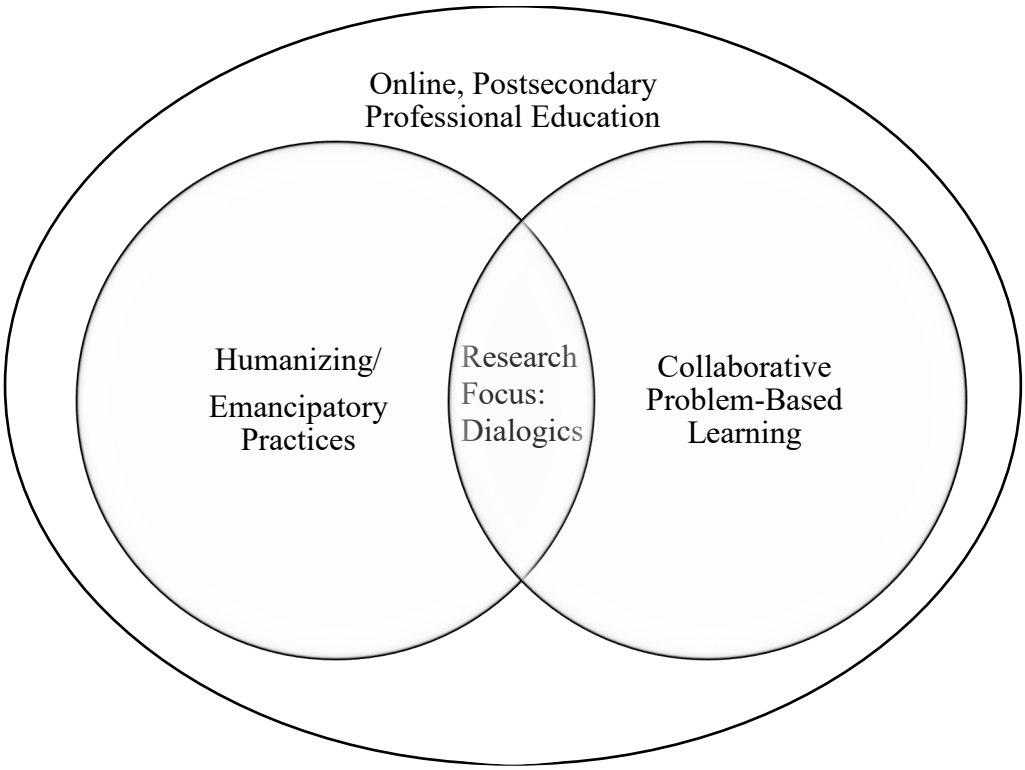
The literature review revealed additional methods for studying the factors at play in online learning, including coding student discussion transcripts, journaling and reflections, interview and survey protocols, data points, and comparative analysis of student deliverables. It also revealed the complexity of the phenomenon and the challenge it will be to study its effect. However, reading about the creative and bold teaching strategies used, including those that crossed international borders and had students address large, complex problems, gave me hope.

Chapter 3: Methods

For educators teaching graduate students in online professional learning environments, the stakes are high. Especially for those units prioritizing access to education, student populations are becoming more diverse in race, nationality, ethnicity, socioeconomic status, and life circumstances such as caregiving, veteran status, and working multiple jobs (NCES, 2021). As they prepare for professional lives in a fraught social climate, students need tools to engage with others across difference, in humanizing ways, to critique dominant systems and solve problems together (Valcarlos et al., 2020). Therefore, educators need to better understand how emancipatory practices may occur and be fostered by certain learning methods. Collaborative problem-based online learning is one of many potential contexts for humanizing practices, but is an important one to investigate further, as it provides unique opportunities to foster problem-posing dialogue and mutual engagement with the ideas of others to deconstruct and reconstruct sociohistorical truths and solutions. Likewise, collaborative learning methods may exist in many different contexts and provide students several learning benefits that do not necessarily relate to humanizing practices, such as career preparedness and active engagement and connection (Cherney et al., 2018). However, its critical deployment toward addressing systemic inequity is under-investigated. Prior research is sparse when it comes to examining emancipatory practices in adult learning environments and in online environments, and there is even less research examining the connection between

emancipatory practices and group work. Figure 3 illustrates the overlap between humanizing and collaborative teaching and learning practices, which where my research focus lies.

Figure 3
Characteristics of the Educational Context



Research Questions

This research study focuses on the nature and experience of graduate, online, student groups engaging collaboratively with "generative themes" (i.e., sociohistorical issues around which humans collectively create meaning, whether it be oppressive or liberatory) (Freire, 1970). This study seeks to determine whether and how students engage in humanizing and emancipatory ways within this learning context. In chapter 3 of *Pedagogy of the Oppressed,* Freire (1970) details and elevates a specific emancipatory

practice: dialogical engagement, which involves respectful mutual exchange, critical questioning, reflection, problem-posing, and praxis toward transforming oppressive conditions. To that end, the specific research questions examined in this study are:

RQ1: How do student groups in online professional studies courses collaborate in humanizing and emancipatory ways?

RQ1a: In what ways, if any, do student groups engaging in collaborative learning methods demonstrate humanizing dialogic practices: the ability to (a) identify critical generative themes, (b) develop dialogue skills, (c) engage in problem-posing, and (d) nurture praxis (reflection and action)?

RQ1b: Which internal and external factors contribute to the groups' ability to engage in humanizing dialogical practices?

Setting

The university at which this study takes place is a private R1 university in a major city in the Western United States. In the Fall of 2021, the total student population was 62% female, 38% non-White, 14% Hispanic, and 5% or less of other races and ethnicities, roughly reflecting the demographics of the city at large (NCES, 2022). Overall, 52% of graduate students and 8% of undergraduates were enrolled in some amount of distance education, and 4% of the student body were international students (NCES, 2022). This study was conducted in a professional studies unit on this campus. While the racial, ethnic, and gender demographics of this unit roughly reflect those of the larger campus and regional demographics, (60% female, 22% non-White, 13% Hispanic), the student population of the department of professional studies stands apart in other

forms of diversity with its non-traditional student population. The mission of the department of continuing and professional studies is to provide access through alternative pathways. By offering a majority of the coursework online (synchronously or asynchronously), evening courses, flexible degree plans (masters and certificate), part-time options, access to all who meet minimum admissions standards (B.A. with 2.5 GPA and no standardized tests), and lower tuition rates, the programs offered within this unit have fewer privilege-based barriers and tend to have more student diversity in terms of life circumstances such as working parents or caretakers, students who had to stop out and return to school, and socioeconomic status. In the department studied, more than 95% of students take at least some online courses, 90% have full-time jobs while enrolled in courses, 60% are out of state residents, most of whom remain living out of state during their online studies, 10% are active duty or veteran students, 22% are international students, and the average age is 34 years old (Data USA, 2023). The faculty for the Professional Studies college is 99% adjunct instructors who are also working professionals in the industries in which they teach. compared to overall campus statistics (51% female, 23% people of color, 5% veteran, and 0.02% international) (Data USA, 2023).

Background

I conducted exploratory interviews with two adjunct faculty members in the professional studies unit known for their expertise in facilitating group work and CPBL. Neither of these faculty members are included in the proposed final study. The instructors were both White, one female in her later 30s teaching in a “Communication

Management" Program, and one male in his mid-70s teaching in an "Information and Communication Technology" program. They each discussed their approaches to facilitating group work as well as how they defined success. Indicators of success and value of online CPBL included emancipatory themes such as the ability to integrate diverse peer perspectives to come up with novel problems to combat inequity, fostering empathy, and developing digital collaboration skills for today's society. They both expressed the need for further research on the nuances of student-to-student dialogue and true collaboration to foster critical consciousness, thus helping direct the shape of the current proposed research case study. Additionally, some of the themes that emerged in that study, including the importance of trust (at the level of the institution, instructor, and among students), risk-taking, choice/autonomy, instructor role, team structure and roles, relationship-building, cognitive empathy, and buy-in towards goals may help inform or fine-tune which themes are attended to in this study.

Research Method Overview

A case study approach was selected to examine the specific "bounded system" of student groups in online professional studies courses employing a collaborative learning methods (Creswell & Poth, 2018, p. 96). Creswell and Poth (2018) recommend selecting the approach based on audience, gaps in the existing literature, personal preferences, and background of the researcher (p. 123). With regard to audience considerations, case study resonates with many practitioners in the field who appreciate concrete examples and models from other classrooms.

Further, a case study is appropriate for a field that is constantly evolving and whose factors and variables are not yet well-understood. Unlike a quantitative method wherein key dependent and independent variables are already known and defined, a case study approach allows for a deep dive into the "complexities of a particular bounded system" (Creswell & Poth, 2018, p. 96), allowing for the discovery and exploration of new variables at play in a given context. Online collaborative learning meets both of these requirements: it is constantly evolving as tools and social norms around online interaction change frequently, and is therefore in need of exploratory analysis of its components. Online collaborative learning is a complex ecosystem of factors (communication approaches, instructor guidance, student interaction, reflection, tools, etc.) that merit deeper inquiry. A case study approach also allows for the analysis of insights that may emerge from the environment that were not expected or intended.

This study employed a "multiple" case study approach, or "cross-case analysis" in order to gain insights into the *different* ways online collaborative learning plays out in varied contexts. A broader portrait aids in "illuminating" a phenomenon toward improving practice (Creswell & Poth, p. 99; Hyde & Woodside, 2012, p. 503). To support these goals, four student groups were selected from two different courses in different disciplines, both employing collaborative problem-based learning on a social justice-oriented theme.

Selection Procedures

Student group cases were identified using "purposeful sampling." I began by first selecting two courses. I systematically reviewed each of the 350 unique courses offered

in the department, first excluding courses that were not scheduled to run online in the study's timeframe (leaving 190 courses). Next, I eliminated courses not revised or updated in the last 3 years (leaving 115). Then, I evaluated the titles and learning outcomes of all courses and further removed those that did not explicitly address "generative themes" or social justice-related topics (leaving 75). Then, I evaluated the design of the remaining courses and eliminated those that did not employ collaborative group work, identifying two courses that were best suited to my research questions. The courses selected were a course on International Environmental Agreements in the "Environmental Policy and Management" program and on Universal Design for Learning applications in the "Instructional Design and Technology" program in order to capture a variety of experiences and perspectives of collaborative learning in multiple contexts, seeking the most well-rounded understanding of this "case" (Creswell & Poth, p. 100).

I secured permission from the Dean, Academic Director of the Program, and the adjunct faculty members of the courses. The instructors will sign informed consent forms to allow data collection on the design of the course, the course container, and the instructor's actions and communications during the course as contextual and influencing factors.

All students in the course were provided an informational letter about the study with an offer of a $20 gift card incentive. Two open information sessions were offered, as well as an invitation for potential participants to reach out via email or to schedule a meeting. All students in both courses consented to participate in the study and signed informed consent documents to allow data to be collected on their interactions with team

members, course materials, and additional interview and survey data, allowing students within a course to opt out. Data was collected on all groups.

Participants / Cases

The "cases" for this cross-case analysis are four student groups in two courses. The two courses selected as the contexts for this study will run concurrently in the ten-week Fall quarter term of 2023 as fully online asynchronous courses. In the College of Continuing and Professional Studies, students may take a graduate course as part of a graduate certificate or as part of a full Master's degree program and may take their courses in any order, meaning students in each course will have varying degrees of prior professional and graduate school experience.

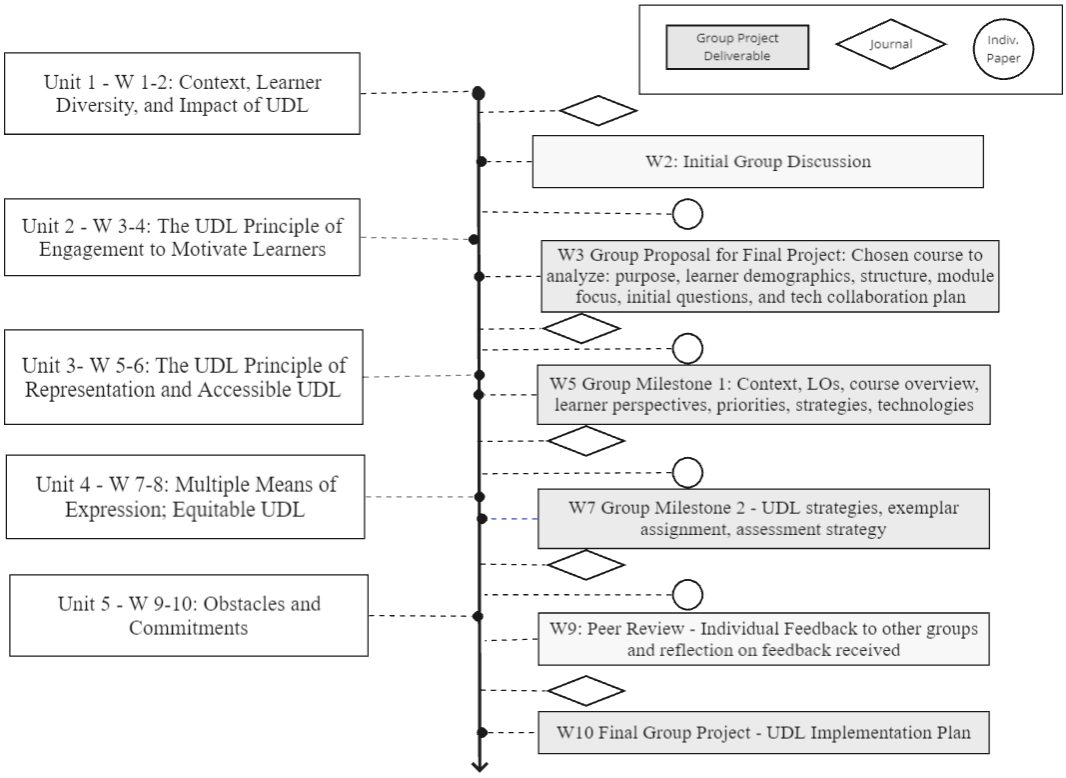
Course 1: Universal Design for Learning (Cases: Two Groups)

The first course is part of an Instructional Design and Technology graduate program. The course topic is Universal Design for Learning. The learning outcomes support students in engaging with the generative theme of inequities and bias in higher education and foster praxis toward enacting change. The course's intention is to help students develop the ability to analyze the impact of University Design for Learning (UDL) on learning populations and to plan and implement UDL strategies by proposing changes to existing curricula. The students in this course examine the foundational principles and theories of UDL through discussion (explore it), practice (do it), analyzing exemplars, and engaging in a single scaffolded group project in which students stay with the same group throughout the course working on multiple milestones in a single project: a proposed revision plan for an open-ed course to increase UDL practices and an

accompanying recorded presentation. Built into the course is regular reflection and journaling about their collaboration experience. The course consisted of six students, formed into two student groups. The groups were formed by the instructor based on the contents of the students' initial journal activity in which they articulated working style and communication preferences including whether they preferred to work synchronously or asynchronously, grouping people together who had expressed the same preferences. She also had been intentional about trying to balance the number of students who had expressed that they preferred to take a "leadership" role in a group. These groups served as the two cases for analysis. One group member dropped the course after the sixth week of the course, leaving one group with only two members. The course structure can be found in Figure 4.

Figure 4

Course Structure of the Instructional Design and Technology Course



Course 2: Global Environmental Law and Policy (Cases: Two Group "Threads")

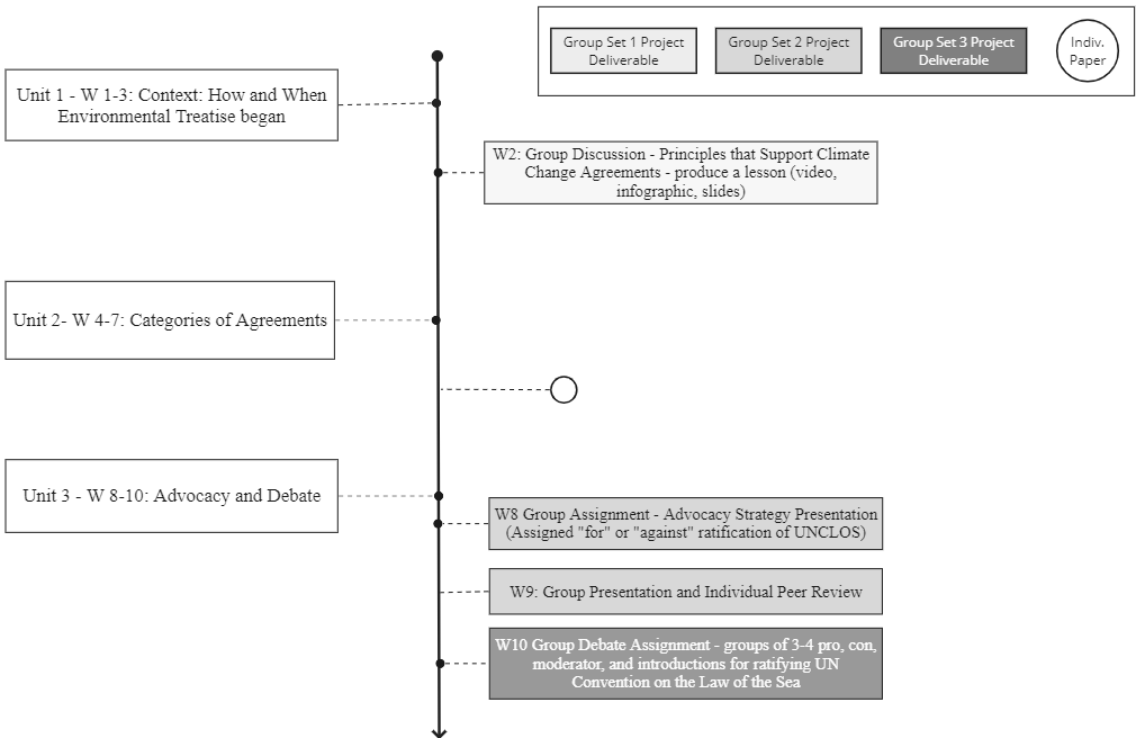
The second course is part of the Environmental Policy and Management Graduate Program. The course topic is Environmental Law and Policy, and the learning outcomes center around the students' ability to analyze international environmental agreements to create advocacy strategies to improve environmental situations. While the focus of the course was on environmental justice, social justice comes to the forefront, as the course asks students to consider equity when discussing the impacts on societies and individuals. During the course, students engaged in discussion, individual research, peer review, and collaborative group work. Students complete four assignments. The first was a five-person group video presentation analyzing the human and environmental considerations

critical for climate change agreements. Next was an individual research paper on plastics pollution policy impacts. Then, the students worked together in a new four-person group arrangements, each randomly assigned to advocate either for or against a global treaty governing ocean activity, which was presented as a recorded presentation with slides and shared and reviewed by their classmates. Finally, they worked in three-person groups to stage a recorded debate on the same treaty, addressing all sides of the issue. All groups were assigned randomly. There were 20 students in the course, meaning each assignment had 4-6 groups each. Data was collected from all groups. Through memoing and initial thematic coding, two "group threads" were identified for further investigation based on their value in illuminating the research questions of the study. They were also demographically and thematically representative of the groups overall. Additionally, of the groups selected for potential inclusion as case groups, two groups had complete responsiveness to the follow-up survey and willingness to be interviewed.

The group threads were defined as having at least one common student (anchor) through each. One female and one male student (Valerie and Avyaan) were selected as anchors for these group threads. They were in different groups for each of the first two assignments and were in the same group for the final group assignment. Figure 5 details the course topics and assignment structure of the course.

Figure 5

Course Structure of the Global Environmental Treaty Course



Demographics and Portrait of the Instructors and Students

In the UDL course, the adjunct instructor, Emily, identified as a White woman. She was an experienced and accomplished mid-career professional who described herself as introverted and reflective, but confidently engaged students through dynamic multimedia presentations, announcements, and feedback through the course. She shared information about her young daughter with the class and stories from her experience in instructional design, primarily in community college settings. The students included two men and three women. All students were White. Two were local students in the Western U.S. Two were on the East coast, one student was an international student from Canada. Two were at the beginning of their Master's Program, one was at the end of their

Master's program. One was starting a 6-course graduate certificate and one was at the end of their certificate. See Table 3 for a breakdown of the demographics of each group.

Table 3
Participant Details for Universal Design for Learning Course

Name	Pronoun: She (S) He (H) They (T)	Race (Ethn.)	Prior Work Experience in Course Topic	Beg. (B) Mid. (M) or End (E) of Program
		Group A		
Drew	H	White	Related	B
Nicole	S	White	Yes	B
Kayla	S	White	Related	E
		Group B		
Jessica	S	White	None	B
Louis	H	White	Related	E
Ashley*	S	White	None	B

Note: All participant names are pseudonyms

* Dropped the course in Week 2

In the Environmental Policy course, the adjunct instructor, Marilyn, identified as a White woman. She was very recently retired from a high-profile career in global climate policy and advocacy serving in various leadership roles at key global meetings. She was outspoken and clear, sharing stories and pushing student thinking throughout the course. In her class, 12 of the 20 students identified as women, and 8 as men. 16 students were White, 1 mixed race, 1 Black, and 2 Asian. Two participants were Hispanic. There was broad representation from different parts of the U.S.; two students were local. seven from other parts of the Western U.S., four from the East coast, three from the Midwest, three from the Southeast, and one student was an international student from Asia. Two students were mid-way through a 6-course graduate certificate. Five were early in their master's

degree program, Five were about half-way through, and six were nearing completion of their Master's Program. See Table 4 for a breakdown of the demographics of each group.

Table 4
Participant Details for Global Environmental Law and Policy Course

Name	Pronoun: She (S) He (H) They (T)	Race (Ethn.)	Prior Work Experience in Course Topic	Beg. (B) Mid. (M) or End (E) of Program
Group Thread A (Valerie's Thread)				
With Valerie Week 2				
Valerie	S	White	Yes	E
Melissa	S	White	Related	M
Leslie	S	White	Yes	E
Amanda	S	White	Yes	E
Carmen	S	White	Related	E
With Valerie Week 8				
Valerie	S	White	Yes	E
Carmen	S	White	Related	E
Micaela	S	White	None	E
Casey	S	White	Yes	M
Group Thread B (Avyaan's Thread)				
With Avyaan Week 2				
Avyaan	H	Asian	Related	M
Dylan	H	White	None	B
Erin	S	White	Related	B
Kutenda	H	Black	Related	M
Marco	H	Biracial (Hispanic)	Yes	E
With Avyaan Week 8				
Avyaan	H	Asian	Related	M
Clara	S	White (Hispanic)	Related	E
Reyna	S	Asian	Related	B
With Valerie and Avyaan Week 10				
Valerie	S	White	Yes	E
Avyaan	H	Asian	Related	M
Alex	H	White	None	E

Note: All participant Names are pseudonyms

Research Design

This multiple case study design was intended to explore the ways that student groups engage in liberatory dialogical exchange, if at all, by examining their actions and experiences collaborating in an online setting.

Operationalization of Theoretical Framework

For the purposes of this study, it is important to clarify how the theoretical framework of humanizing, emancipatory pedagogy and dialogical exchange was operationalized in data collection and analysis. This study draws on Freire's (1970) *Pedagogy of the Oppressed* to establish a theoretical framework with which to interpret observations of student exchanges. As described by Freire (1970), a critical component of humanizing pedagogy for a liberatory education, is *dialogics* or dialogical exchange between and among instructors and students. Dialogical practice in education occurs when students engage in collective exchange to: (a) identify critical generative themes, (b) develop dialogue skills, (c) engage in problem-posing, and (d) nurture praxis (reflection and action).

The goal of *dialogics* is developing *critical consciousness* (CC), defined as "ontological clarity and praxis," or a purposeful way of being oriented toward critical reflection of structural power dynamics and action toward freedom from oppression (Freire, 1970). However, this study does not focus on measuring *CC* development itself. Because CC development is a continuous, life-long, cyclical pursuit (Pillen et. al., 2020), the scope of this short-term study will be the process, not the product, and seeks to

examine the nature, depth, impact, and experience of the engagement in dialogical practice toward CC in a collaborative online learning environment.

This is in line with constructivist and critical approaches to education, which are process-focused, and seek to determine "what constitutes the attainment of meaningful knowledge or learning" (Pillen et al., 2020, p. 1519). Freire (1970) himself emphasized the centrality of the *process*, saying that the actions taken as part of the educational process could be a "humanist and liberatory praxis" in and of themselves, and one in which teachers and students engage in the practice of becoming Subjects of the educational process. Exploring the nature and depth of that practice will therefore provide valuable insight into the ways educators can move toward an effective liberatory pedagogy and serve as an effective measure of the success of an education (Pillen et al., 2020).

To study this dialogical process, the unit of study, or "case" is the student *group* rather than individuals. Freire (1970) describes dialogical exchange, as communal, stating that consciousness development involves "people, as historical beings, engaged with other people in a movement of inquiry" directed toward humanization (p. 85). He goes on to say that "the pursuit of full humanity… cannot be carried out in isolation or individualism, but only in fellowship and solidarity" (Freire, 1970, p. 85). This study therefore investigates the nature of the interactions between people where humanizing action takes place, and which itself constitutes evidence of emancipatory practice.

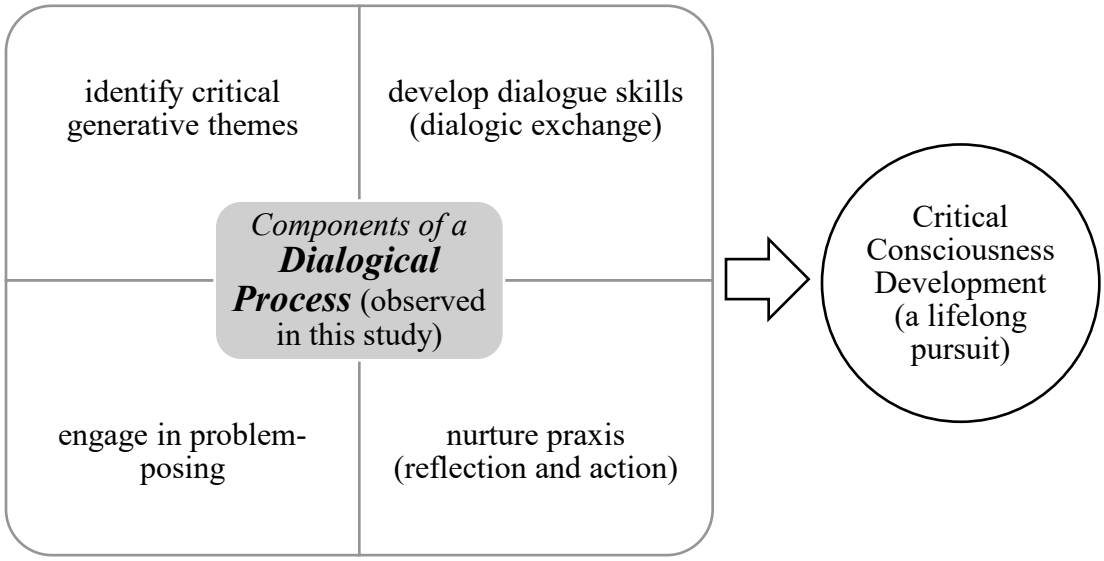
The components of the dialogical exchange are articulated in this paper's theoretical framework and recaptured in Figure 6 below. This study focused primarily on

the first part of the graphic with the four components of the dialogical process as they manifest between and among students in an online postsecondary classroom employing collaborative learning methods, rather than attempting to directly measure individual ontological clarity and praxis, which itself is a non-terminal, continuously pursued abstract goal of the process.

Although CC attainment is not my primary purpose, my observation and interview protocols drew on some of the markers of CC outlined by other researches who approximate CC development by evaluating individuals' awareness of socially-constructed inequity as well as their inclination, confidence, and preparedness to engage in praxis (Diemer et al., 2022).

Figure 6

Conceptual Framework for the Dialogical Activities as Part of a Humanizing Pedagogy



Data Collection and Initial Iterative Analysis

The data collected as part of this case study includes a variety of data types in order to produce a holistic portrait of the learning context (Yin, 2014), combining

observational and interview data with "physical artifacts" (Creswell & Poth, 2018, p. 100). The data was collected in several somewhat sequential phases. However, as is typical and advisable in case study research, "data collection, analysis, and report writing are not distinct steps" and are often iterative and interrelated steps (Creswell & Poth, 2018, p. 185). Each phase revealed additional insights about each research question and sub-question. Table 5 outlines the phases of data collection involved in this study. For reference, the research questions again, are: RQ1: How do student groups in online professional studies courses collaborate in humanizing and emancipatory ways? RQ1a: In what ways, if any, do student groups engaging in collaborative learning methods demonstrate humanizing dialogic practices: the ability to (a) identify critical generative themes, (b) develop dialogue skills, (c) engage in problem-posing, and (d) nurture praxis (reflection and action)? RQ1b: Which internal and external factors contribute to the groups' ability to engage in humanizing dialogical practices?

Table 5
Data Collection Procedures and Sources

Data Collection Phase	**Data Collection Procedures**	**Data Products RQ1a (Evidence of dialogic engagement)**	**Data Products RQ1b (Influencing factors)**
Contextual Data Gathering	Gather course-related materials and environmental information	NA	Syllabus and LMS Content, demographic data, instructor pre-interview
Observation of Group Work	Students use auto-record Zoom room, observe asynchronous collaboration	Videos, Transcripts, Student text-based communication, shared documents	Instructor-to-student communications

Examination of Student Work Products	Gather student drafts and final assignment	Final assignment	NA
Reflection Surveys	Provide all students across participant student groups with a Qualtrics reflection survey to complete	Questions that relate specifically to the each of the 4 categories	Question asking about influencing factors
Interviews	Select individuals to interview based on observation and reflection survey, info illuminating themes meriting deeper examination.	Further questions relating to dialogic exchange	Further question asking about influencing factors

Contextual Data Gathering Phase. Initial data collection included contextual information about the course and learning environment, such as the syllabus and the structures of the online learning environment in the Canvas Learning Management System, including module contents, readings, assignment guidance, discussion prompts, etc. Additionally, I conducted a preliminary interview with both course instructors, asking questions related to their goals, expectations, and approach to guiding students through the group learning experience. As the course progressed, I conducted weekly observations of the course context outside of the collaborative group work, reviewing discussion boards, instructor announcements, videos lectures, and student submissions, noting learning conditions and instructor interventions that supported or impeded emancipatory collaboration practices.

This information was compiled into an observational protocol that separated descriptive and reflective notes (Creswell & Poth, 2018), and was then integrated into a

case context and description section that illuminate situational and social factors that may afford students different "social goods" that restrict, empower, or influence the behaviors of students as they enter the learning and discursive space of the classroom (Gee, 2014a, p. 7).

This contextual data informed the analysis of the observation, reflection, and interview data in response to the research questions. In addition to helping to analyze RQ1b about contributing factors, it is crucial to understand that social inequities may inform the experience of and access to the emancipatory and dialogical practices in the class environment and will therefore be important to avoid making generalizations about those experiences, without taking into account the social conditions present within the cases.

Observation of Group Work Phase. The largest and most central set of data came from observation of student group work. In the instructional design course, students work on one main project for the entire duration of the course. In the Environmental Policy course, students engage in two smaller projects during the course. Students had the choice to collaborate synchronously or asynchronously. I set up Zoom meeting rooms set to auto-record for each student group. All student groups that met synchronously used these rooms each time. Zoom auto-transcribes each recording with 95% accuracy. I imported each of these into MaxQDA along with their video and cleaned and annotated the transcriptions, adding in non-verbal details such as body language or material shared on the screen. Additionally, students were asked to copy me in on any asynchronous collaborations. These included being added to email threads, text group chats, shared

documents in Google Drive and OneDrive, and private group discussions in the Learning Management System group site. I gathered version and comment history and imported these into MaxQDA for annotation and coding. During the observation process, and while re-reviewing recordings, I took notes and memoed to engage in reflective thinking and develop meaningful connections over time to help further develop codes and themes (Creswell & Poth, 2018).

The goals of observing the group collaboration was to further understand how students engage in dialogic practices to collectively make meaning, uncover liberatory truths, and manage and recreate forms of power. I therefore drew on discourse analysis theory to guide the specific development of codes and themes in this part of the research. Gee (2014a)'s theory of discourse analysis situates language use as "saying, doing, and being" within the context of a "figured world," which is informed by often high-stakes political and social power and norms (p. 111). Gee's (2014a) work provides a process by which researchers can break discourse down into sequential units and then further into "stanzas" or portions of discourse "devoted to a single topic, event, image, perspective, or theme" (p. 157). One can then analyze the use of syntax and tone to determine speaker purpose, relational dynamics, and methods of collective meaning-making (Gee, 2014a, p. 137). Gee (2014b) indicates that this form of analyzing meaning-making and interactions through syntactical discourse analysis can also apply to spaces of virtual engagement where the use of virtual tools, navigation and manipulation of the virtual space and alternative communication methods are other forms of syntax.

I drew on the interpretive guidance from my theoretical framework by developing a codebook to pull in samples and further operationalize the syntactical manifestation of the four components of dialogic engagement. For example, the code "generative themes" was defined as emerging when a "stanza's" focus involves a student introducing or engaging with an issue the emerges from their lived experience and reflect their social reality. Freirean "discourse" appeared when a student's use of language opens a door for power-sharing, shows curiosity about another's perspective, or respectfully engages in disagreement toward deeper understanding and growth. I also looked for the opposite of these things, (e.g., fixed thinking or domination and silencing of peers) and other discursive practices in between. As the intention was to develop a fuller understanding of how student groups collaborate in humanizing and emancipatory ways, I also allowed my emergent codes and themes to guide a description of CC's emergence in an online, collaborative space. I purposively selected specific group interactions for deep analysis and description in the findings section.

Examination of Student Work Products Phase. I secured permission at the start of the study to review each group's final submissions and submitted drafts. I conducted open coding of the submissions, building on codes and themes developed through the observation process. The artifact analysis was most significantly aligned to illuminate RQ1a, which asks in what ways student groups engaging in collaborative learning methods demonstrate humanizing dialogic practices. So, many of the codes and annotations related to the 4 components: engagement with generative themes, integrated ideas resulting from a dialogical process, problem-posing, and praxis (orientation toward

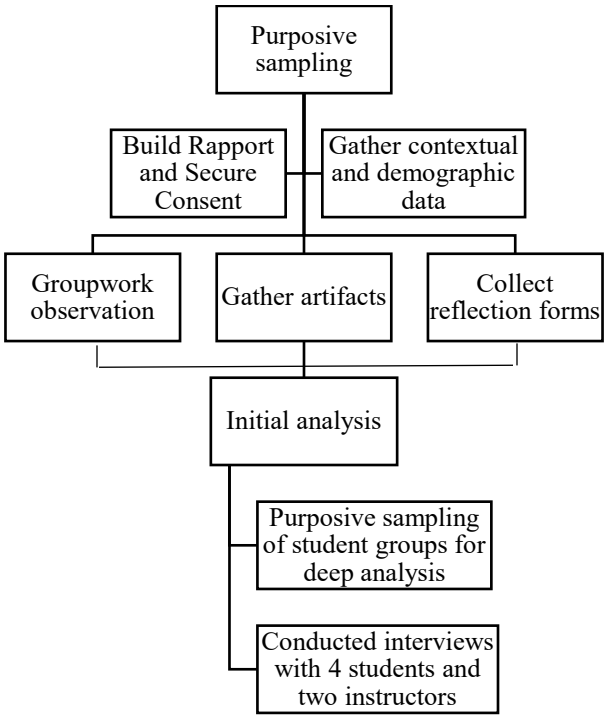
reflection and action). I memoed and annotated, drawing connections between dialogical moments in group collaboration, and their final realization in their submitted work.

Reflection Forms Phase. After students completed all of their coursework for the term, I asked all students to complete an open-ended reflection form with short answer prompts focusing on their experience of the group work and reflection on their dialogical process across each group project in the course. The reflection form included questions about participants' experience with the group work, questions that relate specifically to their experience with the 4 categories of dialogical engagement, and questions asking about influencing factors. As the primary goal of humanizing educational practices and the dialogical process is to foster critical consciousness, I incorporated questions that drew upon the literature on indicators of critical consciousness, defined as "ontological clarity and praxis," namely awareness of socially-constructed inequity as well as their inclination, confidence, and preparedness to engage in praxis (Diemer et al., 2022). However, as the goal of this study is to observe dialogical processes, rather than to measure CC as a summative end goal, I did not employ a formal survey tool to measure CC development. See Appendix C for the full reflection form. These responses were coded using the same codebook, and helped further nuance themes and sub-themes. 12 of the 20 students in the Environmental Agreements course completed the reflection survey. Four of the five students in the University Design for Learning course completed the reflection survey. In addition to the survey for the study, the UDL students also

completed a video-based reflection on their group work experience as part of the course's final assignment.

Follow-up Interview with Select Participants. Following the end of the term, I reached out to all students in the groups that were selected as cases in order to request follow-up interviews. Two students from one of the UDL groups participated in interviews. All participants from the second group declined. The two students selected as anchors for the two group threads in the Environmental Agreements course participated in interviews. The interviews used a semi-structured format to illuminate and clarify the developing themes and theories, adding context and clarification. Follow-up interviews were conducted with both course instructors as well. Figure 7 illustrates all phases of the data collection and initial analysis phases.

Figure 7
Data Collection and Initial Analysis



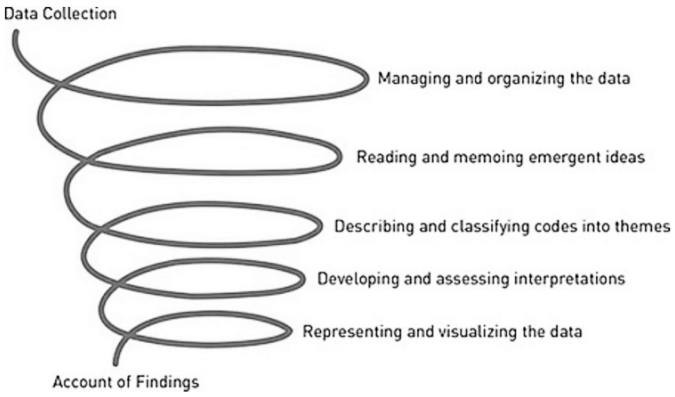
Data gathering and reduction. The data gathering process resulted in 177 artifacts from all groups within both courses. Following memoing and initial thematic analysis, four focal cases were selected that best illuminated the research questions, including varying experiences and approaches to engaging in group work as well unique manifestations of dialogic engagement. This reduced the number of case-related artifacts to 127. These consisted of video recordings, email exchanges, shared documents,

discussion board prompts, submitted assignments and feedback, reflection forms, and interview transcripts.

Data Analysis and Interpretation

The data analysis phase balanced "holistic analysis" to get a sense of the most prevalent features of the online learning context, with "embedded analysis" approach to focus on the specific aspect of *dialogical processes* (Creswell & Poth, 2018, p. 100). The analysis process drew from Creswell and Poth's (2018) "data analysis spiral" approach, reproduced in Figure 8

Figure 8
Data Analysis and Representation



Note: This figure is reproduced from Cresswell & Poth (2018), p. 186.

I began by gathering and organizing each of the 177 artifacts in MaxQDA followed by detailed memoing and contextualizing, which supported an initial rough code structure combining codes based on the theoretical framework to answer RQ1a about the nature of and extent to which students engaged in dialogical exchange, and emergent codes as they related to RQ1b which asked about influencing factors. I coded all artifacts using

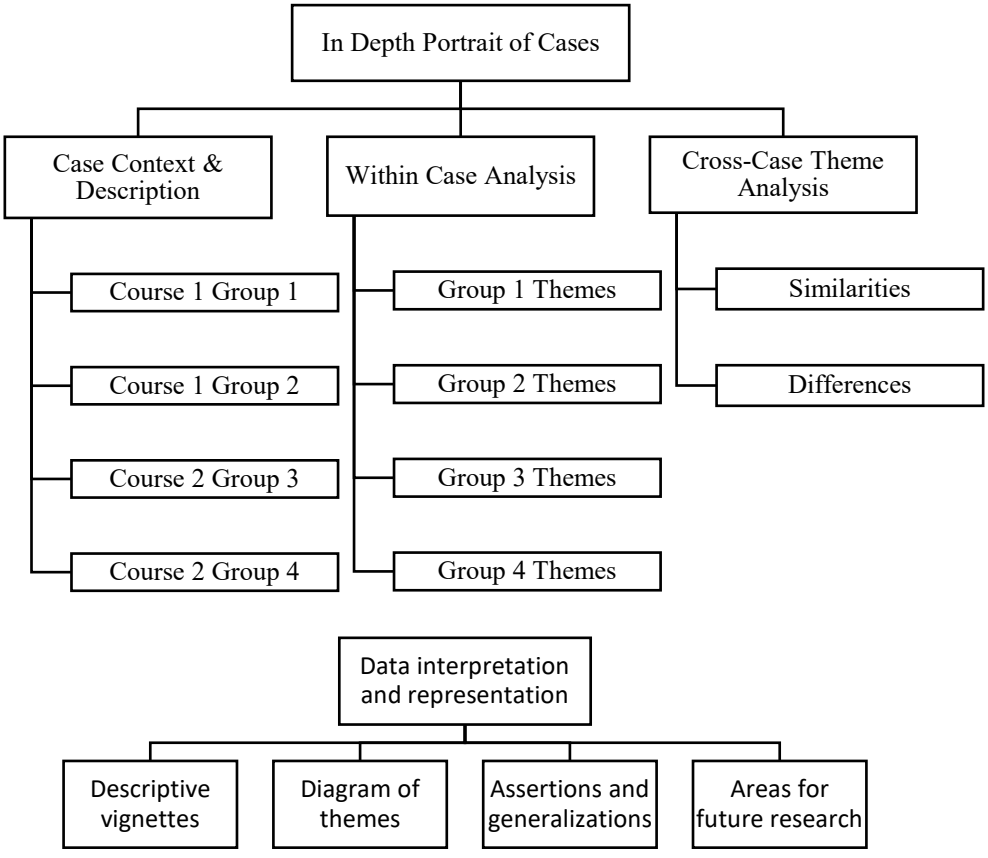
MaxQDA at a high level, labeling the type and nature of the exchange, and selected specific key exchanges on which to conduct line-by-line coding to deepen and nuance codes and sub-codes. I then classified the codes into themes, and then developed and assessed interpretations (Creswell & Poth, 2018). In order to capture complex relationships that thread between themes, I went beyond simply describing the phenomenon and drew from Van Manen's (1990, 2014) Hermeneutical Phenomenology to contribute, as a researcher, an interpretation and co-construction of meaning along with an analysis of its implications (Creswell & Poth, 2018, pp. 77-78, 202). I then related the emergent themes to my analytical framework, including the relationship to the dialogical components of critical generative themes, dialogue skills, problem-posing, and praxis. Additionally, I coded for influencing factors. Analyzing these components was an integrated and iterative process.

The final stages of Creswell and Poth's (2018) "data analysis spiral" approach, involves the researcher looking for categories and branches to make a *model* for how the components of the learning experiences combine to create different experiences of this phenomenon for students (p. 187), creating a useful visual for practitioners and an account of the findings. I created a map of the contextual conditions and instructional methods observed in the class, and a second map of the humanizing practices explored, indicating relationships that emerged between and among the two maps. I looked for evidence that the humanizing dialogical practices described in the theoretical framework helps students uncover power differentials, bias, and assumptions about cultural practices.

Data Representation

According to best practices for multiple case studies, illustrated in Figure 9, I first created a detailed description of each case separately, carefully considering its context; then completed a within-case analysis, identifying themes within each case alone. Finally, I conducted a "thematic analysis across cases," which built to developing "assertions" and "interpretations of the meaning of the case" (Creswell & Poth, 2018, p. 100).

Figure 9
Data Representation Structure for Multiple Case Studies



Note: adapted from Creswell & Poth (2018)

Ensuring Credibility

Threats to credibility in qualitative research include risks of selective or incomplete data collection and bias in interpretation. This study will ensure complete and faithful transcription of gathered data and use data triangulation (Stake, 1995) to capture and verify data across observation, artifacts, and interview data. Data from each case will be kept separate until the cross-case analysis phase. To further establish confidence in my findings, I will rely on Lincoln and Gruba's (1985) concept of "confirmability" by employing member checking and seeking feedback from participants on whether the data analysis represents their experience and whether anything is missing (Creswell & Poth, 2018, pp. 256, 261).

Uses of Artificial Intelligence Tools in Research and Analysis

As artificial intelligence (AI) tools are becoming more prominent in research and writing, it is appropriate to address their use in this paper's methods section (McAdoo, 2024). I reached out to our IRB department, who encouraged transparency in methods, and security of participant data, which was de-identified prior to AI input. MaxQDA's AI assist privacy statement states, "All analyzed data is deleted after analysis and is not used for machine learning purposes. Your research remains your own and is protected from unauthorized use." (MaxQDA, 2023).

In this dissertation research project, AI was minimally used to support copyediting. Generative AI was not widely available and was not used during the construction of the first three chapters.

Use of AI for Data Analysis. Artificial intelligence tools were used in a limited capacity, primarily to affirm hand-coding by summarizing portions of interviews and suggesting codes and code relationships and as an aid in exploring and reflecting on emergent themes and as background research. Due to the complex nature and format of the participant exchanges, the AI assist tools did not prove useful in suggesting codes based on Zoom or email transcripts. It would over-focus on decontextualized repeated phrases or focus too much on the content and not the nature of the exchange (e.g., summarizing the environmental policy assertions the students were making rather than describing how the participants were engaging with one another's ideas through problem-posing.) This version of the MAXQDA (24.2.0)'s AI assist tool may have been useful for simpler or more directed survey or interview data that focused on key phrases.

Another data analysis application of AI that I also explored outside of MaxQDA was when I used Miro to create a mind-map of the codes and themes, sorting them into categories and sequences. Miro has a built-in AI tool that will compose a text-based summary of a diagram (ostensibly to create alt-text). However, it was able to recognize and synthesize items within each category, which was useful in turning this mind-map into an APA-adherent chart of themes and sub-themes.

AI Use for Secondary Research to Support Themes. Where AI proved most useful was in supporting the presentation of themes and putting them into dialogue with existing research. While no part of the actual writing or assertions in the final paper were directly composed by AI, I used it to complement my exploration process. For example, when "risk-taking" emerged as a theme in my data, I asked Elicit.com, a scholarly

research AI engine, “What is the relationship between risk-taking and critical consciousness?” in order to see if there was existing empirical research or theory comparing these two components. It provided a summary of factors that correlate with and influence both topics, and a chart of several peer-reviewed sources, their methods, variables, and abstract. I then read the full text and put that work into conversation with my findings. I did a similar search using key words in the ERIC database, which produced less useful results and took more time. Similarly, I asked Microsoft Copilot to present and summarize several different discourse analysis models that I might consider as I developed an approach to describing and presenting the discourse I observed in my study.

Due to my personal preference to directly compose all content as a way to process and analyze information, I did not use AI much at all in composing sections of the paper. There were three or four paragraphs that I input into Microsoft Copilot to help me make them more succinct. I did use the Microsoft Word plug in for Grammarly to help identify grammar errors and passive voice.

Writing Strategies

The write-up follows Stake’s (1995) audience-centered flow. The findings section introduces the “setting, context, and key features” of each of case, and is structured around detailed vignettes that illuminate key themes and create an intimacy with the student experiences in that case and its unique context (Creswell & Poth, pp. 101-102). Following the individual case descriptions, I provide a cross-case thematic analysis with an integrated description of the “issue” of collaborative, problem-based learning in an

online environment based on the meaning and insight gained from the thematic analysis of the cases together. In this portion of the write-up, I "draw from additional data sources and integration with [my] own interpretation of the issue" (Creswell & Poth, p. 102). I include evidence that both confirms and disproves my interpretation, followed by overall "case assertions" or "lessons learned" (Creswell & Poth, 2018, p. 101-102). As my intended audience is teachers and curriculum designers, I hope to both emphasize in my "case assertions" section and closing vignette the potential impact of collaborative problem-based learning in an online environment as well as its complexity and changeability in different contexts, underscoring the importance of deepening one's understanding of this learning method in order to best serve learners and future citizens of the world.

Limitations

One limitation is the generalizability of the findings. While case studies are typically not intended for generalizing to a larger population, to make the case assertions most relevant to other contexts requires a multiple case study approach, and the researcher should identify "instrumental" or typical cases (Stake, 1995).

Secondly, selecting groups from the second course was, in part, determined by participant willingness to fully engage in the components of the study, providing potential selection bias toward more engaged and satisfied individuals.

A third limitation relates to the research design and the risk that by disclosing that the purpose of the study relates to humanizing practices and including questions in the reflection survey and interview protocol asking direct questions about humanizing

practices may influence student responses and research outcomes. To mitigate this, the questions were phrased in such a way to not indicate an expectation of a positive association between collaborative learning methods and humanization. Similarly, the presence of a researcher who was known to be an educator may have influenced student behavior, adding an additional layer of social pressure for each student to be a productive member of the group. As one participant put it, "While it didn't change my behavior or my approach to the course…Knowing that another person was looking at this stuff added a level of accountability… and maybe kept us more on top of stuff in a way."

Researcher in this Context

Education can be broadly defined as the journey by which a person is brought into the world, or society at large. Yet, each learner comes into the world with a different set of privileges, perspectives, and social markers of power. As a cisgender White woman, born in the U.S. into a comfortable upper middle-class family, societal barriers to education for me were minimal, and I often saw myself reflected in and supported by social structures and dominant historical narratives in my coursework. Engagement with people from backgrounds different from my own came as a choice and with minimal personal risk. For learners with multiple minoritized identities, the opposite is often true. School and social norms are not created for them, survival in a White-centric society is not a choice and can come with great risk. For me, as an educator, researcher, fellow learner, and person in the world, understanding this inequity came as a gradual and unsettling awakening, and a lesson I am continuously seeking to better understand and relearn.

A few years ago, I attended a public conversation between our University's former Chancellor and Dr. Cornell West, in which he drew from the Greek concept of *paideia* to define a "deep education," in which "to be educated is to be so unsettled and unnerved that you have to raise questions about who you are as a human being" (West, 2018). *Paideia* originates from Socratic dialogues wherein interlocutors learn from one another through thought-provoking questions to challenge one's assumptions and beliefs. Later, I read the works of Paulo Freire (1970), who similarly argued that to move from *doxa* or received everyday wisdom to "true knowledge" required liberatory engagement with others (p. 81). For me, the most life-giving part of being a person in the world is finding surprising connections with other people, and through courage and empathy, making meaning together. Throughout my educational and professional journey, I have had the privilege to study and teach in four different countries from a high school in rural Japan to a City College in Chicago with a high poverty and refugee student populations, pushing me out of my comfort zone, forcing me to unlearn biases and appreciate different forms of knowing and being. In each setting, the world opened up as a beautiful and sometimes brutal teacher, but there was creativity and community everywhere. That was my education, and one that I think every student deserves and few receive: being welcomed by the world, getting to co-construct communities, and learning things that are empowering and relevant to their lives. My privilege and cultural capital afforded me that chance, while inequity and racism prevent others that same opportunity.

I am now leading an instructional design and faculty development team for an online professional studies department. It is fascinating and daunting to be an educator at

a time when the world is re-learning how to navigate a pandemic-riddled, digitally-connected, AI-infused world, with changing student expectations, and new technologies. Educators are called to redefine the conditions of inclusive and liberatory education that will empower this generation of students to disrupt oppressive systems and connect across difference to build new ones. I hope to use my research and administrative role to advocate for intentional practices and expertise infused in online learning. Due to lack of training and support as well as pressures to quickly move online and rapidly scale up, online courses risk being poorly designed with the simplest rather than the most effective instructional approaches. My hope is to help establish shared best practices related to collaborative methodologies and to reveal whether they are supportive of CC development. The findings will inform supportive workshops and scaffolds for online course development projects, and training for online course instructors in my department and beyond.

Researcher Privilege and Limitations

As a cis-gender, neurotypical, White woman, born in the United States, conducting research among diverse student populations, it is crucial to recognize how my positionality may impact this research. When studying the ways that students from different backgrounds collaborate and negotiate a shared learning environment that has significant stakes for them in terms of grades, social standing among peers, and professional prospects, it is important to recognize that some of my identities may overlap more or less with different participants, and my presence in the online learning space and my interpretive choices during data analysis must be carefully navigated with

attention and care. This includes reflecting on my constructions of truth and experience of collaborative learning and navigating online environments with privilege and power, recognizing my positions of authority and social power over the participants in my study, and consciously co-constructing the knowledge in my study by uplifting the perspectives and stories over dominant narratives and "truths" about online learning, collaboration, or humanization. (Milner, 2007) provides a framework to guide researchers in thoughtfully navigating their racial and cultural positionality to avoid dangers in their inquiry practices. This framework includes "researching the self, researching the self in relation to others, engaged reflection and representation, and shifting from the self to system" (Milner, 2007, p. 388).

Lavorgna & Sugiura (2022) provide additional insight into the complexities of conducting digital research, noting that it is important to intentionally reflect upon the blurred lines between the virtual and embodied lives of participant and researchers. For example, just like in any space, participants may present themselves differently in a virtual space than in an in-person space. Additionally, a researcher's identity and therefore their perspectives and personal information available through online mediums may be more available to participants. Lavorgna & Sugiura (2022) recommend reflexivity at all phases of the research mitigate assumptions and make ethical choices.

Lastly, during participant recruitment, it is vital to attend to my leadership role in the department in the areas of course design and pedagogy. To ensure that instructors and students did not feel obligated to participate, did not feel judged or critiqued, and did not feel obligated to provide data that would support certain positive outcomes or reflect the

department in an inaccurately positive light, I dedicated additional time to explain my goals, openness to uncomfortable or surprising findings, and de-identification of data. I engaged in member checking to confirm accurate representation of findings.

Ethical Considerations

Beyond the ethical risks associated with researcher positionality and role, which I endeavored to mitigate through bracketing and reflexivity as well as rapport-building and transparency, there are a few other ethical considerations. While this study presents no severe risks to participants, there may be additional stress involved in being observed and additional burden on participants to reflect and report their experiences during an already stressful term. To alleviate this, reflection forms and interviews occurred after the end of the term, after coursework was submitted.

In order to ensure protection of participants from harm, all data was de-identify and securely stored. I also committed to not sharing individual student reflections or observed actions with other participants. (fellow classmates and instructor) in the study. (Creswell & Poth, 2018, p. 183). When reporting out, clearly identifiable information has been masked (Creswell & Poth, 2018, p. 183).

Timeline

The study was proposed in Spring 2023. During the Summer, IRB review was completed. During the Summer quarter of 2023, I secured permission and cooperation of the academic directors and instructors for the courses and conducted preliminary conversations and interviews with the two instructors. In August 2023, I secured

informed consent from the instructors, and worked with them to gather contextual data and course information to prepare for the study.

In September 2023, one week prior to the start of the quarter, I reached out to enrolled students with an informational letter and video recording explaining the purpose, procedures, participant expectations, benefits and risks, as well as how their data will be securely treated. I offered a Zoom session to anyone who would like to learn more, and gathered electronic signatures from all participants by the end of the second week of the term prior to the first group work assignment.

Data collection occurred during Fall term (September – November 2023) as outlined in the methods section above. Interviews occurred December 2023 – January 2024. During November 2023 – April 2024, I completed data analysis and reached out to participants to engage in member checking.

Summary

This chapter explained the purposes, rationale, and processes of this cross-case study design. The goal of this study is to illuminate the ways that student groups in online professional studies courses collaborate in humanizing and emancipatory ways, and the factors that influence that ongoing, collaborative process. This study will contribute to the literature on online learning, post-traditional higher education, and research on humanizing practices. In Chapter 1, I highlighted the changing demographics of higher education, combined with increases and changes in digital education, and an increased need to enhance humanizing and liberatory practices in a simultaneously polarized and interconnected world. The convergence of these three societal factors, combined with a

lack of research on humanizing practices in the fields of online, collaborative, and adult education underscore the need for additional research. The literature review in Chapter 2 reveals promising but preliminary results that are extended and nuanced by this study.

In this paper's theoretical framework in Chapter 2 and its operationalization in the methods section in Chapter 3, humanizing pedagogy and dialogical exchange were used to provide a framework for analyzing prior and future research on online student collaboration toward emancipatory educational practices. A close reading of Freire (1970)'s framework for an emancipatory education highlights the importance of collective dialogue toward critical consciousness. I further make the case that it is valuable to study how students practice this collective dialogue in specific digitally-mediated and collaborative environments, which will replicate the ways that people engage with the world beyond their formal education. As a result, Chapter 2 establishes a theoretical framework that outlines the component parts of the dialogic process, including generative themes, dialogue, problem-posing, and praxis.

Chapter 3 describes this study's research design and procedures, emphasizing the value of a case study approach in order to reveal a nuanced and holistic portrait of an under-researched issue (humanizing collaborative practices in online learning) in an evolving context. Chapter 4 will illuminate within-case findings through thematically-informed vignetters. Chapter 5 presents a cross-case analysis of the observed themes as they relate to each research question, presenting a model that reflects the phenomenon under examination. Chapter 6 puts these findings into conversation with prior research and suggests implications for research and practice.

Chapter 4: Within-Case Findings

This chapter describes the within-case findings for each of the four case groups. Case 1 and Case 2 groups took place in a course on Universal Design for Learning for instructional design students. These students remained with the same group for the full ten-week term. Cases 3 and 4 took place in an Environmental Policy course that examined global climate treaties. This course had students remixed into three distinct group permutations throughout the term. Case 3 followed Avyaan through his groups, and Case 4 followed Valerie through her groups. For the third and final assignment, Valerie and Avyaan were in the same group called Case 3 / 4. Additional demographic and course structure context can be found in Chapter 3.

The format of this within-case analysis draws from Cresswell &Poth's (2018) recommended case study writing structure, which integrates description, illustrative narrative vignettes, and "building complexity through references to other research" and theory (p. 247). Each case description compares findings produced through coding of data gathered through observation of Zoom collaboration sessions, interviews, surveys, and analysis of digital artifacts such as discussion forum contents, comments on shared documents, text threads, and submitted assignment deliverables, increasing validity by affirming assertions through multiple inputs.

The case-by-case analysis seeks to illuminate the research question "How do student groups in online professional studies courses collaborate in humanizing and emancipatory ways?" It will break down the sub-questions:

RQ1a: "In what ways, if any, do student groups engaging in collaborative learning methods demonstrate humanizing dialogic practices: the ability to (a) identify critical generative themes, (b) develop dialogue skills, (c) engage in problem-posing, and (d) nurture praxis (reflection and action)?"

RQ1b: "Which internal and external factors contribute to the groups' ability to engage in humanizing dialogical practices?"

The presentation of findings on each case first provides context about the focal participants and then provides a series of vignettes alternating between RQ1a and RQ1b. It will start with the internal contributing factor of community building (RQ1b). Then, it will present a vignette illuminating the nature of dialogic practice (RQ1a) followed by an analysis of the factors that contributed to that exchange (RQ1b).

Case 1: Universal Design for Learning Group A

Case 1 Focal Participants: Nicole, Kayla, and Drew

This group consisted of three members: Nicole (she/her), Kayla (she/her), and Drew (he/him). All were white adult students. Nicole had bright blue hair and a warm but professional communication style. She had several years of experience supporting neurodiverse students in K-12 and university settings. She described herself in a pre-term journal assignment as a leader, organized, and was motivated by "fairness." Kayla described herself in her journal as "extroverted and feeling," and noted that she thrives on interpersonal learning. Kayla shared with her classmates in a discussion post that she was

diagnosed with dyslexia as an adult, and that the diagnosis helped her understand herself better and build empathy with her students. Drew described himself in his journal assignment as "ambitious yet private" and preferred to work alone, although he said that group work could be productive under the right circumstances. For this reason, the instructor, Emily, had initially put him in the "asynchronous" and "introverted" group but he had asked to move because of a prior relationship with one of the other group members. Drew had prior experience teaching English as a Second or Other Language, but noted in his journal and self-introduction discussion post that he was newer to Universal Design for Learning (UDL) framework. In his journal to the instructor, he questioned the science behind the UDL framework and the purpose of the journal assignment.

Though they were all extremely busy, with both Kayla and Nicole traveling internationally during the 10-week term, they found time to meet over Zoom once or twice in most weeks. They also communicated via email and in shared documents through comments and edits.

Case 1 Vignette A: Internal Factor (RQ1b) – Community Building and Role Identity

As described in the case context, the students came with very different levels of prior professional experience, different communication styles, and different orientations toward group work. Despite this, they were initially able to establish supportive, positive, democratic group dynamics that formed a safe space for dialogical exchange. However, later in the term, power dynamics and erosion of trust and accountability resulted in tension and barriers to dialogic exchange.

In watching the recording of their first Zoom session, the group established a strong rapport, sharing personal details about wedding anniversaries and their shared love of travel. Guided by the instructor-provided *Initial Group Meeting Template*, the group used their first meeting to discuss their individual strengths, limitations, collaboration coordination, roles, and norms for resolving conflict. Nicole emerged as the primary organizer of the group, coordinating meetings, and pulling group content into their multi-media platform (Rise360) as well as guiding assignment interpretation and structuring decision-making. Kayla was an enthusiastic and organized team player. In their Zoom meeting, Kayla mentioned a point she had written in her class journal, "I think there is beauty in brainstorms and playing devil's advocate to get other ideas going for what the next steps are." Throughout the term, she was often the one posing questions or drawing in different groupmates' ideas. Drew shared that he was newer to UDL and looked forward to learning from his groupmates' considerable experience. He expressed concern about finding ways he could contribute meaningfully and "pull [his] weight" and was hesitant to add information to the shared document until discussing it in a meeting first. He shared that he would like to contribute by providing research, and reviewing, synthesizing, and editing content rather than composing the primary content. Though Drew's tone was self-deprecating, Nicole and Kayla were encouraging about the value of his editing contributions with Nicole saying she is too succinct, and Kayla saying she writes too much. At the end of the first meeting, Kayla said, "We're crushing this!" and Nicole said, "This feels like a good team in my book!"

Later in the term, tapping into these roles (for example, Nicole setting the agenda, Kayla questioning definitions and assumptions, and Drew summarizing instructor

feedback), allowed each group member to play a productive role in the conversation, establishing equity and safety before diving into deeper critical topics. When positive group work orientation and trust and appreciation for one another's differences was high, the group was able to challenge one another and solicit one another's perspective to enhance their collective understanding of topics. Therefore, community building emerged as an important internal contributing factor supporting dialogical exchange, in response to RQ1b.

Case 1 Vignette B: Dialogical Exchange (RQ1a): – Eliciting Generative Themes from Lived Experience

The rapport and understanding of mutual strengths that were established in the first couple of weeks made way for the beginnings of dialogical exchange. In the course's second week, students were asked in a whole-class discussion board to draw on their personal experience being a learner in a course that was not supportive of their own learning needs. The students demonstrated their ability to identify generative themes (Freire, 1970) by highlighting injustices and biases in the school system based on their own experiences. Nicole shared in her post an example of a banking-model style chemistry class that left her feeling disconnected and unsupported. Kayla shared her experience having her effort and knowledge dismissed in high school because she could not perform well on a memorization quiz. Drew discussed misconceptions about "digital natives" and how struggling to perform in a technology-mediated learning environment did not fairly reflect one's ability to learn or be successful. The students all showed empathy to one another saying 'that resonated with me" and "that must have been

incredibly frustrating," and offered suggestions for how their experience might have been different with an instructor or school system being more responsive to student needs.

Internal Factors (RQ1b) – Community. In this exchange, the students demonstrated empathy, care, and openness to finding meaning in one another's lived experiences, elements that Freire (1970), hooks (1989) and Salazar (2013) argue are critical for making learning humanizing. By creating a safe space to be vulnerable, students were able to make personal connections with the content and reimagine education as a space susceptible to oppressive patterns, but also therefore susceptible to new, emancipatory patterns.

Case 1 Vignette B: Dialogical Exchange (RQ1a) – Problem-Posing with Stakeholder Empathy

In the second week of the term, students built on these generative theme insights to construct, as a group, three hypothetical learner personas for their final project (a professional development course for faculty). Drew was unable to attend this group meeting, but Nicole and Kayla met over Zoom, sending him the recording. In the meeting recording, Kayla demonstrated problem-posing (Freire, 1970) by questioning received narratives about different faculty populations and the ethics of making assumptions about the lived experiences of others. The assignment had asked them to consider "diverse learner perspectives," prompting Kayla to say, "So really, we kind of need to define the 'diverse learner perspectives'…Do we need to do research on like who those people most commonly are or can we kind of like make our assumption?" Nicole suggested that they extrapolate based on their own experience with different types of faculty (i.e., assumptions and received narratives). The group imagined some compassionate but

initially two-dimensional and even ageist archetype personas: for example, “Professor Fosel” (pronounced “fossil”) who was an emeritus professor who struggled with technology, memory, and eyesight. However, clearly uncomfortable with this decision to rely on personal assumptions, Kayla turned to information gathering, drawing upon personal narratives and research-based descriptions of challenges facing adjuncts to paint a more nuanced picture of her chosen “persona,” an adjunct professor.

Internal Factors (RQ1b) – Evidence-Based Approach. This work reflects Freire’s process for investigating generative themes by gathering data about a phenomenon or “concrete existential ‘coded’ reality” and then decoding it through critical perception and analysis to allow it to acquire meaning (Freire, 1970, p. 105). Kayla did this by conducting additional research on adjunct experiences and came to the next meeting with a well-researched and well-rounded narrative she had crafted for her fictional persona, “Debbie Fleming,” representing a population whose experience was different than her own (adjunct faculty). Figure 10 shows the “Debbie Fleming” persona description used in Group 1’s project, demonstrating specific life details and challenges that an adjunct instructor may face.

Figure 10

Case 1 Coursework Artifact Showing a Hypothetical Learner Persona

Debbie is an Adjunct professor at NCTC and a mother of three boys who are in high school and college. Her full-time job is working in the administrative network office for the public-school systems integrating new students where English is their second language. When she hears UDL, given her experience working with students who need support in representation, she feels adequate and savvy in her methods and does not have much time to commit to overhauling her class(es) and making them more than they are today, because she has conflicting priorities.

It frustrates her to learn when she is teaching a new course and is overwhelmed with the professional development and other reading required or recommended by the university. While she considers herself organized, she has difficulty maintaining organization for this course. She prefers to collaborate with others on teaching the course, and dividing up the work, but is challenged to find time to connect with her peer who lives across town and holds a job working on the weekends (during the adjunct's free time). In her free time, she likes to keep in touch with her boys, visit friends and read fictional books. As time has gone on, readers are critical to ensuring she can see the font in her book.

Case 1 Vignette C: Dialogical Exchange (RQ1a) – Problem-Posing and Productive Struggle in Discourse

The next group milestone was to refine their hypothetical learner personas and analyze their chosen course through that person's perspective. This exchange demonstrated All three group members participated in this Zoom meeting.

The student's instructor, Emily, had provided feedback about the group's personas saying that they should craft a "more robust story" by making their personas more like real people with specific needs rather than archetypes, and consider what

disabilities they might have. In a recorded Zoom meeting, the group read this feedback and Nicole suggested, “I was thinking that mine could be a really good fit [to have a disability] - the professor emeritus- because with older age, people will gain new disabilities that they haven't had in the past. Whether it's vision, cognitive disabilities, etc. … Did you all have any thoughts there?” Ending with open-ended options and an invitation for her groupmates to contribute supported the co-constructing knowledge and democratic inquiry (Freire, 1970).

Kayla and Drew both spoke up, and Drew deferred to Kayla, saying “Go ahead.” Kayla, taking Drew’s offer to go first, initiated a problem-posing exchange. As she had done before with the adjunct persona, Kayla questioned assumptions and definitions, this time about disabilities. She asked her groupmates if there was a list of disabilities they should reference that went beyond vision and hearing disabilities. She then presented an alternative, intersectional concept of an individual’s needs by sharing a more holistic portrait of her Adjunct persona’s needs that intersected with time constraints and an unpredictable schedule. Drew responded next, again downplaying his value to the group by saying, “Nicole could speak to this better than I can, but I was going to say…” However, then he added a valuable contribution, saying, “I think the course [meaning the UDL course these students were enrolled in], has been trying to get us to see that UDL isn't just about accessibility for people with hearing or vision impairment, or a cognitive - whether it's an age related, cognitive decline, or anything like that.”

The above Zoom exchange represents productive struggle as they question and nuance one another’s positions. It introduced a moment of discomfort when Nicole, perhaps sensing that her groupmates felt that she was oversimplifying the concept of

disability said, “I agree with you…The only reason I was bringing it up was to [address the instructor’s feedback.]” Drew and Kayla were quick to affirm that her suggestions to explore her emeritus professor’s age-related disabilities was also valid, and they could all explore the concept of “disability” in different ways to align with the instructor’s request for a “more robust story.” In response, as observed in the Zoom recording, Nicole nodded and smiled, and in a calmer voice suggested they move to the next agenda item.

Internal Factors (RQ1b) – Power Balance This problem-posing exchange existed within a careful power balance, maintaining group cohesion even though challenging one another and challenging oneself to speak up risks alienating different group members. It was clearly important to all group members that they maintain a sense of what Nicole, in her post-term reflection called, “being on the same page” or being equal participants in the shared pursuit of critical analysis. Nicole was sensitive to potentially being associated with narrow, limited, or received definitions of disability, what Freire (1970) terms a “fatalistic perception of a situation” but instead sought to be associated with the group’s problem-posing endeavor of “transforming” or “renaming” the concept of disability (p. 85). Her groupmates picked up on this and were quick to affirm her good intentions and reframe their problem-posing pursuit in a way that incorporated Nicole’s contributions. This kind of “fellowship and solidarity,” Freire argues, is key to ensuring that no one is “prevented from engaging in the process of inquiry” or “alienated from their own decision-making” (Freire, 1970, p.85). The group

narrowly dodged alienating Nicole, and it also risked Drew alienating himself through self-censorship.

Drew continued to grapple with his role as a contributor to the ideas and direction of the group. For example, by saying, “Go ahead” or “Nicole could speak to this better than I can,” he minimized his own role in the “process of inquiry” and “decision-making” (Freire, 1970). In this instance, his groupmates did allow him the space to contribute to the collective redefinition of disability, and Kayla affirmed and built on his ideas, albeit with the risk of putting a team member whose expertise he respected, Nicole, on the defensive. In later group exchanges, these tenuous power dynamics manifested in more complex ways that undermined the group’s ability to continue practicing productive dialogical exchange.

External Factors (RQ1b) – Problem-Posing Instructor Role. Another factor at play in Vignette C is the instructor’s role as a problem-posing interlocutor. In this instance, the instructor’s voice came in through written, electronic feedback, suggesting further investigation into their stakeholder personas. By pushing the students to reflect on additional nuances of their proposed personas, the instructor’s feedback played the role of the “problem-posing educator” who reflects back to the students their own considerations and invites them to be “co-investigators” in continuing to shape their conclusions (Freire, 1970, p. 81). However, because the instructor’s voice was separated from the group’s dialogue through technology and time, it was voiced into the conversation by Nicole and subject to interpretation. Nicole initially interpreted it as a new project requirement and a box to check to give her persona a disability. Kayla and Drew interpreted it as an

invitation to think more deeply and intersectionally about the learner needs in a classroom setting, ultimately serving its problem-posing purpose.

Case 1 Vignette D: Dialogic Exchange (RQ1b) Anti-Dialogical Exchange

Later that same week, in the group's fifth meeting together, the tone seemed to shift. As the group moved into discussions of how to represent their findings, Drew made a few suggestions that were received with confusion or hesitation from his group members. The first was that they could each use different text formats to share their personas (he would use bullets while the others had written narratives.) Nicole and Kayla suggested a preference for consistency and agreed upon a mix, to which Drew relented. Then, he made a suggestion that did not quite fit. Like bringing a piece from a different puzzle to the table, Drew suggested adding content to the course they were assessing (to teach the learners about UDL.) It was clear from his tone and detailed explanation that he had thought a lot about this and felt it was a valuable contribution. Nicole responded that the goal of the assignment was to make the course inclusive by *applying* UDL practices not teaching the learners *about* the UDL framework. She said, "So, I do think that's a really great point, but it's not necessarily relevant to what we're supposed to be doing in this project necessarily." This comment had an impact on Drew, because a few weeks later, he wrote in an email to the instructor, specifically referencing this incident and then saying, "I will be interested to know if what is written about our group work includes one member's exasperated comment that was clearly directed at me."

The group spent another twelve minutes unpacking the suggestion and how it might fit in. Drew suggested that while it might not be part of the project requirements, it could be a "cherry on top." Kayla said, "Okay, yeah, I think it's a really good thing to

keep in mind and see where we can build that in." However, Nicole and Drew continued to debate its relevance until Nicole said she had to jump on another work call, and they should just wrap up their parts and coordinate later on who would submit it the project, ending the conversation.

Following this interaction, the group communication became more logistical, and Drew's communication in weekly Zoom meetings was limited to affirming his groupmate's decisions, saying "Whatever works" "Alright" and "Yeah, at this point just let me know what I need to do, and I'll do it," or to make logistical or technology suggestions, which were well-received. In the final weeks, he missed a meeting, did not respond to emails from the group, and did not complete the final portion he had agreed to record. After five days without response, Nicole and Kayla submitted the draft (one day prior to the deadline,) and then Drew communicated to the instructor that he had not had a chance to finish his contributions. The instructor wrote to the whole group asking them to confirm that he had edit-access to the project to add his material, which they confirmed. He did not respond to the group after that and did not add additional content to the shared file.

Drew's withdrawal from the group communication appeared to be a confluence of difficult group dynamics and personal challenges, as Drew cited technology struggles, dislike of the UDL framework, and health in his emails to the instructor and groupmates. In his required post-term video reflection, Drew noted that he hopes he never has to do group work again. He declined to be interviewed, writing me an email only to say, "The group project did not turn out being representative of anything positive for me."

Internal Factors (RQ1a) – Accountability. Regardless of the reasons for withdrawal, this breakdown of discourse and follow-through resulted in feelings of lack of trust and stress for Kayla and Nicole. In the post-course interview, Kayla said, "I do feel like I lacked trust in the group member I was less close with [Drew]… I understand life things happen and want to be respectful of the challenges going on outside of this responsibility, but I was concerned with the lack of response." In her interview, Nicole shared that this downturn in communication shifted her feelings about group work from "connection" and "enjoyment" into "stress," saying "I think the most stressful part was that we had a team member who just had a different communication style and work style than two of us, and that led to a lot of imbalance in our work…When communicating from a distance, you have to trust that your teammates are dependable and will complete their portion of the project. When they break that trust on multiple occasions, it can be incredibly difficulty to move forward with that faith and confidence."

External Factors (RQ1a) – Instructor Role. Emily had attempted to scaffold supportive inter-group communication and reflection through journal reflections on individual group work orientation, forming groups with similar working styles, and prompting students to make a conflict resolution plan. However, none of these efforts seemed to make an impact on this particular group. She was called upon only at the end when Drew asserted that he hadn't had a chance to complete his work, and it was in place of Drew speaking directly with his group.

Internal Factors (RQ1a) – Community and Communication. Much of the dialogical breakdown was a result of failed communication and thereby failure to maintain a sense of community. In their initial group meeting, the instructor asked each

group to create a conflict resolution plan. Drew suggested communicating if you are busy or sick and need extra time. Kayla said, “I’m super open to direct feedback.” Drew responded, “Direct but kind.” Nicole echoed, “That’s great because then it’s like we’re not harboring unhappy feelings if there is clear communication around it.” Unfortunately, when things did start going wrong, whether Drew withdrew for personal reasons or because he felt excluded from the group, there was no direct communication about the situation at all, except one last-minute complaint to the instructor.

Nicole reflected on her contributions to the communication breakdown in her post-term Zoom interview, saying that due to her sense of “responsibility” she tends to step in and not give others a chance to “showcase their ability to step up.” In her interview, Kayla wondered if she had made Drew feel like he could not express that he was overwhelmed and that given more time, she would have asked him what he needed from her. Kayla spent a large portion of her interview comparing the exchanges with Drew to an example of a time early in her teaching career where her confidence had been shaken when she took a risk to try something unique and a mentor had told her to stop because it didn’t align with the collective goals, which she had accepted at the time as the right decision. However, in relating that story, Kayla was grappling with whether Drew was misguided and confused or whether he was seeing things in a different and valuable way. She had followed Nicole’s lead in dismissing Drew’s suggestion but was continuing to weigh whether that had been the right choice.

The communication failures with Drew were amplified when compared to the exuberant reflections between Kayla and Nicole about their communications between one another. Kayla spoke of being “close” to Nicole in her interview and survey. In her

interview, Nicole described her relationship with Kayla as a "partnership" that involved "communication," "feedback" and "sharing ideas."

Case 1 Vignette E: Dialogic Exchange (RQ1a) Praxis

For evidence of praxis, or reflection and action toward social change (Freire, 1970), I looked to the group's final deliverable construction and their post-term reflections. For their final submissions, Group 1 created an interactive multimedia presentation using Rise360 to present their analysis and recommendations for improving a teacher training course by applying Universal Design for Learning principles to meet hypothetical learner needs. Their collective work showed engagement with generative themes through empathy and the ability to research and reflect on the needs and inequities experienced by those with backgrounds different from their own. The students demonstrated action based on this reflection by leveraging creativity and constructive feedback to suggest concrete solutions and changes that would promote equity. Some of their recommendations included, "facilitate community and collaboration," "utilize a graphic organizer," and "create an introductory module" that would contextualize the learning and provide "relevance, value, authenticity, and belonging." Their language throughout the assignment demonstrated an inclination toward advocacy and mobilization, key components of Freire's (1970) conception of praxis.

However, there was room for improvement in moving from empathy to actionable solutions. While their recommendations were certainly oriented toward inclusion and justice, their analysis became a bit more formulaic, moving systematically through some of the UDL "checkpoints" to make recommendations, and, as Emily pointed out in her grading feedback, they were not necessarily considering the specific impacts on their

unique set of learners. Praxis, Freire (1970) asserts, must always be deeply "contextualized," (p. 104) rather than a one-size-fits-all approach to assessing a situation. So, while the students' work certainly demonstrated evidence of exercising praxis, it left room for continued growth to reach true ontological clarity and critical consciousness.

Accompanying their final submission, the students were asked to reflect on how their values and goals as they relate to this course had changed, as well as their commitments and resources they hope to bring forward out of the class. Nicole stated that her commitment to supporting students finding individualized and personal fulfillment in their learning was strengthened, and she emphasized an increase in her confidence in advocating for change in her workplace to make learning more inclusive, and said the course helped her reduce imposter syndrome. This elicited concurring remarks from her teammate Kayla as well as both Louis and Jessica from Group 2. Their expression of confidence and inclination to enact change further reflects a praxis orientation, aligning with the components that Diemer et al. (2022) call "critical motivation and critical action."

External Factors (RQ1a) – Technology. In constructing their final deliverable, much of the dialogic exchange moved to an asynchronous format via comments and edits in the shared OneDrive folder. The early Zoom meetings included grappling with concepts and clarifying goals and values. However, when it came down to crafting specific recommendations, the shared document became an effective communication channel supporting dialogic exchange. The students made connections such as, "I think this more aligns to Kayla's representation strategy" and "Drew, do you have the sources you had included yesterday too on the hybrid learning communicates? I think those were

really relevant to this idea." Making these specific connections between sources and matching solutions to different stakeholder populations allowed the students to transition their problem-posing and generative theme generation into action-oriented praxis and readiness to implement change. In her post-term Zoom interview, the instructor, Emily, affirmed the group's effective use of the shared document by saying that Nicole and Kayla were "highly interactive with the prompt and with each other. And they left very clear comments within the shared document to show that they were reading and responding to each other. They …were actively present and processing." Nicole gave an example in her interview of how multimodal exchange was supportive because, "seeing other people's feedback and how they approach the same area was really interesting and I learned a lot from that." She elaborated with an example of an exchange where Kayla proposed in a Zoom meeting creating a table to help them link UDL principles with their learner's needs, which Nicole said she would not have thought of. They discussed it over Zoom, prototyped it in the shared document, and used their unique lenses to iterate on it in their shared document until it worked. This exchange took place across multiple modalities including virtual meetings, independent work, and comments in a shared document.

Case 1 Summary

In Case 1, Drew, Natalie, and Kayla experienced a pendulum swing of dialogic engagement, presenting some of the deepest and most complex examples of dialogic exchange, and some of the most problematic forms of anti-dialogical exchange. They leveraged the internal and external factors well, such as building community, balancing power, instructor scaffolding, instructor feedback, and technology. They were able to

identify generative themes by reflecting on their own lived experience, questioning assumptions about their stakeholders, and redefining concepts like disability. They leveraged these reflections into action (praxis) through strong advocacy-oriented solutions and increased confidence. However, there was also evidence of self-censorship, power struggles, and a loss of accountability that resulted in lost trust and anti-dialogic exchange such as blocked contributions and a shift to transactional dialogue.

Case 2: Universal Design for Learning Group B

Case 2 Focal Participants: Louis, Jessica, and Ashley

The second group in the Universal Design for Learning course consisted of three members initially; Louis (he/him), Jessica (she/her), and Ashley (she/her), though Ashley dropped the course in the sixth week of the term. All three group members were White adults, and all were new to instructional design, hoping to make career transitions.

Case 2 Vignette A: Internal Factors (RQ1b) – Community and Group work Orientation

The Case 2 students all had complex feelings about group work and varied goals for taking the course. This was the group that Emily had characterized in her Zoom interview as the group that preferred to process information and engage asynchronously. Aware that asynchronous collaboration could be either highly productive and meaningful or it could mean that they would divide tasks and not actively connect with one another, Emily told this group in her written feedback, “you can find ways to structure individual tasks while still working toward a common goal.” However, the group demonstrated little motivation toward learning from one another and little interest in setting learning goals for themselves beyond simple knowledge acquisition. The confluence of negative group

work orientations, lack of community-building, and low interest in creative or deep learning did not create an environment conducive to dialogic exchange.

In his pre-term self-reflection journal, Louis stated his desire to lead in order to "direct the outcome of the final project." However, he expressed a strong "dislike and/or distrust for team based tasks" and indicated that he fell in the "low-mid range of emotional intelligence," which often resulted in becoming frustrated with others. In a whole class discussion board reflecting on personal learning preferences, Louis expressed his preference for "traditional lecture and textbook-based learning" over "conversation, dialog, role play, and group work." Combined with his self-description in his journal as "not inclined to creative or non-objective tasks," It was clear that Louis did not have an interest or readiness to engage in dialogic exchange with others toward "renaming" and recreating a more just world.

Similarly, in Jessica's journal, she articulated a transactional attitude toward learning, saying "When it comes to this course, I am indifferent about being challenged and just going with the flow. This is somewhat new content, and I just want to progress through." She was somewhat less averse to group work, describing herself in her journal as experienced in virtual collaboration, tending to be a "project manager" and willing to "fill whatever role is needed." She mentioned she can come across as intimidating and too assertive. Jessica was an active participant in the first half of the course but tapered off toward the end. Louis asked the instructor, Emily, to join a call with the group, wherein Jessica expressed that her "personal life was imploding" and that she was not able to prioritize the course. In his post-term reflection, Louis said that he was, "shocked by the causal [*sic*] attitude expressed by one teammate towards the non-completion of

course assignments (stated openly in a meeting with the course instructor present) and this gave pause to wonder about that teammate's commitment to the project as a whole."

Ashley's attitudes were markedly different. In her journal, which she recorded as a video rather than a written submission, she described herself as curious, emotionally intelligent, and good-natured, saying that she is a good listener but will voice her opinion in a respectful way. She attributed her sense of commitment to her military background. Ashley was working two jobs and emphasized the high demand her children and husband had on her. Her coursework was a way to intentionally "do something to prioritize [herself]" and support a career transition. Unfortunately, Ashley encountered unexpected challenges in their personal life and was not able to contribute very much to the group project as the course progressed.

When asked to form group norms and roles, the group collaborated via private discussion board in the learning management system. Their engagement was collegial but impersonal, saying things like "Thank you for taking the initiative and getting the ball rolling on this" and 'I'm sorry to hear about the technical difficulties…let me know if I can be of assistance in the future." They did not share any personal information. On their group project plan assignment, they agreed to avoid live meetings, communicate, and complete their work.

Establishing transactional, impersonal, and superficial attitudes and engagement norms early in the term set the tone for their collective engagement later in the term, and limited their ability to do the deep, liberatory, and collective work of dialogic exchange.

Case 2 Vignette B: Anti-Dialogic Exchange (RQ1a) – Additive not Integrative

According to Freire (1970), dialogue is "an encounter between men, mediated by the world, in order to name the world" (p. 88). In other words, it is an *integrative* encounter where the ideas of multiple people interact to form new insights. It is "mediated by the world," because there is reflection and a search for evidence of truth by examining one's own life experiences and gathering evidence from the world. Anti-dialogic exchange is the "empty word" deprived of its dimensions of action and reflection, or praxis (Freire, 1970, p. 87). The Case 2 group's exchanges were each missing at least one if not all three components: an *integrative* encounter between people, world-mediated reflection, or action.

Instead of working in an *integrative* way, the Case 2 group members worked in a way that could be called *additive*, with each student adding something to their shared deliverable with little discussion or questioning. For example, in Week 3, Louis and Jessica collaborated on a shared document and via private group discussion thread to select and describe a course to analyze for their final project. (Ashley did not see the thread in time to contribute.) Jessica suggested a course, and Louis replied to the discussion board saying, "looks good to me." While Jessica showed some evidence of "reflection" and engagement with "generative themes" by suggesting a course that involved a lot of learner choice (an inclusive practice she had expressed in an earlier class discussion meant a lot to her as a learner), this utterance did not result in any kind of back and forth to uncover further insights.

The anti-dialogic *additive* nature of the discussion continued throughout Week 3. An analysis of the shared document history revealed that Louis and Jessica each visited

the shared document once. Jessica selected a topic, and Louis summarized it. Two days later, Jessica added the rationale. There were no edits or refinements to the work done by the other student, and no comment bubbles or questions indicating an exchange of ideas.

While the group collaborated mostly asynchronously, they met over Zoom twice, in Week 5 and Week 7, to complete their major checkpoints, both times in a rushed meeting on the day the assignment was due. The live exchange proceeded much like the asynchronous exchange: in an additive way. In Week 5, their task was to identify learner personas and improvement opportunities for those learners. They each suggested a persona, Jennifer wrote the descriptions, and Louis and Ashley approved them. Unlike the Week 3 and 5 Zoom meetings in Case 1, the Case 2 group members did not leverage their own experiences, explore their positionality, pose problems about received definitions, or engage in research to craft a holistic learner persona. Therefore, their collaboration could not be described as "world-mediated" or "reflective." In fact, it could scarcely be called an "encounter," as most of the meeting involved the students working on different sections concurrently with occasional check-ins or notes about assignment requirements.

Internal Factors (RQ1b) – Community and Accountability. The primary contributing factor to this additive rather than integrative and dialogical exchange was the students' lack of community and shared goals. As described in the introductory vignette, the Case 2 students lacked buy-in to the value of group work, and lacked a shared commitment to deep engagement with the "generative themes" of inequity of higher education. They did not establish rapport, and personal issues quickly depleted any sense of accountability. Louis noted in his final reflection paper that his "disdain" for group

work had been validated by his poor experience. Though, he noted it may have been a self-fulfilling prophecy, saying that his biases probably impacted the project, and "additional efforts at group communication, and development of group dynamic would likely have pre-empted many of the other issues."

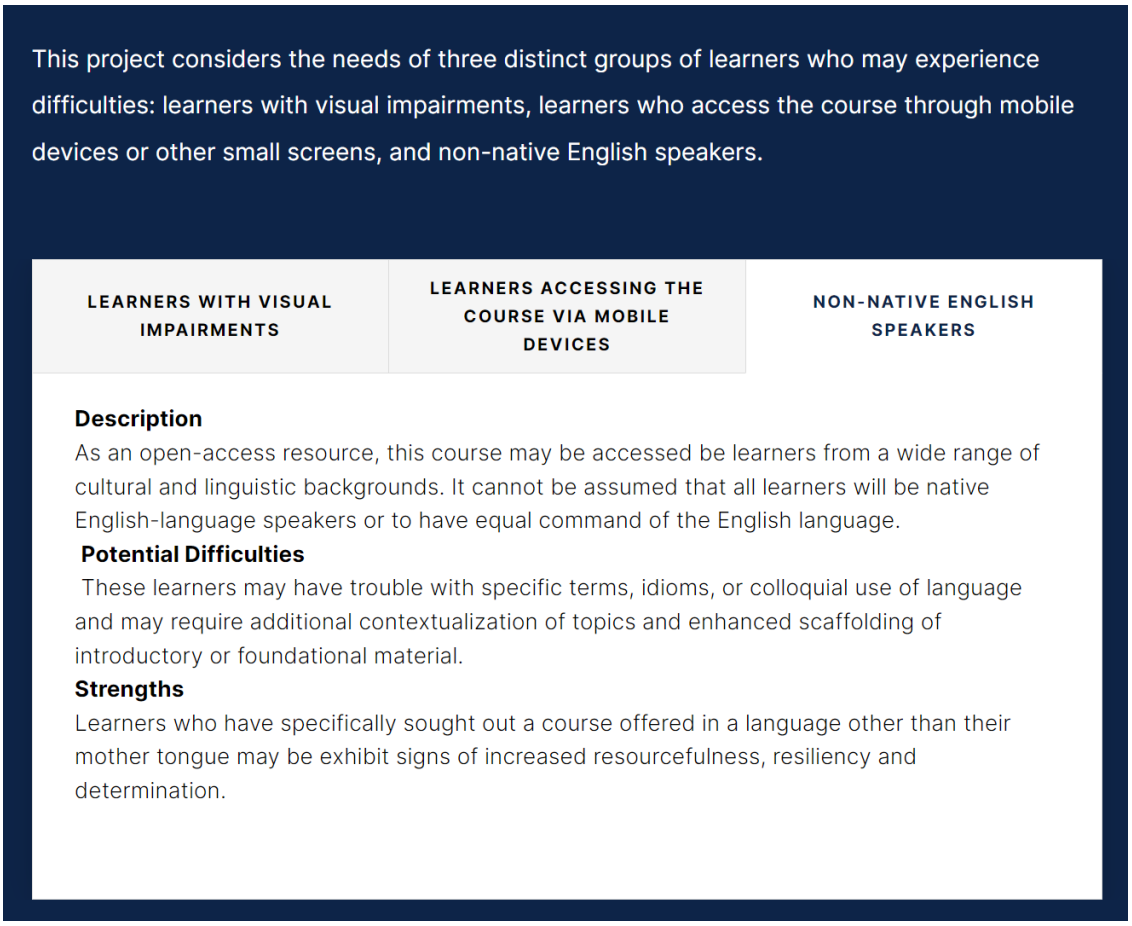
External Factors (RQ1b) – Technology. Technology again emerged as a contributing factor. Whereas in Case 1, the students leveraged different forms of technology to engage in different ways with one another's ideas, and spur deeper dialogic engagement, Case 2 students used Zoom, Canvas, and OneDrive as either a logistical planning tool or a repository to aggregate their individual contributions. Further, poor coordination and use of a variety of technologies also resulted in team members missing communications coming through different platforms.

Case 2 Vignette C: Dialogic Exchange (RQ1a) – Praxis

This vignette looks for evidence of praxis, or reflection and action (Freire, 1970) through close analysis of the final deliverable and their individual reflections about their praxis orientation. One component of praxis is "reflection," or a critical awareness of social inequality (Diemer et al., 2022). The final assignment presented an opportunity to demonstrate this kind of reflection in their presentation the learner personas they created. Unlike Case 1, the Case 2 group did not create a realistic or specific portrait of a learner's persona, but rather listed typical attributes of three types of learners: "Learners with visual impairments, Learnings accessing the course via mobile devices, and Non-native English speakers: as can be seen in Figure 11.

Figure 11

Case 2 Coursework Artifact Showing a Hypothetical Learner Persona



Their learner personas were simply textbook definitions of "types of learners." While they take a somewhat asset-based approach to these learner populations, mentioning potential difficulties and strengths of each group, they do not present their learner personas as individuals with specific identities and complex learning needs as the other group did. They also do not consider systemic inequities that influence these learner populations, describing their characteristics and "needs" as rooted only within themselves. Had the students engaged in dialogue, problem-posing, and deeper first-hand

research, they would have moved further along the spectrum of true praxis-oriented critical reflection on systemic inequalities.

Another component of praxis is "action upon the world" or the propensity to enact change to rectify inequality (Diemer et al., 2022). The group successfully presented some critical analysis and concrete recommendations for reducing instances of inequity in a college class. Louis primarily completed these action-oriented recommendations by himself. As one example, Louis wrote in the final assignment, "By using alternative methods of evaluation, including visual or interactive assessments, learners are presented with greater opportunities to fully express their knowledge through a variety of means. Ensuring that assessments are universally accessible helps ensure that learners are evaluated fairly on their knowledge of the subject matter, and not unduly penalized based on their ability to engage or interact with the assessment itself." While these insights show an inclusive mindset, it is unclear whether they come from a desire to critically analyze inequity or enact societal change, or was rather meeting the assignment requirements. Further, this praxis orientation did not emerge from dialogical exchange among group members, but rather from a confluence of individual and all-class experiences.

Finally, praxis includes "critical motivation" or their perceived ability and responsibility to enact social change (Diemer et al., 2022). While Louis and Jessica were clear about their pragmatic and transactional learning goals in the beginning of the course, they did express a desire to leverage their learning toward praxis for future real-life projects. In a class discussion board about goals and commitments following the submission of the final deliverable, Louis stated that the experience of the group

assignment helped give him language to make his ideas about issues with accessibility more concrete, and allow him to be "a bigger part of the process," with an immediate opportunity to apply these skills in in a committee he recently joined at his workplace. Learning to use language to empower reflection and action (or "naming the world" is a central goal of Freire's (1970) liberatory framework, and a key stepping stone toward praxis. Louis expressed frustration with the gap between theory and practice when it came to UDL principles, and he hoped that the language-based discursive toolkit he gained in the course would allow him to bridge that gap and make practical, actionably steps toward change. Jessica's reflection focused on how she intended to be more "mindful" of different learner needs and opportunities to provide choice and support. This "mindfulness" construct aligns well with Freire's sense of "critical awareness" of oppression, resisting complacency, and always being attuned to inequity through continuous reflection and action (Freire, 1970, p. 51).

External Factors (RQ1a) – Attitudes and Technology. In his final reflection at the end of the course, Louis asserted that his initial concerns about the lack of value and "disdain" for group work, and his fears about the lack of fair evaluation of his individual efforts turned out to be justified. He did, however, reflect on the impact that those biases likely had on the success of the project, saying, "Additional efforts at group communication, and development of group dynamic would likely have pre-empted many of the other issues discussed herein and the author is aware that he made a less than full effort in this regard." Louis also mentioned that his procrastination and inclination to

"respond poorly to criticism of his work" negatively impacted his contributions and work quality in the course.

Case 2 Summary

The Case 2 group experienced an unfortunate confluence of internal dynamics and personal challenges that made dialogic exchange almost non-existent. While the students were able to do some independent critical reflection and showed some evidence of critical motivation and preparedness to enact anti-oppressive change in their careers going forward, it can be determined that they did not choose to leverage the structures and affordances of collaborative problem-based learning to spur their individual growth toward critical consciousness.

Case 3: Global Environmental Law and Policy Group Thread A – Avyaan's Groups

Case 3 Focal Participants: Avyaan's Week 2 and Week 8 Groups

Case 3 took place within the context of the Environmental Law and Policy course wherein students were analyzing and recommending action on international climate change agreements, considering the social and economic impacts on various stakeholders while balancing environmental justice concerns. Because this course involved three group projects with different student combinations in each, each case follows one focal participant through their three group projects, taking the experiences of all group members into consideration while analyzing the group. The groups were randomly assigned. Case 3 follows Avyaan, an Asian man in the middle of his master's degree program, who considers himself more of an "academic" than his professionally-oriented classmates, and is considering pursuing a PhD after completing his Master's degree. Mid-way through the class, Avyaan traveled to India for a period of weeks to attend his

sister's wedding. His week 2 group consisted himself, four other men, and one woman. The group members were from a variety of cultural and professional backgrounds (see Table 3 in the methods section for more details.) His second group consisted of himself and two women (Reyna, and Clara). His final group was himself, Valerie (see Case 4), and Alex.

Case 3 Vignette A: Internal Factor (RQ1b) Community and Accountability

The first group project of the course was a low-stakes group activity in Week 2. Each group was assigned to make a multimedia presentation to the class on a different set of considerations for treaty negotiations. The group collaborated asynchronously over Teams, discussion board, and email, but Avyaan was absent. The group reached out to the instructor to express their concern. Avyaan later wrote the group and instructor apologizing for not engaging, explaining that he had "been a bit under the weather mental health wise." He arranged to make an infographic to complement and enhance the group's presentation. After owning up to his failure to engage, the group agreed to his suggestion and posted the infographic alongside the slide presentation the other group members had co-constructed. Unlike the Case 2 group, trust was able to be restored when Avyaan came with vulnerability and the group accepted this with empathy, and recognizing him as a "whole" person, then accountability and forgiveness could follow, laying the groundwork for the group to find a way to leverage his strengths (visual presentation of information), fill in the gaps, and make a meaningful and authentic contribution.

In his follow-up interview, Avyaan said, "The biggest variable was who we were working with… I was very fortunate that most of my groups were very collaborative and

understanding." He described the first project as "a bit of a wake-up call" and expressed remorse that he had put his group "on a bad footing." He described how it was important to him to own up, accept consequences, and make amends. Following his first group's graciousness, he was motivated to "take a more active and proactive" role in the other two group projects, even while traveling. Later in the term, while attending a family wedding in India, he woke up before dawn to join the Week 6 group meetings, sitting on the porch to avoid waking his family and apologizing to his group mates for bird sounds in the background. He volunteered to start the group's documentation, and provided regular, collegial feedback and engagement with others' ideas.

Case 3 Vignette B: Dialogical Exchange (RQ1a) – Generative Themes and Stakeholder Empathy

In Week 1, students were prompted to explore the needs of the environment, communities, and organizations as they defined environmental justice. Students discussed various stakeholder needs as well as discrimination and inherent bias that arises when finding solutions to environmental issues. Reyna noted that her hometown is located in a low-GDP nation where use of single-use plastics is a necessary survival measure to make up for lack of infrastructure, but that it is causing severe pollution issues. She noted the catch-22 saying, "Those who do and do not support single-use plastics have a common sentiment – human welfare." The conversation proceeded with students presenting different plastics solutions, but they decided that to ban or tax single-use plastics without considering alternatives that address the full picture of stakeholder needs is a harmful and privileged bias. By recognizing that narratives and value judgements are socially

constructed and can be used for oppressive or liberatory ends is an example of engagement with generative themes (Freire, 1970).

Other students in this Canvas discussion board also engaged with personally-meaningful generative themes and began considering the impact that occurs when stakeholders are empowered to tell their own stories and influence their own outcomes. Avyaan posted about a river undamming project supported by climate scientists, conservationists, indigenous peoples and economists, noting the "coalition building and political will" that emerged through collaboration and compromise and allowed "divergent interests" to forge a "viable solution." One of his classmates responded that he'd be visiting with fisheries biologists in the area the following week and would get some first-hand updates, making a critical analysis of this situation personally meaningful. Valerie also responded to point out that increasing indigenous groups' decision-making power and giving them the resources to increase their capacity for influencing change may have been crucial to the group being able to generate a solution, thus introducing an emancipatory perspective on the situation by unpacking how reversing power-dynamics changes the narrative and can foster justice-oriented change.

External Factors (RQ1b) – Assignment Scaffolding The Environmental Policy course was very intentionally scaffolded. It prompted students to move critically through the layers of consideration needed for complex situations. Students first reflected in a discussion board about personally meaningful climate issues and the narratives that formed around them. Then they made formal presentations on treaty considerations and recommendations as to how they should be addressed. Finally, they had to advocate for a specific solution in the face of opposition. Each layer built foundational knowledge and

nuanced their appreciation and understanding of just how complex these situations are. Freire calls these complex situations, "concrete existential 'coded' reality" and asserts that it must be "decoded" through critical perception and analysis to allow it to acquire meaning (Freire, 1970, p. 105). By first developing a shared awareness of structural biases and nuancing perspectives, students were more prepared to craft a deeper understanding of and commitment to environmental and social justice. Reyna, Avyaan, and Marco all noted in their post-term surveys that they felt that the foundational knowledge and practice with a critical orientation made them "more confident" and "more prepared" going into the more in-depth group projects later in the course. This sentiment was especially emphasized by Reyna who had less prior experience in the field and less social power, being an international student in a course focused on the U.S.'s relationship with international agreements.

Case 3 Vignette C: Dialogical Exchange (RQ1a) – Problem-Posing and Praxis

Building on the above exploratory discussion, the Week 2 group assignments asked students to more formally analyze considerations impacting climate change agreements. Avyaan's group was assigned to make recommendations to improve the "Duty Not to Cause Environmental Harm" principle when applied to evolving climate change situations. The group first suggested that the definition of "harm" expand beyond just two parties impacting each other across a single boarder, and include global environmental impacts as a form of "harm" as well, as climate change is a local *and* global issue. The group's recommendations demonstrate collective problem-posing transitioning into praxis. The group expanded definitions of terms that were previously limited, engaging in what Freire (1970) referred to as "naming the world." Redefinition

the scope of "harm" also proposed an evolving moral framework guiding human action and legislation. In this way, students engaged in the "political and moral practice" of questioning and reimagining the assumptions that guide human behavior (Giroux, 2010, p. 717).

Another of Avyaan's group's problem-posing, praxis-oriented recommendations was that carbon offset programs that enabled powerful players to pay to pollute should be deprioritized in favor of providing legislative pathways that empower marginalized communities to defend against pollution of their land, thereby removing structural bias toward political and economic interests. In response to the presentations, classmates from other groups replied in the discussion board, emphasizing and expanding on their recommendations by noting points that resonated with them, bringing in additional examples and news articles, that nuanced the assertions by examining human tendencies and motivations.

In these early student-led presentations and discussions, the class connected based on shared environmental justice values and consideration for countries and peoples who are disempowered by global commerce and military interests. Unlike later in the class, there were no "unpopular opinions" shared in these early discussions, and students were able to engage in a fairly seamless process of collective problem-posing and praxis.

Case 3 Vignette D: Dialogical Exchange (RQ1a)– Managing the Tension of Perspectives

As the group projects moved from unpacking the many socio-historical factors that impact climate change agreements toward having to take positions and generate solutions, the level of thinking became more complex, and so did the group dynamics. In

Weeks 6-8, students were asked to consider in detail stakeholders on opposing sides and to analyze how one might engage them toward a productive resolution.

For this assignment, Avyaan was in a group with two women, Clara and Reyna, each from different racial and ethnic backgrounds and different levels of experience in the field. This group was randomly assigned to make an argument *opposing* the U.S. ratification of an international climate treaty that would limit U.S. autonomy but further international efforts toward peacefully maintained climate protection actions. Their assigned stance against this treaty was a less popular stance among the climate-activist-oriented student population. Furthermore, one of the students in the group, Reyna, was from a low-GDP country whose land and water resource claims would be greatly supported by the U.S. ratifying this treaty, as it would give the U.S. more leverage to defend this country, an ally, against other more powerful nations who are violating international law and taking their resources.

While the group did not directly discuss struggles with the disconnect between their personal perspectives and the stance they were assigned to argue, this tension manifested in the group's more formal, distanced approach to the assignment. They took a more systematic, less impassioned approach to their presentation as compared to some of their earlier course contributions. Rather than saying things like, "this is an issue I'm strongly concerned about" or "this is alarming and needs to be addressed" as expressed in the Week 1 discussion board, they said things like "I don't really have a strong preference which parts I research" as expressed in their first Zoom collaboration meeting.

Tellingly, in her next group, Reyna quickly volunteered to be the debate moderator, whereas other students were eager to take the position they had already

practiced in their prior assignment, as the prep work would be easier. Reyna, however, leveraged her moderator role to establish a backdrop of a changing and increasingly urgent global humanitarian and global crises, reminding the U.S. of its role as a "hegemon for ratifying treaties that foster international cooperation" and asking the question, "Would a change in the status quo or years of refusal from ratifying emerge as the prevailing viewpoint this time?" (see Figure 12). While she dutifully fulfilled her moderator role by providing equal time and acknowledging valid points on both sides, the previously articulate-but-soft-spoken Reyna ultimately claimed the final word.

Figure 12

Case 3 Coursework Artifact Showing Reyna's Opening Debate Moderating Slide and Script

Internal Factors (RQ1a) – Power and Evidence-Based Approach. When reflecting on the group dynamics as they related to generating critical thought and

reflection, Avyaan emphasized multiple times that things went well because “everyone was on top of it,” explaining that they came prepared having conducted research, completed their work, and moved the project along with helpful suggestions. Avyaan explained that this allowed for a level of trust and a more democratic or “non-hierarchical” structure with “no obvious leader.”

Freire (1970) asserts that a necessary precondition for liberatory dialogue is a power balance, with all participants equal co-creators of knowledge. He does not, however, insist that there is no “leader,” and in fact promotes the need for a problem-posing facilitator. Along these lines, Avyaan found this non-hierarchical dynamic positive in that it supported trust and exchange, and centered knowledge and truth, but noted the impact of the lack of a facilitator pushing their thinking. He described this dynamic, saying,

> In most of my groups I felt like some people were more vocal definitely, but no one ever was like, ‘Oh, we're not gonna say that because this is wrong.’ It's more of a, ‘Okay, if we do disagree, just let me know, like why or how, and we'll go forward.’ But I don't even think that came up. I think we are all presenting our information thoroughly enough that it felt well-researched, and it didn't feel like what we were saying was going to jeopardize the presentation, the grade, and how things went.

In describing this group dynamic, Avyaan implied that rooting their contributions in evidence and research supplanted a dynamic experienced in more opinion-based conversation wherein the loudest voice often wins. However, there were downsides to this non-hierarchical structure. As Avyaan put it, “I think our biggest barrier was that no

one wanted to step on each other's toes." The students' desire to maintain a positive atmosphere and not come across as acting superior or presuming to know more than others prevented them from challenging one another's ideas or pushing the conversation in new directions.

Case 4: Global Environmental Law and Policy Group Thread B – Valerie's Groups

Case 4 Focal Participants: Valerie's Week 2 and Week 8 Groups

Valerie is a White woman nearing the end of her master's program with several years of experience in the field as a Climate Policy Analyst. She worked with teens as a social worker prior to moving into environmental regulations and then policy analysis. In college, she collaborated with indigenous communities on research related to subsistence hunting practices. Valerie was polished, serious, and dedicated to her work. Though randomly assigned, Valerie's first two groups consisted entirely of women.

In Week 2, for a group presentation assigned to explore the impact of state sovereignty and common concern on treaties, Valerie worked with Melissa, Leslie, Amanda, and Carmen. The students in this group had diverse professional backgrounds including military, environmental science, regulatory, and corporate analyst.

For the Week 8 project, Valerie worked with Carmen again as well as Micaela and Casey. Their project, like Avyaan's was to present an argument *against* ratification of a treaty regulating ocean use and resources.

Case 4 Vignette A: Internal Factors (RQ1b) – Lack of Community Building

In Valerie's first group, the team communicated primarily through email and divided up the assignment parts among the group for individual work. In the weeks 6-8 group, the students communicated via text and email, a shared document, and met once

over Zoom as compared to the four synchronous meeting that Avyaan's group held. The text and email threads were used for purely logistical coordination. In their first Zoom meeting, there was little personal exchange or rapport building aside from a brief moment of laughter about a nosey dog named Pumpkin. The codes that emerged from that exchange centered around logistics such as coordinating shared documents, recording practices, dividing sections, clarifying assignment expectations, and finding resources. By contrast, Valerie's Week 10 debate project group involved a good deal of rapport-building and content discussion as described in the Case 3 / 4 description below.

The weak rapport later manifested in unnecessary tension as the group attempted to engage in dialogical exchange.

Case 4 Vignette B: Dialogic Exchange (RQ1a) – Problem-Posing One's Own Positionality

Though Valerie was overall dissatisfied with the weak sense of community in her Week 6-8 group, there were two brief moments in their single Zoom session where the students engaged in productive dialogical exchange.

Valerie, initially not realizing that the group has been assigned a position for the assignment, said, "So I think I'm guessing we're all probably on the same page that we can support UNCLOS ratification." Her groupmates agreed with her personal stance but broke the news that they had to argue against it. This spurred a conversation about how they could form an argument that did not align with their personal opinions.

Carmen opened the conversation with an oversimplified "straw man" argument, saying, "I feel like the only argument against that I was able to find was…[in a mocking tone] 'we don't need [the UNCLOS treaty] because we already have other stuff that does

the same thing,' which isn't really true. So, I guess that's our argument…It's like all the actual people that know what they're talking about are for it, and then all the people who think they know what they're talking about are against it."

However, Valerie then took a risk to provide some evidence in favor of the maligned "against" stance and mentioned, "well, also sovereignty." Micaela chimed in, "yeah, sovereignty, and military issues and security." While it would have been easy to maintain group cohesion by collectively criticizing a common "straw man" argument, the group took a risk to instead make an earnest attempt to understand and unpack the considerations of stakeholders with very different priorities than they had themselves and to gather evidence to deepen their understanding. In this way, the students engaged in dialogic exchange, which Freire (1970) describes as a "search for truth" not "an imposition of their own truth" (p. 89).

Another component of this dialogic exchange that helped them overcome personal bias and straw-man arguments was the focus on evidence. When a group member suggested the military opposed ratification, Valerie was intrigued, saying, "Oh, everything I saw was that the navy has supported UCLOS ratification for 50 years. Can you send me the info that you found?" Micaela clarified saying it was politicians making a military security case, not the actual military, and Casey agreed, saying she found the same information along with other points that make a strong case on each side, and would share that resource. In her post-term interview, Valerie reflected on this exchange and how it helped her appreciate different perspectives while still maintaining a sense of "being on the same page." She shared, "It was really interesting to hear. You know, I think we were on the same page, like there's absolutely no reason not to ratify on

UNCLOS. But you know they had seen some arguments against it that I had not seen, and to have them, you know, kind of introduce those and talk about them was, you know, like I can understand why some people would make this case."

Unfortunately, this productive exchange did not carry into the asynchronous collaborations via a shared PowerPoint file in OneDrive. Valerie described the interaction to the Group 10 teammates, explaining that someone still put in an uncited assertion that the miliary did not agree with UNCLOS, got defensive when she suggested they were factually incorrect and should include a source, and then rewrote and deleted Valerie's slide arguing the opposite.

External Factors (RQ1b) – Accountability. Tensions continued as the group moved into crafting their presentation. In describing her group projects during her post-term Zoom interview, Valerie drew a clear "dichotomy" between her first two projects and the final debate activity. The first two she felt "lacked a kind of professional collaborative atmosphere." She defined this as "doing the bare minimum," "lacking commitment," and letting others "fill in the gaps." Valerie said her group members showed little attention to reviewing and integrating the work of their group members into a cohesive end product. And an especially frustrating component for Valerie was finding uncited and "factually inaccurate statements in some of the work," which she referred to a "inexcusable" and a "capital sin."

Valerie contrasted this experience with her final group project with Alex and Avyaan in which they had a "great dynamic," and "were on the same page." Everyone followed through on their commitments and agreed-upon timeline, they reviewed one

another's' work, the assignment was submitted early, and although "all 3 of us were sick and working through this and still communicating well."

Case 3 and 4 Combined in Final Week 10 Debate Project

Case 3 / 4 Focal Participants: Valerie, Avyaan, and Alex

Valerie and Avyaan were in the same final group, and so Cases 3 and 4 merge for this final portion of the case description. Alex, was a White man nearing the end of his Master's degree transitioning from a career in cybersecurity. For all three students in the group, Alex, Avyaan, and Valerie, the debate project was the most enjoyable and satisfying for several reasons as described below, and were the most supportive of the conditions of dialogical exchange.

Case 3 / 4 Vignette A: Internal Factors (RQ1b) Community

The three students in this final group each came from very different professional backgrounds. Valerie had several years of relevant and high-level experience in the field. Avyaan considered himself an academic and brought strong research skills, and Alex came with little experience but an openness to learn. Despite these differences, the group established value in different types of prior experience. In their initial class introductions, Alex asked Valerie if she was sure she shouldn't be teaching the class and he expressed to Valerie and Avyaan that he was "intimidated" to work with them because of their backgrounds, but eager to learn from them.

The group also established strong rapport. In their first Zoom meeting, the group spent 13 minutes getting to know one another before diving into a discussion of the group topic. Alex's curiosity and openness to get to know his groupmates served as a catalyst for an intimate-feeling conversation about a range of topics. Prompted by Alex, Avyaan

and Valerie shared stories from their experience and career advice. They also discussed thoughts about the course and degree program, shared their "real" perspectives on the treaty ratification, thoughts about the research study being conducted in the course, and their hobbies and passions. Interspersed with these Zoom conversations were family interruptions like a dog eating bugs, a daughter asking for a giant Kit Kat, and a baby nephew getting tripped over (no injuries), causing laughter.

In response to a question in her post-term interview about whether doing the assignment in a group vs individual made her think about the topic differently, Valerie said, "Yes. Definitely. Part of it was the nature of the assignment – the debate- but also because we had a more informal discussion before we just decided who was going to do what." She highlighted that the informal conversation included talking "about the content of the assignment and the nature of the [UNCLOS] agreement" and "having a conversation that was not related to the class work, and just talking about the class and about ourselves, and where we're from and what we're doing. And it was nice to establish that kind of connection." She went on to share that the group dynamics contributed to increasing her engagement with the content and openness to learning from both her classmates' ideas and their stylistic approach. "We worked really well together." The rapport building "set up a dynamic where, I don't know. We were all a little bit more invested in the project cause, because it was a little bit more personal."

While this final group project lasted only one week, as opposed to the previous three-week project, and the group only met once, Valerie felt significantly different about this second group, saying in her final interview, "I totally think it depends on who is

involved in the project rather than whether or not you have, you know, several opportunities to work together."

Case 3 / 4 Vignette B: Dialogic Exchange (RQ1a) – Tension Between Problem-Posing and Group Cohesion

After this initial rapport building, the group continued their Zoom conversation and started planning out their debate roles. Alex paused, then asked with hesitancy, "So, like, do you guys feel that we should not ratify?" Valerie asked, "Sorry? You mean personally or…" Alex responded, "Personally." Valerie was the first to jump in saying she didn't see a reason not to ratify it. Interspersed with making her argument, she said, "Sorry, if anyone disagrees with me" three times. But Avyaan jumped in to reassure her, "No, I'm in a similar boat of like all the naysayers…I mean, even doing the research I was going to websites that I don't typically go to. I mean, I understand why you're saying this. I don't agree with you." Alex was the first to offer a counterpoint against ratification, and the others followed suit. Then they debunked them together in turn. "This is the debate!" Avyaan said. The students gradually became more comfortable with sharing their personal stances, especially once they were reassured that they all agreed. However, it was unclear if Alex truly was aligned or felt pressure to conform to the group's position.

This desire to maintain a feeling of ideological alignment helped foster trust but may have limited the ability to seriously engage with a different opinion. For comparison, one of the other groups also discussed their personal feelings about the treaty over a Zoom call. In this other group, one student had kicked off the meeting saying, "Okay, but I have to say, after the last project, I don't really feel strongly for ratification." She

described that it was perhaps outdated and had failed so many times, and other solutions might be better. She cited the professor's lecture, which emphasized that just because you agree with the end goals of a treaty, it doesn't mean it's the most practical solution at the time. The other team members followed suit with an ambivalent assessment, saying "maybe its political capital has worn off." It was clear in both groups that there were members who could see both sides, but whoever spoke up first set the tone and started a domino effect of group think, thereby limiting dialogic exchange. Both Roberts (2016) and hooks (1989) emphasize the importance of struggle and disagreement as part of dialogic exchange. The groups that had more rapport and trust, such as Valerie, Avyaan, and Alex, were better able to break through the group think and explore new perspectives with less tension.

Case 3 / 4 Vignette C: Dialogic Exchange (RQ1a) – Role-Play and Risk-Taking

Avyaan, who, in his first group project had floundered to keep up with the deadlines, then engaged as an active and supportive participant in the second project, now took his work to the next level in the final group project debate with Valerie and Alex. In this group, he was confident to take risks. In his post-term interview, Avyaan described that his biggest risk was getting into the character as a "free-movement, anti-ratification industry pro" when playing his role in the final debate. As someone who had described himself as an academic with minimal insight into practical industry applications, this perspective-taking was a risk for Avyaan. Taking an acting approach to this debate role-play activity was an entry point into this unfamiliar territory and allowed him to project himself into another identity. It was also a risk to inject creativity and humor and "have a little fun" with the project. Mabrey et al. (2021) suggests that engaging in risk taking as

part of role play and debate helps students see "controversies" as more than "one dimensional and merely opinion based" (p. 109), supporting the dialogic project of viewing reality as open to different meanings based on interpretation, and therefore changeable.

Internal Factors (RQ1b) Power Balance.

In his post-term Zoom interview, Avyaan described the interpersonal dynamics that enabled this role-play and risk-taking. He emphasized that while there was no hierarchy and he "didn't have to get approval for it," it was important to him that he was being respectful of the stakeholders and content and respecting the preferred style of his group members. "I think it went ok," he said. In her interview, Valerie affirmed that Avyaan's experimentation with style and adopting a stakeholder's persona encouraged her to experiment with role play as well. Listening to their final debate recording, this was confirmed in Valerie's tone and approach to the debate, which was more animated and impassioned than her formal approach to the prior group presentations.

Case 3 / 4 Vignette D: Dialogic Exchange –(RQ1b) Valuing and Integrating Perspectives

A key factor in creating a humanizing learning environment is valuing students' perspectives and worldview (Salazar, 2013.) Bringing different perspectives into conversation with one another fosters dialogic exchange by challenging assumptions and seeing the same topic from multiple angles, inviting students to understand reality as socially constructed and changeable (Freire, 1970).

Fostering this engagement with different perspectives was the goal of the Environmental Policy course instructor, Marilyn. In her post-term interview, she

lamented that her students lived in a world of "fake news," which oversimplifies narratives and provides only one perspective. As a result, she argued, they all think that the wrong people are working on the problems, and if they can just get a job at an NGO, they can "save the world." She suggested that collaborating and discussing different perspectives was an antidote to oversimplified and siloed perspectives, saying, "I'm trying to get them to dig in to see what is actually happening." Her hope, she expressed over Zoom, was to get students to "have respect" for what each of the players were doing and everyone who is impacted, including the typically vilified governmental entities. She wanted the students to work together and explore different resources and perspectives so that they can "really understand rather than just speaking louder than the person next to them. I want them to truly understand the facts. So that they can actually have an educated conversation…it's really meant to help them understand the true landscape so they can function in the global arena and then "save the world" if they still wanted to. Marilyn's phrases like "truly understand the facts" and "true landscape" recall Freire's (1970) speaking "true words" and "naming the world" (p.88). For both Marilyn and Freire (1970), seeking truth through dialoguing across perspectives, would ultimately serve to equip students to transform or recreate their world.

Avyaan likewise picked up on the value of the group being able to have an integrated conversation while coming from different perspectives. In his post-term Zoom interview, he said, "I think their professional intentions and mixing it with my more research-oriented stuff has been good especially when we're talking about policy, as it relates to people's jobs and you know, interacting with industry." He noted that they would bring in different types of resources. He would often research using Google

Scholar and bring in peer reviewed studies and theory, and they would bring in "news stories, secondary, tertiary sources and analysis and application." Avyaan expressed that there is usually a disconnect between academics who see their work as "elevated" and practitioners who see scholarly work as "inaccessible," but he felt that there was no stigma in his group. As a result, "being able to work with people who don't see the content the same way I do was really important in the way I framed the information and the presentations, and made me want to kind of approach the same information in creative ways, I'd say."

Valerie also noted that "it was really interesting to hear…some arguments against ratification that I had not seen, and to have them introduce those and talk about them was, you know, like I can understand why some people would make this case." Other students noted in their post-term surveys that they learned from divers "classmates' insights" and "hearing different perspectives has helped ground and refreshed me a bit, as my current coworkers all have similar views The group projects reminded me of the different ways of working and thinking and pushed me."

Overall, the students and instructor found value in discussing diverse perspectives as a means to further critical awareness of reality and truth, equipping them for praxis.

External Factors (RQ1b) Assignment Structure A major factor in the Environmental Policy course that enabled engagement with different perspectives, engage deeply with generative themes, and practice reflection and action was the iterative assignment design, which allowed the students to revisit the same topic from several different angles. The course had three group projects, one individual paper, and one or two discussion forums each of the ten weeks of the course. The students explored various

treaties and considerations but spent a significant portion of time on the United Nations Convention on the Law of the Sea (UNCLOS). They discussed UNCLOS in a class discussion in Week 7, a group presentations advocating either for or against ratification due in Week 8, followed by a peer review class discussion, and then a debate role-play about UNCLOS due in Week 10. The instructor, Marilyn's intention with using different group permutations while focusing on the same topic was to get students to learn to work with different types of people and see the topic from different angles. "It's the most important thing," she said in her post-term interview. "Because as an adult, if you don't do that, you will never succeed. I mean, companies will spit you out, and you'll just never be happy. It's a must these days."

The students were initially ambivalent about the repetitive nature of the course and the amount of group work, and seemed unclear about the purposes. In their final project meeting, Avyaan said, "Guys, let's talk about the course." And Alex chimed in asking, "You guys think it's weird that we had a project on UCLOS last week, and then this week …it seems slightly repetitive." Avyaan said, "Hopefully it was intentional." Alex expressed disappointment at continuing to discuss UNCLOS into the final assignment, and had expected to discuss the Paris Agreement instead, a sentiment expressed by other groups as well, but conceded that it would make it easier to build from the for-and-against arguments from the previous weeks to construct a script for their debate.

However, when asked to reflect specifically on the value and impact of their group work experience in their post-term reflections and in their post-term interviews, the students expressed a more positive response. In his interview, Avyaan said,

> Having the content recycle… having different ways to think about it, and like bringing different perspectives from different groups also helped. And I think it kind of got a little tedious. But then doing the actual project I was like, oh, no, this is good cause, like it's less research and more kind of analysis and thought. So it was good to have multiple opportunities to present, like the same information, or even like learn from other people's presentations going into it. Cause I know we had to do the peer reviews and stuff. But, like actually interacting with people from other groups and saying, like, "Okay for this project. Now, what's the perspective?" Or "What did you think from there? And going forward like, how would we apply in this situation?" That really helped.

Avyaan's reflection brings out three important components: 1. The iterative nature of the assignments allowed for different angles of analysis on the content. 2. Engaging with the content over multiple weeks allowed the students to move beyond information gathering or "research" and more "analysis and thought." 3. Working with different groups and hearing report-outs from different groups allowed him to see different human perspectives and approaches to the content.

External Factors (RQ1b) – Problem-Posing Instructor. Students also pointed to the instructor's contributions in the discussion board as pushing and challenging their thinking both by asking them follow-up questions or sharing an anecdote from her own experiences negotiating treaties wherein the solution or path to the solution was not always the obvious one. For example, in a class discussion forum, when Marco suggested

a short-term solution to water contamination, the instructor, Marilyn pushed him further by asking him to consider how the stakes and impacts may change as communities grow.

Within-Case Findings Summary

Through detailed vignettes and descriptions, Chapter 4 sought to craft a clear narrative description of each case and the individual journeys each experienced as they navigated their group work experiences. Chapter 5 seeks to integrate these experiences, drawing connections through similarities and differences across the various cases, illuminating three key themes, and making sense of those themes through connections with Freire's (1970) theory of dialogic engagement and relevant research.

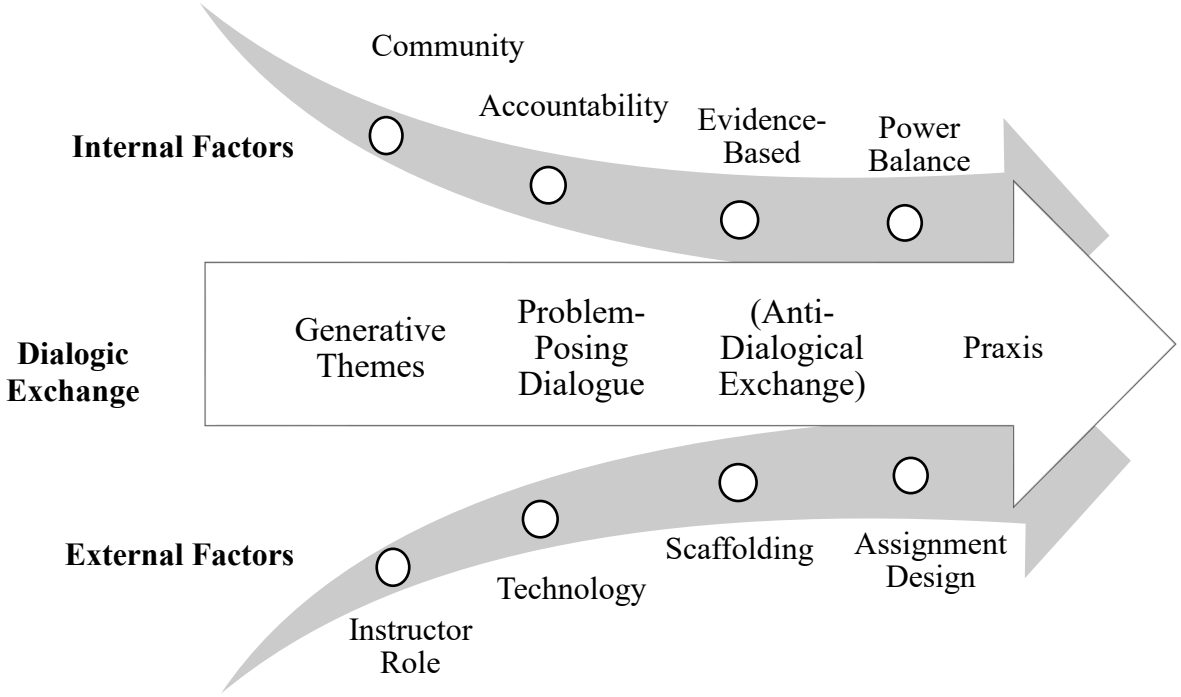
Chapter 5: Cross-Case Analysis

Across all four cases, I analyzed 131 artifacts including video recordings, email exchanges, shared documents, discussion board prompts, submitted assignments and feedback, reflection surveys, and interview transcripts. All artifacts were annotated, categorized, and coded in MaxQDA to form an initial code structure and overall portrait of themes for each case. The data was then synthesized and compared across cases. Overall, 340 unique codes were identified and then grouped into themes.

The following analysis synthesizes the case findings from Chapter 4, describing patterns across cases in relation to the research question, "How do student groups in online professional studies courses collaborate in humanizing and emancipatory ways?" RQ1a asks if and how humanizing dialogic exchange occurred among the groups. A close comparative analysis of observed interactions and work products reveals insights into each of the components of dialogic exchange. Then, findings related to RQ1b are presented to attempt to answer "why?" or what factors supported or inhibited that dialogical exchange. These are divided into Internal Factors (Democratic Group Dynamics), and External Factors (Structural and Pedagogical Choices), each with four sub-themes as shown in Figure 13. For a full list of sample codes in each theme, see Appendix E.

Figure 13

Cross-Case Themes: Internal and External Factors Influencing Dialogic Exchange



Research Question 1a: Dialogic Exchange Findings Summary

RQ1a asks, "In what ways, if any, do student groups engaging in collaborative learning methods demonstrate humanizing dialogic practices: the ability to (a) identify critical generative themes, (b) develop dialogue skills, (c) engage in problem-posing, and (d) nurture praxis (reflection and action)?" The following cross-case summary and analysis will describe the themes that emerged for each of the theoretical components investigated by this question.

This integrated cross case analysis operates off the assumptions of Gee's (2014a) discourse analysis model which assumes that human language serves "to scaffold the performance of social activities … and to scaffold human affiliation within cultures and social groups and institutions" (p. 1). This presumption aligns well with Freire's (1970)

assertion that “the word” and narrative truths formed by “the word” about “the world” are socially constructed, and true “dialogue” is an empowered social action upon the world. Therefore, the following discourse analysis and visual models seek to unpack both how ideas and information are developed through dialogue, but also unpacks the social activities and human affiliations that emerge to support or disrupt humanizing dialogical exchange.

Generative Themes

According to Freire (1970), generative themes consist of a situation or construct as well as the ideas or “truths” people form about that construct, often from their lived experiences. Freire’s (1970) goal for an emancipatory pedagogy was that learners would form a liberatory perception of those “truths” by recognizing that they were socially constructed and changeable. Both courses were selected for their focus on generative themes. For example, the Instructional Design course was scaffolded toward a liberatory perception of the traditional education construct as being designed for certain dominant and privileged student identities. And through the work of the course, students could then imagine (through a UDL lens) a learning environment that would adapt to different learner needs and become more equitable. Similarly, the Environmental Policy course focused on the “situation” of international environmental treaty negotiations and was scaffolded toward a liberatory perception of that endeavor as nuanced by different stakeholder needs and having multiple paths toward social and environmental justice outcomes.

However, while the central “generative theme” was provided in each course, there were opportunities for the students to engage with one another to identify additional and

more specific critical generative themes in each context. Across cases, this frequently took place through reflection on their lived experience and empathy with stakeholders. For example, the students made personal connections to the content by considering local pollution issues that impacted them personally or reflecting on their own experiences feeling marginalized in a classroom environment.

Freire (1970) states that to investigate a "generative theme" is to first recognize oneself as a "subject" with an active role in forming meaning and truth, and also recognizing other "subjects" or stakeholders impacted by a situation or construct and, becoming a "sympathetic observer" (p. 110) of those stakeholders, affirming that they are "persons and as persons should be free" (p.50).

In both courses, careful scaffolding of student dialogue with strategic instructor intervention supported the identification of generative themes, but this occurred at varying levels of depth in different cases. For example, in the Universal Design for Learning course, the instructor prompted the students to reflect on a time when their own needs were not met in an educational environment, and then encouraged the students to build on that reflection to craft hypothetical personas that are multi-dimensional and more "real." In Case 1, this prompted a dialogical exchange in which the students in Case 1 examined their positionality and questioned their own assumptions about stakeholders (different types of faculty), conducted further research to understand those stakeholders (esp. adjunct faculty), and crafted a narrative of those personas that considered them as whole people with intersecting needs just as they had crafted their own learner narratives about themselves. In Case 2, as part of that same assignment, Jessica independently extrapolated her personal frustration with lack of choice as a learner into selecting and

revising a learning design that gave learners choice. While this constituted an emancipatory insight, it was done independently, and the lack of problem-posing dialogue with the rest of her group following this suggestion left the resulting learner personas one-dimensional.

In the Environmental Policy course, students similarly made emancipatory discoveries about generative themes and oppressive situations based on their personal experiences. This was supported by the instructor's scaffolding their choices by asking students to explore areas of personal interest and carefully research and consider the different stakeholders. Through whole-class discourse, Case 3 participants were able to identify environmental situations whose narratives and "truths" were in flux (e.g., plastics pollution in low-GDP nations, and river damning on indigenous nations' land) and where human welfare and environmental justice hinged on the "truths" that emerged. They were further able to identify and nuance the humanity of the various stakeholders. Reyna's "subjecthood" played an especially crucial role in her participation in the dialogue, as she was both the "observed" stakeholder and an "observing" subject in the course. She later reclaimed the power of her duel-subjecthood by seizing the moderator role in the final class debate, demanding that the different personas played by her teammates in the debate roleplay considered and answered for those ignored constituents.

The Case 4 participants Valerie, Casey, Carmen, and Micaela grappled with their identity as Subjects by venturing out of the comfort of their shared position of support for the UNCLOS treaty and chose to thoughtfully unpack the considerations of stakeholders with very different priorities than they had themselves and to gather evidence to deepen their understanding. They also worked together to step through how one might

communicate with different stakeholders based on their interests and ways of thinking so as to move toward a solution. By navigating these perspective shifts through dialogue, they were able to identify the UNCLOS situation as a Generative Theme and illuminate the fluid nature of a situation and grappling with the complexity of moving forward by considering many different stakeholders. Valerie later reflected on how this process had been rewarding and eye opening for her.

In summary, students in all cases were able to engage in the emancipatory dialogical process of identifying generative themes by first drawing on personal experience to recognize themselves as stakeholders subjected to the often-oppressive structures of society, spurring empathy of other stakeholders, and eventually a sense of themselves as Subjects who could influence those structures. In both cases, this was supported by the instructor prompting this type of reflection, In Cases 1, 3, and 4, the students leveraged inter-group dialogue, expressions of mutual empathy, and models/examples to deepen one another's' thinking. In Case 2, the students mostly independently made these discoveries, and the presence of the group did not seem to impact their ability to identify generative themes.

Dialogic Exchange Supporting Problem-Posing

Problem-posing occurs when "teachers and students question accepted ideologies and structures and ask questions about their role in the world. In this way, the world emerges "not as a static reality, but a reality in progress" (Freire, 1970, p. 83). In an emancipatory learning environment, as outlined by Freire (1970), problem-posing should occur through dialogical exchange, which he describes as "indispensable to the act of cognition which unveils reality" (p.83).

Productive dialogical problem-posing was observed in three of the four cases, Case 1, 3, and 4). Sub-themes that emerged to illuminate the components and activities of dialogic exchange include questioning positionality, pushing on received definitions, productive struggle, seeking data over assumptions, creativity and risk-taking.

The Case 1 UDL course students engaged in productive problem-posing dialogical exchange in the first half of the course when they challenged one another and themselves by reflecting on their own bias in order to interrogate limited definitions of disability and the intersectionality of different disabilities and individual needs. This occurred through productive, if tenuous struggle. Freire's intellectual successors describe the nature of dialogical exchange as engaging with others "to prompt reflection, to disrupt the flow of events, to unsettle, and sometimes disturb" (Roberts, 2016, p. 3). Similarly, hooks (1989), when proposing a theory of "pedagogy as a practice of freedom" noted that there is "a sense of struggle" around the "union of theory and practice." This struggle occurred when, prompted by problem-posing feedback from the instructor suggesting they make their personas more robust and to consider intersections of disability and other learner needs, Nicole presented a definition of "disability," and Drew and Kayla unsettled and broadened the definition of disability without discounting Nicole's contributions. They were able to come to a consensus around a more emancipatory understanding of the construct of disability. Kayla followed up by asserting that she did not feel comfortable sketching out the needs of hypothetical learners whose lived experience was different than hers and that she knew little about, therefore bringing in additional research to explore the way disability intersects with other social and personal factors to form a learner's experience. The group was able to reflect on their ability to describe the lived

experience of those different from them (in this case different college instructors), and pushed against stereotypes.

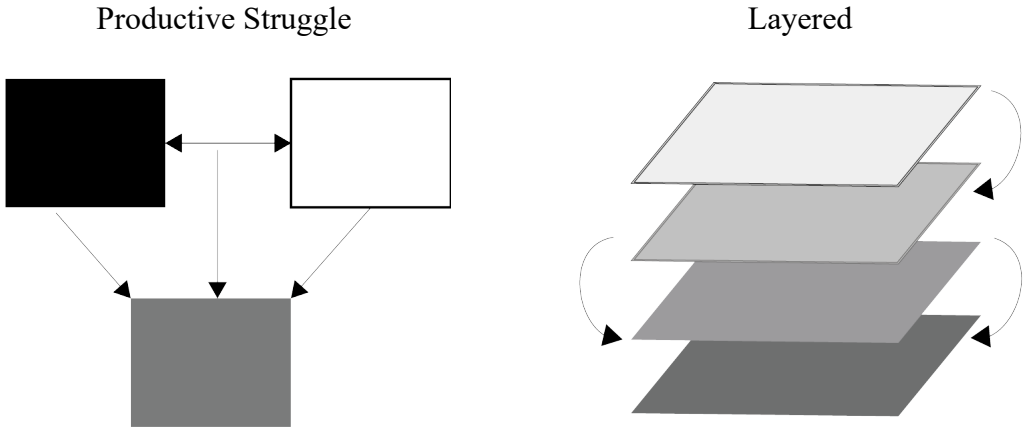
In Case 3 (Avyaan's groups within the Environmental Policy course), the sub-themes that emerged from their dialogic exchange similarly centered on forming new definitions and truths, or "naming the world," and prioritizing investigation over assumptions. They leveraged the foundation of personal connections and critical perspectives built through all-course discussions and early low-stakes team presentations as described in the Generative Themes section above. Recognizing themselves as "Subjects" in the project of analyzing critical social problems created a foundation for dialogical exchange. Case 3 students were able to introduce new stakeholder considerations in the plastics-pollution dilemma, recognize the value of shifting power balances to indigenous communities in the river damming case, and redefining what "harm" meant when zooming out from a local to global scale when forming climate pollution laws.

While in the Case 1 group, the dialogue practices took on a more push-and-pull dynamic, the Case 3 students' discourse took on a layered structure. In three separate exchanges about different environmental justice situations (damming the river, plastics pollution in low-GDP nations, and climate pollution on a global scale), each of the students' contributions to the dialogue built on one another, taking the conversation to a new plateau. For example, when discussing the river dam situation, Avyaan introduced the undamming project as a possible generative theme and suggested an entry point for further conversation by discussing the unique coalition building dynamics in this situation. Another team member drew in a personal connection to a stakeholder (fishery

biologists), and offered to do in-person data gathering. Valerie introduced an analysis suggesting that successful coalition building may have been supported by indigenous communities building agency and capacity as decision-makers. The instructor pushed them to think toward long-term solutions that would support evolving stakeholder needs. And finally, Valerie suggested that there were potential alternative solutions that liberated stakeholders from relying on special interest funding. While no one disagreed with one another, the layered ideas and pushed one another to explore deeper through questioning, effectively moving the conversation from curious and concerned wonderings toward solutions based on nuanced understanding and hope. To illustrate these two equally valid approaches to engaging in problem-posing discourse, Figure 14 represents, in the left discourse in which students with different initial perspectives engage in a back-and-forth exchange or "productive struggle", resulting in a more nuanced and liberatory perceptions of the situation. On the right, students begin from a single starting point, but through problem-posing inquiry, the addition of evidence, and the building of ideas, students similarly work toward a more nuanced and liberatory perception of a situation.

Figure 14

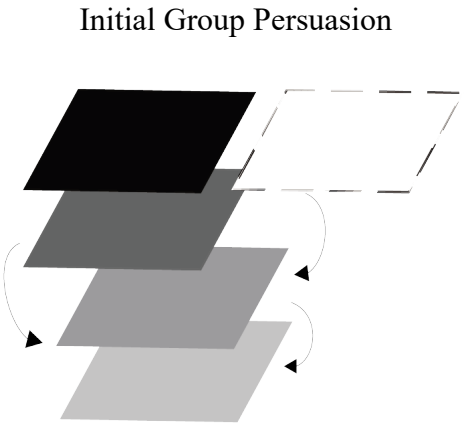
Two Different Models of Productive Problem-Posing Dialogical Exchange: Productive Struggle and Layered



During the Environmental Policy course's Week 6-8 projects, the Case 3 and Case 4 groups were both assigned to oppose ratification of an international climate treaty that the majority if not all the group members supported, including Reyna for whom the stakes were personally and culturally meaningful. Both groups struggled in different ways (both productively and unproductively.) The students in Case 3 – Week 8 (Avyaan, Reyna, and Clara) dealt with the disconnect between personal goals through enacting small acts of subversion against their own "assumed role" by ensuring that there was space in the argument for values and stakeholders that the anti-ratification community might otherwise choose to ignore. The students in Case 4, Week 8 (Valerie, Casey, Micaela, and Carmen) also noted the difference between their personal beliefs and their assigned position against ratification. The first couple of students to speak out shifted the conversation immediately toward one side when they strongly spoke in favor of ratification and expressed surprise and mockery of the anti-ratification position. To maintain group cohesion, each subsequent member expressed agreement, and slowly and

tentatively introduced counterpoints to bring the conversation productively back around to dialogic exchange. The same pattern occurred in two of the final project groups where students asked one another what their "real" opinion was. The first student who spoke up swayed the conversation toward an expressed agreement with that position, whether the first person was for or against the treaty ratification. However, in all three instances, one student took the social risk to introduce additional positions, producing evidence, and examining additional considerations. Figure 15 illustrates a third model for dialogic exchange, wherein the conversation starts very aligned with a certain perspective (the black square) with an absent or ignored additional voice (the white square with a dotted outline), and the conversation must slowly draw back toward the center through problem-posing dialogue.

Figure 15
Model of a Dialogical Exchange in which the First Interlocutor Sways the Initial Conversation Toward a Certain Position



The final debate project saw Cases 3 and 4 merge as Avyaan and Valerie joined together with a teammate, Alex, in their third group work iteration. In this group, a unique sub-theme emerged, which was risk-taking, creativity and playfulness when

Avyaan used role play to safely explore alternative stakeholder perspectives without the social risk of aligning oneself with an unpopular perspective. His creativity was well-received by his group, and Valerie said it inspired her to try out new communication styles as well. Avyaan attributed his willingness to take this risk to, "being able to work with people who don't see the content the same way I do was really important in the way I framed the information and the presentations and made me want to kind of approach the same information in creative ways, I'd say."

In summary, regardless of the discourse pattern, the student exchanges that showed evidence of dialogical exchange engaged in a similar set of activities, sometimes over a series of digital exchanges, and sometimes within the context of a single Zoom meeting or discussion thread. Those exchanges included: personal reflection and stakeholder empathy giving way to generative themes, nuancing understanding of considerations and stakeholders, redefining terms, gathering data, and generating solutions. Emergent sub-themes of dialogical exchange that differed between groups included risk-taking and creativity, examining one's own positionality and subjecthood, and expressed disagreement.

Anti-Dialogic Exchange Limiting Problem-Posing: or "blah"

Anti-Dialogic Exchange is described here as verbal exchanges that are not dialogic in nature (that is, students exchanging ideas and information in a way that prevents students from engaging critically with generative themes and engaging in praxis.) Freire (1970) described what anti-dialogic exchange looks like. He used the phrase "unauthentic word" to express what results when language is separated from reflection and action, and "the word is changed into idle chatter, into *verbalism,* into an

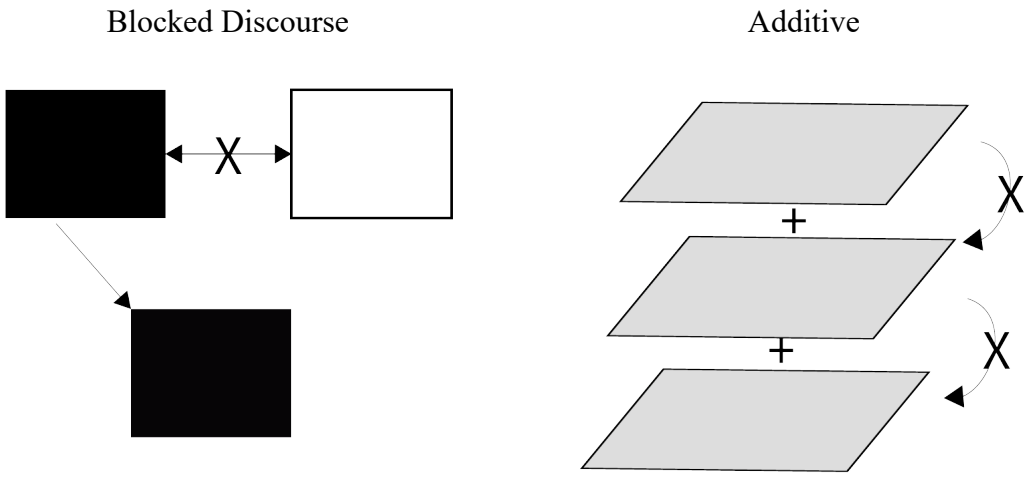
alienated and alienating “blah” (p. 87). This section will investigate the manifestation of the “blah” in the cases within this study.

Across all four cases, there were moments where productive problem-posing dialogic exchange was impeded, leaving behind only the “unauthentic word.” These moments transpired as a transactional or divided approach to collaboration, moments when dialogue was stalled by power dynamics blocking contributions, and by self-censorship to avoid disrupting group cohesion, especially when there was pressure to craft a deliverable that reflected a single, collective voice.

Figure 16 illustrates two different forms of anti-dialogical exchange observed in this study in which conditions prevented students from engaging in a way that was supportive of growth toward a critical understanding of a situation.

Figure 16

Two Different Models of Anti-Dialogical Exchange: Blocked Discourse and Additive



Case 1, (the UDL course with Nicole, Kayla, and Drew) was the only course where discourse contributions were “blocked,” meaning they were unable to integrate various group member contributions into a productive line of discourse. Despite having

several successful dialogical exchanges early in the term, this group's dialogue hit a metaphorical wall in Week 5 when one of Drew's stylistic suggestions was overruled, and then shortly afterward, his suggestion for an addition to the group project was perceived by his teammates as being unrelated to their collective goals. While there were some attempts to understand his reasoning, ultimately, the suggestion was rejected by the group. While Drew did not address this specific interaction in his post-term reflections, it did correlate with an immediate shift in his group collaboration contributions to being purely practical and a gradual drop-off in the amount of work he completed and lack of follow-though on his commitments. Prior to the group work Drew had indicated that he was excited to work with peers, and at the end of the course said, "the group work did not represent anything positive for me." Both of his teammates also pointed to this meeting as a turning point in Drew's engagement and "reliability" and a breakdown in mutual "trust." Group power dynamics also may have played a part, as Drew had expressed early in the term that his teammates had a lot more knowledge than he did and he was worried about his ability to contribute meaningfully often deferring to them with phrases like, "Nicole could speak to this better than I could."

Case 2 (the UDL course with Louis, Jessica, and Ashley) represented the "additive" approach to anti-dialogical exchange as illustrated in Figure 16. Their synchronous and asynchronous communications were primarily logistical or even antagonistic around workload equity. The small moments where self-reflection and stakeholder consideration emerged were largely done independently and not in dialogue. For example, Jennifer's reflected on her own experience not being given choices as a student and wanting to ensure that choice was provided in their final assignment. But

Louis's response was simply, "that works for me." So, while there may have been some degree of critical reflection coming from the students themselves (as "Subjects") vs. from the instructor, it was not aligned with Freire's vision of collective inquiry, and the result was simply a restatement of the student's existing understanding of the conditions of learning design.

A review of their shared document versions and meeting transcripts similarly showed an "additive" approach to dialogue. When considering areas for change in the education field, students cited course readings and their own experiences, rather than engaging with one another's ideas. While the group was able to make recommendations for educational change that would increase equity, they implemented them in the assignment in an "additive" manner, where one group member accepted another's proposal without discussion and added additional points or solutions to their collective planning documents in a way that did not problematize or push the thinking further. The Case 1 participants also made note of how, after the initial stakeholder analysis, during which interesting feedback and exploration took place, their collaboration to develop recommendations for adjusting a chosen course took on a more logistical feel. Nicole explained in her post-term interview, "I think our group was pretty surface level most of the time, and we didn't get into a lot of in-depth conversations or talks even about UDL as a framework, as a group, and we were very logistically focused." Another student in the Environmental Policy course echoed this sentiment, saying of some, but not all of her group projects, "I feel that a lot of our discussions were just agreeing with each other. I would have wanted to discuss more hot topic items and discuss differing ideas. I enjoyed the debate at the end."

Despite moments of superficial discussion, both groups shared that they felt that they were still able to produce quality equity-focused recommendations, but not necessarily through engaging deeply with one another's perspectives. While still productive, that work would more accurately be described as problem-solving. "Problem-posing education is not the same as problem-solving education," Roberts (2016) explains in a reflection on Freire's work. Roberts continues. "Freire's support for the former had an ontological, epistemological, and political grounding. In seeing human beings and knowledge as necessarily incomplete, as always in a process of becoming" (Roberts, 2017, p. 4). Proposing a "quick-fix solution" based on received understandings of a phenomenon lacks the orientation toward transforming the world and uncovering new liberatory truths.

Praxis

The final component of emancipatory dialogical exchange is praxis. That is, whether students can move from identifying generative themes to then engaging with those themes through dialogical exchange, and finally to an orientation toward reflection and action. Essentially, this section of the cross-case analysis investigates whether students are primed to take the fruits of their dialogical exchange out into the world. In this study, evidence of praxis was defined in terms of engaging in critical *reflection* on and "curiosity" about social or structural inequity paired with the propensity toward critical *motivation* and *action* toward taking responsibility and making effort toward rectifying inequality (Diemer et al., 2022). Sample codes that emerged in relation to praxis were ability to identify inequity and make recommendations, curiosity, redefining terms ("naming" the world), skills to engage with others, seizing one's "subjecthood,"

and commitment and confidence in advocacy. In the following sections, I will show how praxis unfolded across the groups in different ways and to different degrees.

Curiosity. An important first component of praxis is curiosity. Increased curiosity was a recurring code in several student responses, even those students who had a negative experience with group work, such as Louis who said the experience increased his "curiosity and awareness." Alex in the Environmental Policy Class said, "This course has positively influenced my curiosity into the political side of global environmental issues and given me the tools to effectively consider the intricacies of policy." And Clara said, "It made me more critical of the policies in place and curious to learn the why behind them." These instances of expressed curiosity relate primarily to curiosity to develop a more nuanced understanding of why things are the way they are. Additional curiosity-related codes centered primarily on students' curiosity about stakeholder backgrounds and the purpose behind their behaviors and beliefs. For example, Case 3, Week 8 students (Avyaan, Reyna, and Clara) and Case 4, Week 8 students (Valerie, Carmen, Micaela, and Casey) and the combined Case 3 / 4 debate group (Avyaan, Valerie, and Alex) each overcame group think and bias against an opposing viewpoint (the anti-treaty ratification stakeholders), and were ultimately able to explore those stakeholders' concerns and propose a strategy for communicating with those stakeholders.

Renaming or Redefining Terms. Following from curiosity about structures and stakeholders is the interest in the *action* of reframing traditional definitions of issues. Case 3, Week 2 students (Avyaan, Dylan, Erin, Marco, and Kutenda) demonstrated praxis as an act of "renaming" or speaking the "authentic word" (Freire 1970, p. 87). That is, through dialogue, they collectively redefined "harm" in the context of the

environmental rule of "do no harm" by expanding it to refer to global climate change impacts. Case 1 students (Drew, Kayla, and Nicole) similarly expanded the definition of "disability" to include non-visible forms of disability and looking at disability with an intersectional lens, considering how it interacts with other elements of a learner's identity.

Seizing One's Subjecthood. While many of the students across cases were able to leverage personal experiences to foster meaningful revelations about oppression within systems and imagine themselves as an empowered Subject who could enact change as a result, Reyna in Case 3 demonstrated a form of praxis that was unique among these case study participants. She happened to have a personal stake in the treaty ratification issue being discussed in the course, putting her in the position of one of the passive objects or abstract "stakeholders" in the situation. However, she was able to flip this narrative and seize her identity as a subject. In her post-term survey, she said that "I usually keep to myself," but due to her classmates' "reliability" "learning from my classmates insights…stimulating new ideas in my head" and a general sense of safety and "positive experiences" she stepped out of her comfort zone and shifted from a position of detached analyzer of the pros and cons of the situation (as if wearing a hat that was separate from her identity as a stakeholder) to an advocate. Her advocacy took the form of asserting the nuanced needs of the citizens of low-GDP nations in the plastics pollution conundrum as well as asserting herself as moderator in the final debate and getting to ask the tough questions.

Identifying Inequity and Making Concrete Recommendations for Change. Like Reyna, the students in the UDL course (both Case 1 and Case 2) had personal

connections to oppressive learning experience and showed evidence of critical reflection by revealing inequities in the education system and nuancing stakeholder needs. All expressed an increased confidence and motivation for making change. However, it was unclear if their praxis-orientation developed through dialogical exchange. For example, when working on the solutions portion of the assignment, the Case 1 and 2 students took a more systematic approach to applying the UDL framework. They divided the up portions of the assignment and independently picked solutions to align with the framework. There was some helpful commentary to hone one another's solutions in the shared file, but this did not involve the lively and sometimes challenging back-and-forth that occurred during the early brainstorming phases of the group work. The Case 1 and 2 students did express commitment to and passion for equitable learning environments and increased confidence in applying the UDL framework, which is justice oriented. Therefore, the project may have supported the students' praxis, but it was not necessarily a result of deep or productive engagement with one another's ideas and may have equally been achieved without group work.

Case 2 showed very little evidence of dialogical exchange, but still demonstrated some degree of praxis-orientation. When asked in his post-term survey if the group project supported his curiosity, awareness, or confidence in critiquing political or social issues, Louis from Case 2 responded, "Awareness or curiosity maybe, but definitely not confidence or ability. I feel I learned very little from the group project, specifically because it was a GROUP project." He further made the case that without the distraction and frustration of group work, he could have made more progress on critical analysis alone than in a group, saying, "I would very much have preferred an individual

assignment that would have allowed me to fully explore the range of issues at hand and express my understanding thereof. The use of the group format meaningfully detracted from my learning."

Conversely, the students in the Environmental Policy course, by nature of the debate project and the need to take on different positions and build on or rebut one another's positions, frequently engaged in dialogue. Those activities included, negotiating which issues were most important to unpack in a debate format (namely international disputes, environmental impact, national sovereignty, and economic equity), which evidence was considered valid in making decisions, and considering all sides of proposed solutions, such as whether diplomacy or international law was a more sustainable approach to avoiding economic and environmental exploitation of less powerful nations.

Commitment to Justice and Confidence in Advocating for Change. The students from Case 1 and 2 in their all-class end of term discussion when asked about their goals and course takeaways highlighted several key elements of commitment and confidence in advocacy. Nicole mentioned increased confidence and overcoming imposter syndrome now that she had a chance to practice advocating for change in a research-based way. Jessica, Kayla, and Louis agreed. And even though Louis said in his survey that the group work "definitely [did not increase] his confidence or ability, he did credit the course as a whole with helping him develop a vocabulary he needed to gain confidence and a "seat at the table." Jessica expressed a commitment to mindfulness of unique learner needs and biases in the educational environment. In Case 3 and 4, the students expressed an increased confidence in "considering and appreciating different

perspectives," "understanding the intricacies of an issue" and "explaining my perspective to others."

In summary, all groups expressed and showed evidence of an increased propensity for curiosity, reflection, and ability to critique existing societal narratives and structures like climate laws and educational systems. They showed evidence of dialogue with peers helping push them further in these pursuits as well. For most, this critical reflection also translated into increased confidence and practice advocating for change, and an ability to unpack how that change might occur. However, the findings were mixed when it came to determining whether the advocacy and solutions-generation was improved by working in groups, with some groups questioning and probing one another's ideas, co-constructing frameworks to guide their thinking, and suggesting additional considerations, while other groups simply independently ideated on solutions and lumped them together in the end. Whether the group work added to or even distracted from the students' ability to engage in dialogical engagement and a praxis-orientation was largely influenced by a number of factors including group dynamics and external factors that will be explored in the following section.

Research Question 1b: Contributing Factors Findings Summary

RQ1b asks, "Which internal and external factors contribute to the groups' ability to engage in humanizing dialogical practices?" The predominant themes that emerged as contributing factors were shared goals, trust and safety, Management, Power, and Course Structure (including instructor role.) Through the many diverse and complex interactions that emerged throughout these case studies, several themes emerged as consistent factors

enabling or preventing dialogical exchange. Those themes related to either group dynamics or structural and pedagogical choices.

Internal Factors: Democratic Group Dynamics.

When taken in aggregate, the codes relating to interpersonal dynamics all pointed to the importance of creating positive, democratic group dynamics, and in doing so, creating a sense of psychological safety before true dialogical exchange could occur. Underscoring the need for safety, several participants expressed that engaging in group work was inherently risky. Whether expressing concern for their grades not reflecting their own effort or quality (Valerie, Louis), their social capital resulting from lack of prior experience (Reyna, Alex), or whether their ideas would be accepted (Drew, Avyaan), the student participants felt vulnerable. They said things in group meetings such as, "I was intimidated to work with you" (Alex), and "I am new to this…I just hope I can pull my weight" (Drew). In their interviews, Valerie, Avyaan, and Nicole compared this vulnerability to similar situations in the workplace environment where the stakes are even higher. This, it can be argued, makes it all the more important for students to have the opportunity to foster collaborative, dialogical skills in the safety of an educational environment where stakes are lower and individual growth is centered.

Freire (1970) asserts that ideal dialogic exchange has the preconditions of a trusting egalitarian environment free from hierarchy or power differentials. Salazar (2013) similarly asserts that "trusting and caring relationships advance the pursuit of humanization (p. 142). While there were observable moments of dialogue successes observed in all four cases, there were notable breakdowns of these preconditions (egalitarian power balances, trust, and care) in all but one case often resulting from team

members' failure to uphold commitments, lack of shared goals or values, and the domination/silencing of ideas.

In response to research question 1b, the "internal factor" themes that emerged as critical for fostering a safe, growth-centered and democratic group dynamics were community, accountability, evidence-based approach, and power balance. Together, these conditions support effective collaboration and allow students to engage meaningfully with one another's' ideas.

Community and Rapport. Seven different group permutations were observed (Cases 1, 2, 3Week2, 4Week2, 3Week8, 4Week8, 3/4Week10). In four of the seven cases (1, 3Week2, 3Week8, and 3/4Week10), the students spent at least 10 minutes establishing rapport and learning about one another on a personal level, including discussing personal and professional lives, giving advice, and sharing what they "really" thought about course topics. These groups also had the highest rates of successful dialogical exchange vs purely transactional or logistical collaborations. In their post-term interviews, the students explained this relationship between rapport and deeper dialogic engagement. For example, they said that getting to know one another on a personal level made them "more comfortable sharing" (Nicole), supported collaboration through "connection and intimacy" (Alex), and made them "a little bit more invested in the project because it was a little bit more personal" (Valerie).

Another personal factor in establishing community was empathy and care. In their post-term interviews, Avyaan, Kayla, Ashley, and Valerie expressed appreciation for the care and empathy shown by their team members when illness, life, or travel made it difficult for them to meet their obligations. In the cases where there was strong proactive

communication around those challenges, the students reported feeling even more invested in contributing to the group work going forward.

Beyond the personal, the students established community and rapport by intentionally establishing an egalitarian environment even when there were different levels of prior experience. They did this through noting one another's strengths and inviting one another's contributions by using phrases such as "I was thinking X, but did you have any thoughts there?" "I really like that idea," and "You have a great background in UDL, so that will come in handy when we need to start making recommendations." Using language in this way is what Gee (2014) calls "position design" in which individuals design their speech to invite the recipient to take on a certain identity, in this case an equal member of the group despite their insecurities (p. 21).

The final component of community is a shared goal. A shared goal does not mean the same perspective or approach to the project, but rather a shared intention to meaningfully engage with one another and with the content. Students often used the phrase, "being on same page," which showed up 17 times in many different interviews, written reflections, and group meetings, including those from Valerie, Avyaan, Reyna, Nicole, and Carmen. In analyzing how students elaborated on the meaning of this phrase, it emerged that it related to commitment to group work and a shared sense of value for the course topic (e.g., that UDL and international negotiations were worthy of exploration as an avenue to achieve social and/or environmental justice.) Conversely, the attitude of resistance to and skepticism of the course goals (in Drew's case) and toward group work itself and toward "creative or non-objective tasks" (in Louis' case) contributed negatively to group cohesion and openness to dialogue. According to Drew's groupmates, lack of

communication eroded feelings of "trust" and created "stress," eroding the sense of psychological safety and openness to dialogue that is created by "trust" and "care."

Accountability and Trust. Trust has been defined as, "the intention to accept vulnerability based on positive expectations of the intentions or behavior of another" (Kramer and Cook, 2004, p. 214). One can be vulnerable psychologically (emotionally and socially) or structurally (Kramer & Cook, 2004). In the prior section, community and rapport served to support trust in the face of psychological vulnerability through warm affiliation and care (Freire, 1970; Salazar, 2013.) This section will discuss structural vulnerability, expressed by the group members as a risk that they would have to do unequal amounts of work, that the end product of the assignment would not reflect their quality standards, and that their grades would suffer. When these vulnerabilities were not assuaged by trust in their group members, the students reported frustration, stress, and a decrease in willingness to engage with their group in meaningful ways.

Every single participant spoke about the value of this form of trust and accountability, often at length, using terms such as "accountable, reliable, motivated, committed, invested, professional, and responsive." Many students noted that these qualities in their peers directly influenced successful collaboration, enjoyment, and dialogical exchange. Specifically, in post term reflections, Reyna shared that her group's reliability increased her commitment and focus, Avyaan shared that it helped him try new approaches, Valerie said that the trusting encounter in her Week 10 debate group made her feel more open to hearing other perspectives. Conversely, Valerie said in her Zoom interview that the lack of "professionalism and follow-through" in her Week 8 group distracted her from going in depth with the content because she just had to focus on

correcting their work and picking up their slack. And Louis expressed in his survey "shock and disappointment" in his team member's "total lack of commitment," making it impossible to create a high-quality project.

Not being able to trust their group members to complete their share of the work was often equated with a moral failing or lack of care for their peers or their learning, even if the situation may have been beyond their group member's control. This sentiment was expressed by Kayla, Nicole, Louis, and Valerie in post-term surveys and interviews. Consequently, the students felt that because there was a lack of intrinsic motivation, attempts to restore or enforce accountability, such as team charters, peer grading, or attempts at "talking it out" would be ineffective. They noted that trust had to be gained in a way that felt willing, natural, and personal rather than "enforced." For this reason, Nicole and Kayla did not confront Drew, Valerie dismissed the idea of a team charter or group manager, and Carmen the tense nature of a group that tried to micro-manage one another.

Evidence-Based Approach. A third component promoting successful democratic group dynamics was the use of evidence. Avyaan (Case 3) mentioned the importance of evidence or "research" multiple times in his interview, saying that his group was able to avoid stalling discourse because they relied on evidence and not unfounded opinions to make their case, fostering trust. He also emphasized the value of different teammates bringing not only different perspectives, but also different types of sources and

information (e.g., academic, industry, different political alignments) to the group conversation, which helped him see the topics in new ways.

Similarly, the use of evidence helped Valerie's Week 8 group (Case 4) move from mocking and rejecting the opposing anti-ratification viewpoint. When a teammate brought up that she had found an anti-ratification source that made clear and thoughtful points, Valerie perked up and asked to see it, sparking her curiosity and openness to considering other perspectives. She affirmed this in her post-term interview, saying, "they had seen some arguments against it that I had not seen, and to have them introduce those and talk about them was, you know, like I can. I can understand why some people would make this case."

Lastly, when crafting personas for hypothetical stakeholders for their project, Kayla (Case 1) reminded her group of the danger of making assumptions about a group of people (adjuncts) without first gathering information about them and considering the sources and assumptions that form the received narratives about those groups of people.

Power Balance. Power and hierarchy were frequently mentioned in interviews, and frequently observed across groups. In cases where trust was established through rapport, accountability, and an evidence-based approach, then group hierarchy was often not needed. Avyaan, Reyna, and Valerie all expressed relief that trust allowed them to be engaged team members and learn from their peers rather than becoming domineering in order to ensure the project was completed, and that they did not have to endure anyone else's domination either. Avyaan mentioned that because there was respect and trust among team members and "no hierarchy," he was glad he didn't have to "ask permission" to share an idea or try something new like embodying his stakeholder

persona through role-play, which was well-received and ultimately allowed the group to think more deeply about both the identities of the stakeholders and their communication styles.

This democratic, non-hierarchical approach also allowed students with different backgrounds and prior experience to engage on an equal footing. While students like Alex, Drew, Avyaan, and Reyna all told their group members in their first group Zoom meetings that they were "intimidated" or "nervous" to work with others who had a good deal of industry experience, there was a conscious effort by team members to establish the idea that prior experience did not equate to their value to the group. More experienced group members like Valerie and Nicole emphasized the value of "doing research," and "reviewing and editing." Avyaan emphasized that his group's varied backgrounds (academic and professional) was seen as an asset to the group. Overall, the groups were able to establish a connected and egalitarian dynamic. However, there were some exceptions. In Case 1, despite early discussions about different roles that could add value to the team, Drew often would self-sensor saying things like, "you could speak to this better" or "whatever you think." And later, when Kayla was away for two weeks, and Drew was becoming less responsive, Nicole began to feel that the roles they established early on "were not strictly adhered to" and she tended to step up and take "responsibility" for determining the course requirements and managing the group's outputs (as shared in her post-term survey). She also became the gatekeeper of what was appropriate to include, pushing back against the supplemental content Drew wanted to include in their project.

Davies and Harré's, (1990) positioning theory gives language to the social dynamics at play in these "gatekeeper" type power dynamics. Positioning theory posits that through "speech acts," individuals' identities within an exchange are continuously (re)determined. The use of phrases like "you could speak to this better than I could" or "that's not relevant to what we are trying to do here," position individuals as less competent, giving them less power and ability to "produce a story line." Freire (1970) calls this "story line" production a "liberatory truth" that is developed through socially-situated dialogue around "generative themes."

Summary of Democratic Group Dynamics Theme. As discussed above, establishing successful democratic group dynamics hinges on an intentional and careful balance of community and rapport, accountability and trust, use of evidence, and egalitarian power dynamics are crucial to supporting productive dialogical exchange. These observations align to Freire's (1970) theoretical framework which asserts that hierarchies among members of the learning community should be abandoned. These observations also affirm the findings in prior research such as Barrett and Moore (2011) who observed an in-person PBL and observed that "dialogical knowing" (socially co-constructed meaning through exchange) was influenced by democratic social relations, co-constructing knowledge through co-elaboration, and adopting shared control This study likewise found that establishing democratic group dynamics is crucial for opening the door for dialogic engagement. It was also shown to increase the investment, curiosity, and satisfaction of the students whose groups maintained a mostly successful democratic dynamic. However, this dynamic was made more complex by the broad range of prior experience, geographic and cultural elements, and personal goals that online graduate

professional studies students bring to their education, and students were not always able to establish the group dynamics and structures that allowed the challenges to outweigh the benefits.

External Factors: Instructor Role, Technology, and Assignment Structure

This section continues the cross-case examination of Research Question 1b, which asks, "Which factors contribute to the groups' ability to engage in humanizing dialogical practices?" In addition to the interpersonal dynamics discussed above, external factors such as the instructor role, technology use, and assignment design played a significant role in the ways and degrees to which students engaged in dialogical exchange.

Instructor Role. According to Freire (1970), in liberatory education, the teacher's role should not be to "deposit" knowledge into students' minds, but to be a "co-investigator in dialogue" with the students (p. 81). Research shows that online adult students often enter the learning environment primed for this type of interaction with their instructor, as they are usually self-directed, have specific goals, and regard their instructor as a resource and model rather than the sole source of knowledge (Gómez-Rey et al., 2017; Liu et. al., 2019). Further, the nature of group work, in which the students are given ample time to exchange ideas and make decisions without the instructor present creates a space in which student voice is centered. However, while this context may provide a leg up, instructor actions remain a key variable in supporting online adult

student's dialogical exchange, problem-posing, and praxis in collaborative learning environments.

Freire (1970) sketches a portrait of the "problem-posing educator who "presents material to the students for their consideration, and re-considers her earlier considerations as the students express their own" (p. 81). Throughout both courses, in discussion forums and in assignment feedback, the majority of both instructors' feedback was phrased as affirmation, combined with questions or suggestions for how the students can further their own argument and goals through additional research or considerations. For example, Emily's feedback in the UDL course built off the ideas students had already expressed and pushed their thinking by saying things like "I'm noticing some overlap between the needs of your learner demographics. How might learners benefit in different ways from a UDL-informed strategy?" Marilyn's feedback was often oriented toward making the students' own arguments stronger (regardless of whether she agreed with them personally.) She posed hypothetical scenarios for consideration, such as "It may seem like there is no benefit to ratification…but could the U.S. take a similar approach to China?" and "We often regulate chemicals today but find out that they cause problems later…should we be looking at a more precautionary approach?"

Additionally, the instructors demonstrated learning from the students as well. Marilyn showed an interest in new information and a curiosity to speculate with the students on it's meaning, saying, "Valerie, I'm glad you raised the Ramsar Convention, as I was not familiar with it… I am surprised there was no mention of lack of sanctions…What benefits do you think the Parties expected when they ratified it?" Similarly, in the class discussion forums, Emily often expressed that she was learning

from and nuancing her own knowledge by engaging with the students, saying things like, "Your counterargument based on the example from your workplace is a great point, Louis. I wonder whether a combined strategy would help us better identify the issue," and "Hi Kayla, you mentioned in response to Nicole that you have taught math, so I really appreciate your read on this gamification example and how it made math feel safer." This was then followed up by Emily strategically probing Kayla about how she saw gamification experienced differently by different student populations, sparking a conversation with Louis and Kayla about the definition of "safety" and how to adapt gamification to different learner needs. In this way, Emily modeled curiosity and a practice of nuancing her own stance based on student input, modeling that knowledge is socially constructed and improved by inviting people to share perspectives from their lived experience.

Freire theorizes that by engaging with students as in the instructor examples above, and posing the students "with problems relating to themselves in the world and with the world," students regard the challenges posed in the course not as abstract, but as something relevant to their lives and something they are committed to solve (Freire, 1970, p. 81) Indeed, the students often brought the instructor's voice into their group discussions by referencing their discussion posts and assignment feedback. For example, Emily's written feedback to the Case 1 group on the Learner Profile activity prompted Drew, Kayla, and Nicole to take a more nuanced and intersectional approach to their stakeholders, and prompted Drew to note that "the course was trying to get them to see" that UDL and learner needs were far more complex than simple accessibility checklists.

In their anonymous course evaluations, all students in both courses unanimously expressed appreciation for the types of feedback and engagement they experienced from the instructors. Emily's students said, "The instructor's subject matter knowledge and passion are clearly evident" and "she was very responsive and helped clarify misunderstandings." Marilyn's students said, "She demonstrated that she cared about the topic, was knowledgeable and wanted us to learn and apply the content" and "provided additional context and background or corrected assumptions." Both sets of student feedback mention modeling passion combined with knowledge or expertise, which the students often attributed to their own curiosity or passion as a result. This informed passion is a key component of praxis which combines reflection and committed orientation toward action (Freire, 1970). Both sets of feedback also specifically mentioned clarifying "misunderstandings" and "assumptions," highlighting the perceived value of that problem-posing instructional approach which debunks received, oppressive narratives. Along these same lines, in his post-term survey, Dylan said, "Professor [Marilyn's] responses to the discussions were also a great way to see how her experience directs her thoughts on what we are learning," demonstrating that Dylan observed through Marilyn's modeling that "truth" is relative and informed by one's experiences.

In addition to problem-posing facilitator and model, the instructors also played a role in influencing attitudes toward group work and helping students resolve conflict. Prior research on traditional college classrooms suggests that instructor's active facilitation of group projects (by connecting group work to course objectives, communicating the value of group work, and being available to help manage group work problems) can influence students' attitudes, beliefs, and concerns about group work

(Chapman & Van Auken, 2001). Unlike traditional undergraduates, this population of students had a wide variety of professional and educational backgrounds and very different attitudes toward and experience with group work, as expressed in journal assignments and group discussions. This perhaps made it even more important that the instructors made attempts to establish a common understanding and value toward group work early in the course. However, while both instructors strongly emphasized in their pre- and post- term Zoom interviews, that they believed in the inherent value of group work to deepen learning about course topics and to develop relevant professional skills, neither instructor directly addressed the "why" or "value" of group work in their communications with students or with their course materials. Emily identified this as a potential missed opportunity, determining in her post-term Zoom interview that the next time she ran the UDL course, she would include additional opportunities to evaluate the value of group work and unpack group work attitudes. It is unclear whether attempts to generate buy-in for group work would have strongly swayed student attitudes or avoided negative group dynamics that interfered with dialogic exchange, as adult students tend to have a strong pre-determined sense of their own learning preferences and goals (Malone, 2014).

In this same vein, it is unclear whether instructor support for managing group work challenges would have been effective in avoid negative attitudes and interpersonal dynamics. Existing research indicates that adult learners tend to rely upon themselves to manage social struggle in the classroom though appreciate instructor "immediacy" or availability to support creating a safe environment (Qayyum, 2018; Melrose & Bergeron, 2007). While frustration with group accountability was a major barrier to successful

collaboration, both instructors were rarely called upon to moderate these struggles in the moment. In the UDL course, Emily attempted to facilitate group work structures by having students journal about their personal strengths and preferences around collaboration, using that to try to pair like-minded individuals. Once in their groups, she then provided questions on the first couple assignment templates, asking the group to make a conflict management strategy and to reflect on their collaborative practices. However, both Case 1 and 2 groups focused only on the positives in these reflections, and did not leverage the suggested strategies to correct group conflict by having direct conversations with one another about their collaboration or group roles. In the Environmental Policy course, there were no guidelines for how to manage group collaboration. Valerie expressed a high level of frustration with her group's level of commitment in her Zoom interview. However, she did not suggest that the instructor should have played a greater managerial role, and only wondered aloud about the possibility of assigning one of the group members to regulate participation like a workplace manager (which she ultimately decided would be too uncomfortable in a class setting.) Instead, several students mentioned in their anonymous post-course evaluations that they would have liked the instructor to play a larger role in enforcing accountability in the form of grade reductions. Both instructors did reach out to students who appeared to be engaging less in the group and other course assignments in several cases throughout the term and did implement grade deductions. However, this was often done privately, such that the group may not have been aware of these outreaches or consequences. In the end, the online group work setting and the inclinations of adult learners resulted in

limited ability of the instructor to manage interpersonal relationships, making student attitudes and interpersonal relationships even more important.

In summary, student attitudes toward instructor role in graduate, online, group work-based learning is very different and far less center-stage or authoritarian than traditional on-campus undergraduate populations. On the one hand, this potentially supports a more egalitarian and emancipatory learning structure. And on the other hand, it limits the instructor's ability to play a managerial role in overseeing group work. Yet, the study showed that in this graduate, online learning context, the instructors instead played a key role as a problem-posing shadow interlocutor guiding the group direction toward increasingly complexified and more "true" accounts of the group's own chosen topics and ideas. Both instructors modeled passion, wisdom through experience and investigation, and the relativity of knowledge, all key factors that support students peer-to-peer dialogical engagement and moved them further toward critical consciousness.

Technology. As this study specifically sought to observe online learning, it is important to ask how the digitally-mediated nature of their collaboration influenced the ways in which students engaged in dialogic exchange.

The online nature of the course blurred the lines between learning and life, dissolving the temporal and spatial confines of a traditional classroom. As a result, Avyaan, Natalie, and Kayla, all were able to trave internationally with family during the term, and many students who were caring for children and pets could meet over Zoom and bring the classroom into their homes. Students whose personal commitments would not allow them to engage in a traditional class could be members of the class community. Further, by not limiting the opportunities for engagement to pre-determined live class

time, it allowed for continuous and personal engagement with their peers throughout the group project while traveling or caring for family members. This had a mixed impact – alternately fostering ongoing dialogue and personal connections, while also being a distraction and leaving some students like Ashley and Jessica struggling to focus and balance school and life obligations.

Another benefit of eliminating physical and temporal synchronicity was that Dylan, Valerie, and several other environmental policy students were able to travel for work, encouraging students to bring in examples like a live site visit to a river dam project being discussed in class. This led to rich and integrated conversations, as Alex, Avyaan, Drew, Nicole, and Reyna all mentioned how valuable it was to have students bring in immediate and relevant examples and perspectives from their work in the field. It helped students make connections between course concepts and their lived experiences (an important component of Freirean (1970) emancipatory pedagogy).

Aside from the benefits afforded by time and geographic flexibility, different forms of communication technologies also influenced the types of dialogue students engaged in. In both courses, students chose from a broad range of available technologies to collaborate. Each of these technologies housed different forms of communication. Text and Teams chats were primarily used for logistical planning (e.g., "Ok, I uploaded my slides, will you look at it? Maybe we should add a conclusion slide.") Live sessions were used for rapport building and clarifying the group's goals and direction (e.g., "So, do we want to approach this from the perspective of supporting UNCLOS?" And "Who are our stakeholders and how should we go about researching them?") .Shared documents were places where ideas were fleshed out and specific feedback was provided to hone ideas

(e.g., “I created this chart that compares learner personas and their needs, what do you think?” “Ok, I took a stab at revising it and added a column that showed how the UDL principles could address those improvement priorities.”) Whole class discussion boards complemented the group discussions by allowing students and instructor to practice problem-posing and work out their understanding of concepts before applying them in the group assignment (e.g., I agree that toxic waste is an important concern, but when I worked as a regulator for the Dept. of Env Protection, I saw how difficult it was for utility managers to comply with such limited funds, and it made it very hard for me to enforce that through fines.). Students also used the recording features of PPT to coordinate the group debates. Reyna taught her group how to record separately on each slide, allowing them to conduct the debate one piece at a time, allowing each of them to get their responses just right, alleviating the pressures of an improvised, real-time debate, which Reyna felt would put her at a disadvantage. These findings relate to other research on digitally-mediated collaborative learning methods, which found that given the “polymedia” ecosystems in which students live today, students tend to select different tools for different purposes (e.g., social or intellectual exchange), and their choices are often based on familiarity and their desired level of emotional and cognitive investment (Lee et al., 2021; Mielikäinen et al., 2023; Nor, 2012).

These varied modalities often complemented one another. For example, Nicole shared that the rapport established during synchronous sessions made her “more open” and “more comfortable sharing” in asynchronous communications like discussion boards and shared documents. By establishing rapport in one modality, students could engage in problem-posing and challenge one another in another modality. Often, students in live

exchanges were more delicate with one's emotions and would suggest general ideas such as suggesting the group do more research and not make assumptions (as both Kayla and Valerie did in their respective groups.) And in shared documents, students were more precise and brough in concrete evidence to problematize certain assumptions. Students who strategically leveraged both the social and cognitive affordances of different communication technologies tended to be more successful in fostering a collaborative environment that supported productive dialogical exchange.

On the other hand, when not used strategically, too many tools, each with a learning curve, served as a point of frustration and barrier to engagement and missed engagement opportunities. Several students struggled to find instructor and peer feedback and two missed a group meeting because they didn't know which communication method they were using and didn't check their messages in time, thereby limiting opportunities for dialogic exchange.

Assignment Design: Scaffolding. The final external factor influencing the groups' dialogical practices was *assignment design*. Both courses were intentionally scaffolded to help students develop insights into critical, generative, social-justice themes. They did this in different ways, with key similarities including assignments that fostered self-reflection, stakeholder empathy, and structured engagement with peers in and outside of groups to build collective social-justice oriented solutions. And they included key differences, such as templated vs free-form solution development,

consistent or remixed group participants, and a single group deliverable vs a role-play debate structure.

First, it was key that the goals of the course were intentionally crafted to support the development of critical consciousness, i.e., a critical awareness of oppression in a sociopolitical context, and orientation toward action (Freire, 1970). Both courses were selected for this study because their focus was exploring generative themes (learning barriers in education and climate justice) and reframing oppressive narratives to generate justice-oriented solutions. In the UDL course, students were tasked with "analyzing the affordances and limitations of a designed module out there on their diverse learning populations" and leveraging the UDL framework to correct it (Emily, post-term Zoom interview). In the Environmental Policy course, students problematized prevailing assumptions how to resolve climate change by considering the many current and future needs and constraints of diverse stakeholders, and then finding more nuanced and justice-oriented solutions.

These critical consciousness-oriented goals were then operationalized through careful scaffolding to support students in engaging in dialogical practices to achieve these goals. Both courses guided students through a similar sequence of steps: 1. reflection and discussion of their own experiences/interests to make personal and meaningful connections with the course themes. 2. group collaboration to identify stakeholders and impacted parties, examining both their needs and their power and influence. 3. exploring the structural components and sociopolitical contexts of the existing situation (whether that was the inherent bias in the design of existing courses to support certain learners over others or whether that was examining the current state of laws and power dynamics

between nations that were dominating a specific region's people and resources.) 4. developing a strategy to achieve more equitable and justice-oriented outcomes.

In both courses, this scaffolded group work was complemented by all-class discussions facilitated by the instructor and individual journals or papers that analyzed theories and examples. These complementary assignments and discussions were entry points to the topic where students' thinking was pushed further and baseline comfort with the content could be fostered prior to the group work. Leslie from Case 3 said, "I really enjoyed the contents of the discussion posts and how both my peers and the professor challenged me to interact more with the material and my peer's thoughts" and Reyna, (Case 4, Week 8) said that "reading through discussion posts stimulates new ideas in my head, so I think with my classmates' insights, I share what I learned from them through a response to their posts." These discussion boards allowed students to practice and prepare in an environment they perceived as lower-stakes and more guided than the group project where their skills were truly tested. For example, students felt that all-class discussions "gave us more ideas to work with for our own group assignments (Kayla, Case 1, interview), and "It meant going in with my thoughts more organized and having references I could regularly access" (Melissa, Case 4, survey).

Assignment Design: Nature of Final Deliverable. The major difference between the two courses' designs was the nature of the final project. In the UDL course, students remained in the same groups all term, and the final project involved applying the UDL framework and presenting collective recommendations. Students in the UDL course were able to make strong, inclusive recommendations, but unlike the beginning of the course

where they pushed each others' thinking, in the final project they took a more systematic and independent approach to applying the UDL framework in the final assignment.

The final assignments in the Environmental Policy course, on the other hand, resulted in high levels of engagement and a stronger association with increased dialogical exchange. The benefits of the Environmental Policy course were mainly attributed to the iterative structure of having student groups in Week 8 dive deeply into an argument either for or against ratifying the UNCLOS environmental treaty, and then in Week 10 having students role-play a debate on the same treaty. The iterative nature of this assignment prompted them to engage with their peers in dialogic ways, specifically, questioning their own position and examining different perspectives. Referring to his experience being forced to argue against the treaty, which was not his personal position, Avyaan told his group, "I mean, even doing the research I was going to websites that I don't typically go to. I mean, I understand why you're saying this even if I don't agree with you." Expressing a similar idea, Valerie shared in her interview how this process actually made her more open to other ways of looking at treaties, saying, "It was really interesting to hear…[my group members] had seen some arguments against it that I had not seen, and to have them introduce those and talk about them was, you know, like I can understand why some people would make this case." In his interview, Avyaan explained how the assignment structure contributed to these ah ha moments for him. He said, "Having the content recycle… having different ways to think about it, and like bringing different perspectives from different groups also helped cause, like it's less research and more kind of analysis and thought. So it was good to have multiple opportunities to present the same information, or even learn from other people's presentations going into it and actually

interacting with people from other groups and saying, like, "Okay for this project. Now, what's the perspective?" Avyaan's reflections show that the assignment structure forced him to go deeper with his analysis and set his biases aside to be more open minded to other perspectives.

Another benefit of the debate assignment structure was that it created a safe environment for risk-taking. Risk taking supported dialogical practices by allowing students to playfully and bravely engage in perspective-taking and pushing back against received narratives. In previous assignments in the environmental policy class, and in the UDL course, students had to create a single deliverable that represented all of their voices. This, Kayla, Valerie, and several others mentioned in their post-term surveys, caused some anxiety, tension, and self-censorship. Whereas in the debate project, students were relieved that "it was ok for everyone to have their own style" (Leslie, Case 4, survey). Avyaan even introduced a component of play into his approach to the debate, role-playing an "industry pro" and safely being able to explore that persona without the risk that his group would conflate that with his personal beliefs. Reyna similarly took a risk in asserting herself as the moderator. In her post-term survey, Reyna said that she typically tends to be reserved and blend into the group's direction, which I also observed in her early group work. However, in the debate, she jumped at the opportunity to moderate the debate, and in that role asserted her justice-oriented goals and demanded justification for the U.S.'s inaction in ratifying the treaty that would better support her home country. This aligns with current research on the benefits of role-play, which says that it supports critical empathy and perspective taking (Maier, 2002; Rao & Stupans, 2012; Sogunro, 2004; Westrup & Planander, 2013), and allows students to practice real-

world critical problem-solving while appreciating the complexity of decision making (Mabrey et. al. 2021; Pavey and Donoghue, 2003).

Overall, in both courses, the students found the structured, scaffolded nature of the group work helpful in engaging more deeply with one another and with the content, expanding their learning by exploring new perspectives and offering insights into biases and limitations that prevent justice-oriented solutions. However, in the anonymous course evaluations and in the post-term surveys, about 75% of the students said that less group work would have yielded similar benefits, and the interpersonal frustrations and logistical stress of working with students in different time zones decreased the effectiveness of this method. Only one student in each class said they would have preferred no group work at all.

By comparing the impact of both course structures on different groups, it is clear that intentional, layered scaffolds toward critical perspectives best supports students in productively exploring multiple sides of an issue and uncovering assumptions and biases. Additionally, balancing whole-class, individual, and group work exploration builds confidence and readiness to engage in dialogical exchange. However, too much group work can detract from the experience. When looking at the differences between the two course structures, the findings indicate that it was helpful to require students to examine different sides of an issues, and that the debate structure created a safe environment for students to explore a different perspective without fear of personal judgement. It also provided a release from the pressures of representing a single, collective voice, allowing students to take risks and express themselves more openly, leading to deeper praxis, or

ability to uncover biases and explore the nuances of a topic and find more effective justice-oriented solutions on their own.

Summary of External Factors Theme.

The most salient external factors that were found to influence dialogic exchange, based on observations and insights from participants include the role of the instructor, the use of technology, and the design of assignments. Students saw the instructor as a model of passion and informed insights. Their problem-posing feedback was often mentioned and shown to enhance the dialogical exchange in the groups. Technology allowed students to weave the coursework into their careers and lives, which increased intimacy, community building, and allowed for real-life connections, though was also sometimes a distraction. Students who strategically leveraged both the social and cognitive affordances of tech tools, while managing overwhelm and learning curves, were more successful in fostering a collaborative environment that supported productive dialogical exchange. Finally, the assignment design was a key factor in supporting dialogical exchange. Balancing whole-class discussion and independent work with group assignments that guided students step by step through a layered approach toward critical perspectives and praxis was effective in both cases, but the Environmental Policy course's debate role-play assignment allowed for risk-taking, and pushed students deeper into perspective-taking in an engaging way.

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Chapter 6: Discussion

This case study emerged in response to shifts in society and education that increasingly demand people learn to interact virtually to address pressing social issues and engage in meaningful, emancipatory dialogue with different people and perspectives in order to ensure deep and inclusive learning for all and an active and equipped citizenry committed to social justice. This qualitative multiple case study approach applied Freire's (1970) framework of *dialogical exchange* (engaging with generative themes through problem-posing dialogue oriented toward reflection and action) to a contemporary setting (asynchronous online professional studies classrooms, particularly those using collaborative problem-based learning or CPBL). The study investigated *how* students in this setting engaged in emancipatory dialogical practices, and the *factors* that influenced their ability to engage with one another and with the content in this way.

Summary of Findings

Description of Findings in Relation to Research Questions

The research questions explored how student groups in online professional studies courses collaborate in humanizing and emancipatory ways. Research question 1a explored in what ways, if any, did they engage in dialogic practices involving identifying generative themes, engaging in problem-posing dialogue and nurturing praxis?

Across cases, students engaged with generative topics of social importance including online learning environments and the global stage of climate agreements,

identifying them as socially constructed spaces ripe for redefinition and transformation toward anti-oppressive ends. Students were especially successful at connecting these themes to their own lived experience and engaging in empathetic and nuanced exploration of diverse stakeholder perspectives. Through dialogue, students redefined terms such as "disability" and explored the value of stakeholder agency and choice. In three of the four cases, these insights emerged through group exchanged, complemented with individual reflection and whole-class discussion. In one case, these insights emerged independently through readings and insights, and were not necessarily furthered through dialogue with their group.

A close examination of the types of exchanges among participants revealed that dialogic exchange took the shape of questioning one's own positionality, pushing on received definitions, seeking data over assumptions, respect for ideas, and creating space for creativity and risk-taking. Sometimes this occurred through a productive struggle and respectful back and forth, and other times it was a layered nuancing of ideas. The adult learners were very conscious of avoiding conflict or appearing to direct the conversation (with notable exceptions), and found ways to preserve group affinity while pushing their collective thinking.

Anti-dialogic exchange occurred as well. Freire (1970) characterized anti-dialogic exchange as "verbalisms" that cut-off deeper engagement between individuals and reduced discourse to superficial chatter or "an alienated and alienating "blah" (p. 87). In the groups observed, anti-dialogic exchange took the shape of transactional and divided work, actively blocked discourse by asserting power, and self-censorship due to lack of confidence or conflict avoidance, and group think. In the end, all students expressed

evidence of growth in their orientation toward praxis (reflection and action), reflected in their propensity for curiosity, reflection on biases, care and dedication, and the ability to critique and suggest concrete recommendations for changing existing societal narratives and structures like international climate negotiations and educational systems. However, each case varied significantly in the degree to which this growth could be attributed to dialogic exchanges within their groups or the course structure of a collaborative problem-based learning approach. This variance was largely based on external factors.

This leads to research question 1b, which asked which **internal and external factors** contributed to the groups' ability to engage in humanizing dialogical practices. Here, two themes emerged: 1. democratic group dynamics (internal factors) and 2. structural and pedagogical choices (external factors). The internal factors that supported a group's ability to engage in emancipatory dialogical exchange included community building (rapport, care, and shared goals and values about the topic and group work), accountability (trust and reliability), an evidence-based approach (a group's commitment to overcoming assumptions by looking at evidence), and a power balance (respecting different perspectives, strengths, and leveraging prior experience without silencing others). While sometimes an over-sensitivity to avoiding conflict and hierarchy made it difficult to ensure accountability or to engage in problem-posing dialogue, overall these trusting, democratic group dynamics were strongly associated with productive dialogical exchange and collective uncovering of emancipatory insights.

The second part of research questions 1b was the External factors also influenced dialogical exchange. These factors included the instructor's role as a problem-posing interlocutor and model, spurring further dialogical exchange among students. The

findings also noted the instructors' limited ability to manage group conflict in an online graduate context, and a potential missed opportunity to influence students attitudes toward group work by directly addressing its value and connection to course goals. Technology was another external factor. This study revealed that technology-mediated distance learning allowed for synergies between learning and life, fostering interpersonal and intellectual connections, deepening students engagement with generative themes. When strategically applied with sufficient support, students were able to leverage a variety of tools from Zoom to annotated shared documents to engage in different types of dialogue on students' own terms and pacing, supporting additional forms of problem-posing and dialogical exchange. However, when not thoughtfully leveraged, the variety of tech tools served as a distraction and barrier to productive exchange.

The most influential external factor supporting dialogical exchange was the structure and scaffolding of assignments. Students found the layered, iterative approach taken in both classes supportive in building critical perspectives and supporting praxis (i.e., their ability to reflect and act to further social justice in their fields). In particular, weaving whole-class discussion and independent work with group assignments as well as having related assignments that built on one another each week was helpful in guiding students from empathy and exploration toward concrete action and built student capacity for dialogical exchange. However, while dialogical energy waned toward the end of the UDL course, becoming more transactional and more fraught, the Environmental Policy course ended strong with the debate role-play assignment, which garnered even more student enthusiasm and engagement, and allowed for risk-taking, pushing students deeper into perspective-taking.

Description of Findings in Relation to Previous Research

This study extends prior empirical research outlined in this dissertation's literature review, which indicated promising alignment between collaborative methods in online courses and components of emancipatory, dialogical practices (Arcos-Alonso and Arcos Alonso, 2021; Jahng, 2012). Unlike prior research, this study looked intentionally and holistically at the combination of factors that make up emancipatory dialogic exchange (generative themes, dialogue, problem-posing, and praxis), and thereby affirmed what the theoretical literature had argued, namely that there is a significant alignment between the processes and philosophical underpinnings of CPBL and dialogic exchange (Armitage, 2013; Jemal, 2017). This study went one step further than much of the other research on collaborative learning methods to closely examine through discourse analysis the types of dialogic and anti-dialogic exchanges that occurred among students in two professionally-oriented, online graduate courses, revealing the ways discourse was encouraged and sharpened through problem-posing. It showed how students leveraged personal reflection and experiences to foster empathy for stakeholders, which in turn supported perspective taking and redefining and re-reading situations based on evidence to form more liberatory truths. It also revealed the ways that dialogic exchange was stymied by lack of trust, misaligned goals, undemocratic assertions of power, and aversion to group work, resulting in transactional and disconnected work or even blocked engagement.

Prior research indicated a combination of factors that support inclusive collaboration and critical awareness, including guided self-reflection and validating students epistemologies, technology use, supportive teacher, structured collaboration, and attitude (Chaaban et al., 2021; L. Lee et al., 2017; Liu & Shirley, 2021; Rambe, 2017;

Valcarlos et al., 2020). The study results echoed many of these key features and added in the importance of developing community, trust, and shared values for collaboration and evidence-based inquiry. They also further revealed the dynamics between adult students in a professionally-oriented graduate program, wherein the teacher's role of manager and social broker is limited, and it becomes more important that students can maintain respect and accountability on their own while maintaining democratic group dynamics despite different levels of prior experience in their fields. The study also extended prior research that called generally for "structured and scaffolded" collaboration, indicating that particular assignment structures influence dialogical exchange in surprising ways, such as role play and debate, which spurred deeper investigation of perspectives, overturning biases, and created a sense of safety in role-play that encouraged risk taking.

Significance

The results of this study contribute to the research on online, professionally oriented graduate education by exploring the nature of digitally mediated dialogic exchange and the interpersonal and pedagogical factors that influence it. Educators seeking to empower adult students with the skills to be critical, social justice change agents in a global, digitally mediated society need a deeper understanding of the ways pedagogical choices influence how students engage with one another and with ideas. The results of this study offer insights into one such pedagogical approach: online collaborative problem-based learning (CPBL). They indicate that, under the right interpersonal and pedagogical conditions, CPBL does hold potential to support the practice of productive emancipatory dialogue that would orient students toward critical consciousness and praxis in their lives.

Implications for Practice

This study provides practical guidelines for instructors, leaders, and instructional designers wishing to provide a liberatory learning environment that creates space for and scaffolds the development of emancipatory dialogical skills. This study does not suggest that CPBL is the only or even best way to develop emancipatory dialogic skills among students, but it is *a* way. It is a door that may be opened to students, leading to critical consciousness. While measurably transforming students' critical consciousness is too ambitious and abstract an aim for a single course, educators can create virtual learning spaces where students practice the dialogical steppingstones toward it. Those steppingstones include engaging with their peers and with ideas in ways that allow them to recognize oppression, question assumptions, engage with their own and other perspectives, and participate in the project of re-creating the narratives and structures that cause oppression. The following guidelines were shown to support this endeavor.

It is important to first assess the learner populations and course learning outcomes to determine their alignment with collaborative learning methods and student readiness to engage with generative themes. Instructors should be transparent about the goals and methods in the course so students can make prepared and informed decisions about their engagement with the course.

If choosing to engage in CPBL methods in a course that engages with social justice topics, there are two categories of recommendations that instructors should consider: supporting collaborative practices, and supporting critical and dialogical engagement with peers and course themes. First, instructors can foster buy-in for group work and nurture democratic group dynamics by openly discussing the components that

will support group work, i.e., getting to know one another and creating community, valuing evidence over assumptions, reflecting and checking power-balance, strategically leveraging technology, and ensuring accountability. They should also provide support and incentives for managing group work dynamics. Lastly, even functional groups can burn out from too much focus on group work, and over-reliance on group work can amplify negative dynamics. A balance of individual work and reflection, group work, and whole-class discussion allows students to prepare and digest information in different ways, maximizing the impact of the group work moments.

Second, intentional structures and supports around the group work environment are key to making the group work not only functional, but also creating the potential for it to be emancipatory and dialogical as well. First, focusing on real-world "generative themes" with action-oriented projects builds students' capacity to recognize and act upon injustice. Guide students through exploring these themes with iterative assignment design that prompts students to layer knowledge on a topic over time in different ways: through self-reflection, exploring different perspectives, problem-posing discussions, and exploring solutions from different angles. Allow students to bring their full selves to the project by providing space for students to make connections to their lived experience and values. Honor the students' individuality by crafting assignments that allow for a balance of individual and collective voice and allow for a broad range of strength-based contributions (e.g., domain knowledge, creativity, technological, research, or writing.) Lastly, certain types of assignments such as role-playing create safe and even playful opportunities for overcoming fear of conflict, and invite risk-taking and creativity,

allowing students to explore different perspectives, build confidence, and imagine themselves as agents of change.

Finally, instructors should model curiosity, openness to changing perspectives, and problem-posing insights. Their feedback should provide open-ended inquiry that guides students through their own process of problem-posing and developing solutions.

Limitations

The assertions mentioned in prior sections are, of course, limited in their generalizability due to the study design and methods. The study was a case study, and although it included four cases in two courses, the cases were all drawn from a single professional studies department. Researcher presence and the expressed purpose of the may have impacted Finally, although there were multiple opportunities to triangulate the findings through observed activities, submitted assignments, instructor facilitated reflections, researcher facilitated surveys, researcher-facilitated interviews, and post-term anonymous course evaluations, there were important pieces of data that I would have liked to have obtained. Not all students engaged in the post-term interviews. In particular, further insights from the two students in the UDL course who had particularly negative experiences would have been valuable.

Implications for Future Research

Because this study was intended as an exploratory study seeking to deconstruct and demystify the nature of emancipatory dialogical exchange among adult students in an online environment, it was broad and preliminary by nature. Being a dutiful explorer in this exploratory study, I attempted to chart the land of collaborative problem-based learning and hunt for artifacts, seeking evidence of potential conditions that bring about

emancipatory dialogical exchange. As a result, each of the emergent themes deserves further research (influences of different forms of technology use, approaches to fostering metacognition on collaborative practices, forms of instructor problem-posing guidance, power dynamics, risk-taking, and trust). Of particular interest and promise is examining different types of collaborative assignment designs and structures, as these two courses had two very different structures, resulting in very different types of exchanges between students. Another major factor that deserves further research are the evolving goals, motivations, and attitudes that adult learners bring into the online classroom (Bellare et al., 2023), as that emerged as a "make it or break it" factor influencing trust and willingness to engage in dialogical exchange with peers.

In addition to evolving learner goals and motivations, the technological landscape is evolving as well. Since starting my graduate coursework, online learning moved from a steadily rising tide to a sudden groundswell as schools and workplaces rushed to move online during the Coronavirus pandemic, changing social norms, attitudes, and forms of technology, leading to a need to constantly revisit the impacts and best-practices of digitally-mediated collaboration and world-building. Spurred by this, I began to investigate these questions of connection and critical consciousness, only to see a new form of consciousness emerge in Artificial Intelligence. This study took place around the one-year anniversary of OpenAI's ChatGPT launch, and mention of AI tools and evidence of their use was minimal. One student briefly mentioned using ChatGPT to generate stakeholder descriptions, and then quickly said they were only joking. However, attitudes and comfort levels will change. However, artificial intelligence will continue to grow as a factor in collaborative dynamics, creating a need for further research. Research

has already shown that AI, when serving as a "teammate," can enhance coordination, knowledge sharing, decision-making, and evaluation of team performance (Khakurel & Blomqvist, 2022). Just as the teachers in this study were shown to be influential shadow interlocutors, offering from the sidelines guidance, questions, information, feedback, and modeling, AI too, will become another interlocutor and a tool. It can synthesize and summarize background information, propose key considerations, and identify stakeholders. It can function as a debater and help students hone arguments. However, AI is also known to perpetuate bias, repeat dominant, oppressive narratives on which it is trained, and sometimes provide false information (Leffer, 2024). So, additional research is needed to determine its place in human exchanges intended to problematize and reverse dominant and oppressive narratives.

Overall Study Summary

This study arose in response to shifting social, technological, and education conditions. In today's societal context, it is even more important to remember the call to action by Cornel West to seek *paideia* and Paulo Freire to seek *a pedagogy of liberation*, both forms of education that unsettle and transform – transform individuals, transform a community of dialoguing learners, and by extension, transform their worlds. The communal nature of West's and Freire's philosophies led me to explore collaborative problem-based learning and its' real-world, problem-posing, deeply-engaged ethos. Drawing on a theoretical framework of Humanizing Pedagogy (Freire, 1970; Salazar, 2013) and Dialogics (Freire, 1970), this study sought to fill a gap in the literature of online learning and higher education relating to emancipatory pedagogical practices and leveraging collaborative methods to practice emancipatory dialogical exchange.

Using a qualitative multiple case study method, this study investigated multiple groups across two online professional studies courses, examining how students engaged in emancipatory dialogical exchange. This involved analyzing their digitally mediated exchanges throughout the term, identifying how they engaged in identifying generative themes, problem-posing, dialogue, and praxis. This research revealed key insights into the ways students developed critical awareness by drawing upon their personal experiences to foster empathy, explored perspectives, redefined concepts, took risks, challenged and added to one another's thinking, and claimed their status as a world-influencing *subject* and *advocate* who can change systems and stories. It also revealed insights into the ways that dialogic processes broke down through blocked contributions, purely transactional exchanges, and group think. It then asked what factors contributed to the success or failure of dialogical exchange, revealing practical insights into fostering democratic group dynamics and safety through structural and pedagogical choices.

Online education is increasingly becoming a significant pathway for adult learners to pursue personal growth and career advancement (NCES, 2021). It has the potential to provide a safe environment where individuals can engage deeply, create meaning, and develop solutions with other people from different regions and backgrounds. By equipping educators to craft more humanizing collaborative learning environments that deliberately foster dialogic practices, we not only empower students to achieve their own liberation, but also equip them to make a more liberatory world. They do this by forging more true narratives and crafting anti-oppressive systems (like climate treaties and inclusive learning environments), impacts that extend well beyond the end of the course.

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Appendix A

Recruitment Email

Dear [insert name],

My name is Chelsie Ruge, I am a Ph.D. student in the Curriculum and Instruction Department at the University of Denver. I am emailing to ask about participating in my doctoral research study. This is designed to gain an understanding of how students engage with one another around social justice issues. Your course has been identified as eligible for this study based on its use of Collaborative Problem-Based Learning and its focus on social justice themes.

If you decide to participate in this study, your group collaboration meetings and/or shared documents and correspondences will be observed and recorded. You will be asked to complete a brief reflection form at the end of the course. I will ask some participants to engage in further follow-up interviews over Zoom. I will ask to record the Zoom interviews and student meetings so that I can relisten to information and pull direct quotations. The data gathered will be de-identified in any written analysis and reports, and specific student information or feedback will not be shared with your fellow classmates or instructor.

The data collected will be used to provide guidance for course development and instructional design purposes. Remember, this is completely voluntary. If you would like to participate, or if you have any questions about the study, please e-mail or contact me at Chelsie.Ruge@du.edu or 303-871-2085. Thank you very much.

Sincerely,

Chelsie Ruge, PhD Candidate

Faculty Sponsor: Dr. Kimberly McDavid Schmidt; kimberly.schmidt@du.edu

Appendix B

Exempt Research Information Sheet for Instructors and Students

Title of Research Study: Digital Dialogue: Emancipatory Dialogical Practices in Virtual Collaborative Problem-Based Learning

Principal Investigator: Chelsie Ruge, PhD Candidate, University of Denver, Morgridge College of Education

Faculty Sponsor: Kimberly McDavid Schmidt, PhD. Clinical Assistant Professor, University of Denver, Morgridge College of Education

IRBNet Protocol #: 2089388-1

You are being asked to participate in a research study. Your participation in this research study is voluntary and you do not have to participate. Even if you decide to participate now, you may change your mind and stop at any time. This document contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate.

Study Purpose:

If you participate in this research study, you will be invited to complete a brief reflective survey and 60 minute group or individual interview in addition to being observed conducting normal class activities. This is designed to gain an understanding of how students engage with one another around social justice issues. Your course has been identified as eligible for this study based on its use of Collaborative Problem-Based Learning and its focus on social justice themes.

Alternatives

You may choose not to answer any survey or interview questions for any reason without penalty. Choosing not to engage in the study will not impact your enrollment, grade, or ability to fully participate in the activities of the course.

Risks

There are no expected risks to you as a result of participating in this study.

Benefits

You will not benefit directly from participating in this study, other than potentially gaining a deeper understanding of group work practices to support social justice aims.

Confidentiality of Information

Study records that can identify you will be kept confidential by coding data using pseudonyms for your name and school. All data (notes, transcripts) will be kept on a password-protected computer, in a password protected OneDrive account. The Zoom recording will be deleted once the interview is transcribed. In the transcription, you will be identified using your pseudonym. The recording will only be kept for record keeping purposes as per the institutional policy. The results of the research study may be published, but your name, university, and department will not be used.

Procedures: If you agree to be a part of the research study, you will be asked to allow the researcher to observe live or recorded activities of normal coursework practices. Additionally, you will be asked to complete a survey in which you will reflect on your experiences, which will take about 10 minutes of your time. You may be asked to engage in follow-up interviews or focus groups. Your consent to participate in the study at large will not obligation you to participate in additional interview activities.

Before you begin, please note that the data you provide may be collected and used by Zoom and Qualtrics as per its privacy agreement. This research is only for U.S. residents over the age of 18. Please be mindful to respond in a private setting and through a secured Internet connection for your privacy. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

You will be audio/video recorded via Zoom videoconferencing software in order to aid transcription and coding and thematic analysis of participants' course activities and reflections. If you do not want to be audio/video recorded, please inform the researcher, and only hand-written notes will be taken during group observations and interviews.

Data Sharing

De-identified data from this study may be shared with the research community at large to advance science and health. We will remove or code any personal information that could identify you before files are shared with other researchers to ensure that, by current scientific standards and known methods, no one will be able to identify you from the information we share. Despite these measures, we cannot guarantee anonymity of your personal data.

Questions: If you have any questions about this project or your participation, please feel free to ask questions now or contact Chelsie Ruge at Chelsie.ruge@du.edu at any time.

If you have any questions or concerns about your research participation or rights as a participant, you may contact the University of Denver's Human Research Protections Program (HRPP) by emailing IRBAdmin@du.edu or calling (303) 871-2121 to speak to someone other than the researchers.

The University of Denver Institutional Review Board has determined that this study is minimal risk and is exempt from full IRB oversight.

Please take all the time you need to read through this document and decide whether you would like to participate in this research study.

If you agree to participate in this research study, please sign below. You will be given a copy of this form for your records.

_____ _____

Participant Signature **Date**

Appendix C

Student Reflection Form

The purpose of this study is to gain an understanding of how student groups in online professional studies courses collaborate in humanizing and emancipatory ways. In particular, I am looking at the ways students critique and challenge dominant/oppressive systems through dialogue, problem-posing, reflection, and action. Please spend about 10-20 minutes answering the following questions with a few sentences each.

1. What was your experience engaging with other students in this course? How would you characterize your relationship with your group members?
2. How would you describe your group's approach to engaging course concepts and completing the course work? (e.g., collaboration, roles, sharing ideas, completing deliverables?)
3. What prior experience with group work or content have you had that may have influenced your experience?
4. What was your role in the group work? How did you contribute to moving the group's goals forward?
5. What elements of the course, instructor, or your group do you feel contributed positively or negatively to connecting in meaningful ways with your peers around critical social issues?
6. What would you do differently or the same if you were to engage in a similar course in the future?
7. Share with me any reflections about your curiosity, awareness, or confidence in critiquing political or social reality as a result of your work in this course.
8. In your opinion, what were the primary benefits and outcomes of engaging in this group work?

Appendix D

Semi-Structured Interview Protocol for Students

Date and Time of Interview: **Place and Modality of Interview:**

Interviewee Name and Role/Group: **Interviewer:**

Introduction to the Research Project:

Thank you in advance for your participation in this interview. I appreciate your willingness to share your time and your perspective with me. The purpose of this study is to gain an understanding of how student groups in online professional studies courses collaborate in humanizing and emancipatory ways? In particular, I am looking at the ways students critique and challenge dominant/oppressive systems through dialogue, problem-posing, reflection, and action.

Interview Protocol

1. *Researcher will identify a specific moment in the dialogue or their reflection form that initial observation appears to represent one of the four components of CC practice.* I wanted to ask you about a particular segment of your collaboration. (*Share summary or piece of transcript.*) Please comment on the dynamics at play in that segment of the dialogue.
2. How would you describe your group's approach to engaging with one another's ideas?
3. How, if at all, did this component impact your curiosity, awareness, or confidence in critiquing political or social issues?
4. How, if at all, did this course help you feel equipped or prepared to engage in invoking action toward social justice?

Appendix E

Cross-Case Synthesis of Themes

Instructional Method and Context			
Collaborative Problem-Based Learning in Asynchronous Online Professional Studies Graduate Program			
Dialogic Activities (RQ1a)			
Generative Themes • Sample Codes: Connections to personal experience, generative themes provided by instructor, empathy and stakeholder analysis, recognizing constructs and complexity, exploration of one's "subjecthood"	Problem-Posing Dialogic Exchange • Sample Codes: Questioning positionality, pushing on received definitions, seeking data over assumptions, productive struggle, respect for ideas, space for creativity, risk-taking	Anti-Dialogic Exchange • Sample Codes: Blocking contributions, transactional and divided work, groupthink	Praxis • Sample Codes: ability to identify inequity and make recommendations, curiosity, redefining terms, skills to engage with others, seizing one's "subjecthood," commitment and confidence in advocacy
Internal Influencing Factors: i.e., Democratic Group Dynamics (RQ1b)			
Community • Sample Codes: rapport, shared goals, value collaboration, safety, care	Accountability • Sample Codes: trust, communication, reliability, equivalent but different contributions, management	Evidence-Based Approach • Sample Codes: prioritizing evidence over assumptions, transparent sources to support assertions, varied evidence types	Power Balance • Sample Codes: non-hierarchical, respect for different perspectives and experience levels
External Influencing Factors: i.e., Structural and Pedagogical Choices (RQ1b)			
Instructor Role • Sample Codes: problem-posing interlocutor and model, garnering buy-in to group work, and social broker	Technology • Sample Codes: weaves course and life, challenges, flexibility, varied forms of engagement with other's ideas	Scaffolding • Sample Codes: goal of assignment, iterative assignment design to increase depth, sequenced inquiry	Assignment Design • Sample Codes: Single-voiced deliverable vs collection of individual voice, structured praxis, role-play to assume perspectives