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A Project-Based Learning Approach to Community-Based Learning: Action Research to Explore Transformative Change in 1st Year Occupational Therapy Students' Awareness About Contextual Barriers, Occupational Justice, and Advocating for Community Health and Wellness

Patricia Ann Wisniewski

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A PROJECT-BASED LEARNING APPROACH TO COMMUNITY-BASED LEARNING: ACTION
RESEARCH TO EXPLORE TRANSFORMATIVE CHANGE IN 1ST YEAR OCCUPATIONAL THERAPY
STUDENTS' AWARENESS ABOUT CONTEXTUAL BARRIERS, OCCUPATIONAL JUSTICE, AND
ADVOCATING FOR COMMUNITY HEALTH AND WELLNESS

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DEDICATION

This dissertation is dedicated to the most important people who have supported me unconditionally throughout my life and throughout this heartening journey.

To my parents, Dorothy and Edward Boyko. You have given me the courage to persevere learning about my passions and growing as an individual. Thank you for your love, prayers, confidence in me, and for being my biggest fans.

To my sister, Cyndee. You are my daily inspiration to appreciate each day, be thankful for my blessings, and embrace living life. You have instilled in me humility, kindness, and courage to ponder the meaning of life and accept each moment despite any obstacles along the way. You give me hope each day.

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To my husband, Mark, my life partner. Thank you for loving and supporting me for who I am and for living through this process with me. Your enduring patience, encouraging words, and sacrifices (and there were many) gave me the strength and confidence to believe anything is possible. I am eternally grateful and blessed to have you by my side in all the moments of our life together.

Love and support are the words that describe my family. You are my source of courage, hope, inspiration, and strength. Thank you for experiencing this journey with me.

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ABSTRACT

The purpose of this action research was to evaluate the effectiveness of implementing reflexive photography as a means for a transformative community-based learning (CBL) experience. CBL is an experiential teaching pedagogy that helps prepare college students for a rapidly changing and diverse society that fosters social, health, and cultural awareness about individuals and populations. Students engage collaboratively within the local community to help solve societal problems.

This study focused on three research questions, each exploring how a reflexive photography project (RPP): (a) changes how students view occupational justice, (b) influences students awareness about contextual barriers that may impact community residents health and wellness, and (c) changes how students perceive their role as a socially responsible citizen for occupational justice within their local community.

The research took place at a Jesuit University located in the Northeastern region of the United States. Nineteen, 1st year occupational therapy students (OTs) completed a six-week RPP as a component within a designated occupational therapy course. The RPP was designed to align with the principles of project-based learning (PBL). Students worked independently to take photographs of community barriers that hinder attaining health and wellness, followed by small group collaboration to decipher contextual barriers to community health; jointly deliberated how to solve a societal problem; and presented their findings to interested stakeholders for discussion.

The study utilized a convergent parallel mixed methods research design that applied quantitative and qualitative data collection and analysis. Data collection methods included a quantitative retrospective pretest-posttest survey and qualitative self-reflections and a questionnaire. Quantitative data were analyzed using descriptive and inferential statistics. Qualitative data were analyzed using a thematic analysis approach to gain a better understanding of the students' transformative perceptions, behaviors, and actions as a result of the RPP.

Findings showed that the students perceived a transformative change after completing the RPP. Students reported an increased awareness of existing occupational justice and injustices in the local community, environment and personal contextual community barriers, health implications, and a change in how they perceive their role as responsible community members. Aspects of the RPP that attributed to the positive outcomes included engaging in the learning process, collaboration, and experiential learning opportunities that were embedded in a recursive reflective practice of inquiry. Conversely, challenges that impacted the learning process were identified: logistical factors and personal experiences. This research has implications for service-oriented, community-based education in occupational therapy; a PBL approach was used as the guiding framework for designing this study.

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LIST OF ABBREVIATIONS

ACOTE	Accreditation Council for Occupational Therapy Education
ADA	Americans with Disabilities Act of 1990
AOTA	American Occupational Therapy Association
CASQ.....	Civic Attitudes and Skills Questionnaire
CBL	Community-based Learning
CBS	Contextual Barriers Survey
CDC	Centers for Disease Control and Prevention
OT	Occupational Therapy
OTS	Occupational Therapy Student
IARSLCE.....	International Association for Research on Service-Learning and Civic Engagement
PBL	Project-based Learning
RPP	Reflexive Photography Project
RQ	Research Question
SL	Service Learning
SPSS.....	Statistical Package for the Social Sciences
WHO	World Health Organization
ZPD	Zone of Proximal Development

CHAPTER 1
INTRODUCTION
National Context

The Kellogg Commission on the Future of State and Land-Grant Universities (2001) called on higher education institutions to do more and become engaged in their local communities to address societal needs and education initiatives through collaborative relationships. Within the past thirty years, community-based learning (CBL) has re-emerged as a renewed social and educational reform to complement traditional education practice consisting of teacher-directed instruction within a classroom setting (Giles & Eyler, 1994). In response, academic institutions adopted an experiential pedagogy approach to learning, commonly known as CBL. Students use their acquired knowledge and skills learned in the classroom setting to increase social responsibility by addressing community-identified needs (Byrne, 2006; Furco, 1996).

CBL enriches pedagogy by providing active learning experiences that are transformative, as demonstrated by improving students critical thinking skills, academic engagement, student identity, sense of social responsibility, and sensitivities to cultural diversity (Carlisle et al., 2017; Carnicelli & Boluk, 2017; Eyler, 1997; Howe et al., 2014; Jacoby, 2015). A successful CBL experience lends students to become consciously engaged community members through a process of questioning, discovering, and making meaning of their world and the world of others. As a result, students broaden their

understanding of contextual issues that have a direct impact on community dwellers and how they can become change agents in supporting health and wellness for everyone.

Transformative changes experienced after CBL highly correlate with changed perceptions of stereotypes, improved interpersonal skills, spiritual growth, selfless deeds, self-knowledge, and a social commitment to one's community (Bamber & Hankin, 2011; Eyler et al., 1997; Felten & Clayton, 2011; Furco, 1996; Kiely, 2005). Further research indicates that CBL increases cultural awareness, including tolerance for different races, cultures, and behaviors different from one's own (Dey, 1991; Fitch, 1990; Kinsley, 1993; Markus et al., 1993). As a result, CBL experiences enable students to address specific societal needs through active engagement in the community, thereby eradicating social and health disparities among individuals who are at risk for occupational deprivation. Impactful CBL experiences include community-identified needs, community collaboration, intentionally designed instructional pedagogy, reflective inquiry, and direct engagement with the community (Carnicelli & Boluk, 2017; Cress, 2009; Furco, 1996; Hullender et al., 2015; Jacoby, 2015).

Factors exist that can impact the transformative learning process. Merzirow (2003) contends individuals can be so resolute in their beliefs and perceptions that it stunts broadening one's worldview and risks skewing reality. For instance, when individuals choose not to explore dissonance beyond one's comfort zone it can limit exposure to new perspectives and wisdom (Mezirow, 2003, 2012). CBL attempts to challenge stereotypes and personal beliefs by emerging students in communities different than their own and consciously question their values through designed reflective projects (Bamber & Hankin, 2011).

Similarly, students may not be equipped with the necessary knowledge about the population or community in which they will be interacting (Reitenauer et al., 2013). Cress (2003) reported that one-third of students disclosed that their awareness of social nuisances, community issues, and limited exposure to people from different races and cultures was weak or very weak before CBL. As a result, transformative learning may not occur and prevailing presuppositions may not be altered or changed. One study reported students' misconceptions, including beliefs that individuals get AIDS as a consequence of their life choices, people who drive nice cars should not qualify for welfare benefits, and anyone is capable of obtaining a job if they just work hard enough (Jones, 2002). These points of view may be attributable to limited personal or life experience, developmental readiness, moral development, or resistance to explore new ideas or experiences (Jones, 2002; Mitchell, 2017; O'Grady, 2012; Pearl & Christensen, 2017). Nieto (2012) explained how the community recipients of CBL primarily are populations at risk for social and health disparities that may include persons who have a disability, racial minorities, are homeless, or are poor. On the contrary, students are predominantly young and have more affordances than those they serve (Nieto, 2012).

Lastly, the effectiveness of the CBL experience and the transformative learning process is two-fold. Educators have a responsibility to structure meaningful CBL experiences that meet the students learning objectives and the community's needs. Responsible educators self-reflect on one's background, knowledge, and abilities to design ideal CBL experiences that nurture students' transformative learning (Carnicelli & Boluk, 2017; Eyler & Giles, 1999; Jones, 2002).

Local Context

Jesuit Universities strive to graduate “men and women for others” (University of Scranton, 2018b) by providing service to the poor, marginalized, and hopeless to eradicate injustices and become advocates for equality (Kolvenbach, 2000). Fr. Kolvenbach (2000), the former Superior General of the Jesuit order, declared the renewed commitment to the promotion of social justice in Jesuit higher education since its inception over 40 years ago.

This research study took place at a Jesuit University located in the Northeast region of the United States. The mission of the research setting embraces a transformative and reflective education (University of Scranton, 2018a). The ideologies embedded in an engaged education include a commitment to cultivating students to be men and women for others, inspire students to learn inside and outside the classroom, challenge students to identify their unique talents, and provide service in the community as both students and as socially responsible citizens (University of Scranton, 2018e). The research setting is committed to CBL as a transformative educational experience; students engage in the local community to address societal issues and concerns (University of Scranton, 2018c). In response, the research setting established the Office of Community-based Learning, within the last four years, to support its mission and provide support for faculty (University of Scranton, 2018c). The CBL resource office provides educational materials about CBL, faculty initiatives (financial and others) to support CBL efforts, and coordinates faculty development workshops (University of Scranton, 2018c).

The research setting requires all full-time, undergraduate occupational therapy students (OTs) to complete CBL. Beginning 1st year Spring semester and every

semester thereafter, students are required to complete a CBL project as a requirement to graduate from the university (University of Scranton, 2018a). In the Department of Occupational Therapy, all 4th-year OTSs must submit a reflection essay that provides a synopsis of their four years of CBL and describe how the Jesuit Mission will help guide their actions in their imminent professional roles after graduation (University of Scranton, 2018a). Faculty evaluate a sampling of blind essays using a scoring rubric (see Appendix A) (University of Scranton, 2018d, p. 2). Over the past four years, a sampling of the 4th year reflection essays revealed that a percentage of students scored low in the following three categories: (a) understanding of the Jesuit mission of social justice, (b) reflections on four years of CBL experiences, and (c) plan for implementing Jesuit mission of social justice as a professional.

In response to the 4th year OTS reflection essays, I conducted an informal survey of 1st year OTSs perceptions about CBL upon completing their 1st year. The survey resulted in data supporting my hypothesis that some students have a vague understanding of how CBL impacts them, but fail to recognize the significance of the experience or how it supplements their education at a Jesuit University. A sampling of anecdotal student responses from the survey included: “I bonded with my classmates”, “I felt good helping people of the community”, and “got me out of my dorm room to do something good”. As evident, the student responses are devoid of any substantial indication of a transformative experience intellectually or personally. In addition, when asked if the students are familiar with who the university community partners are and if they are familiar with the difference between CBL at the university and community service, greater than 50%

responded “4” or above on a Likert scale with “1” meaning “Extremely familiar” and “5” meaning “Not at all familiar”.

I am a faculty specialist in the Department of Occupational Therapy. Over the past eight years, I taught 2nd year OTSs who were required to complete CBL as a course requirement. Upon completing CBL, each OTS was required to submit a short one-two page reflection paper that demonstrated how their CBL experience impressed upon his or her academic and personal life. No evaluation rubric was used to assess the content of each reflection paper, instead, reflection papers were scored as Complete/Incomplete.

Currently, I teach 1st year OTSs who are required to complete an occupational therapy department-approved CBL project that I am responsible to develop. Past CBL projects included: using power woodworking tools to make wooden birdhouses for the local blind association, toolboxes for preschool children to decorate as gifts for Father’s Day, and memory boards for active older adults residing in skilled nursing facilities; knitting baby blankets for low-income parents; and sewing fidget toys and weighted stuffed animals for children with sensory processing disorders. Transportation barriers and class schedules limited the number of students available to deliver the CBL projects to local organizations. As a result, some representatives of the local organizations came to the University to collect the donations. However, the inherent logistics of the CBL projects limited student engagement and interaction with the community members who benefited from using the handcrafted student donations.

Upon reviewing student reflection papers, it became evident that not all 2nd-year OTSs demonstrated a transformative change after completing a CBL project. Student reflection papers revealed superficial references to a changed self as a result of CBL.

Students failed to describe how the CBL project helped to reduce social disparities, nor was evidence presented of how advocacy efforts to eradicate social or health injustices can be implemented. Finally, there was a minimal reference of personal contemplation on how CBL changed their presuppositions about populations at risk for social and health disparities and how the CBL project will impact their future practice as occupational therapy professionals.

Scaffolding of CBL experiences throughout the occupational therapy curriculum will help prepare reflective practitioners ready to work within today's complex and evolving healthcare environment (Kuiper, 2004; Schon, 1983; Taylor, 2007). As graduates of a Jesuit University and future healthcare practitioners, OTSs will be forged with the task to provide quality healthcare to underserved and uninsured community members as well as advocate for healthy communities to prevent unwarranted burdens on individuals and society (Coker, 2010; Hansen et al., 2007; Knecht-Sabres, 2013; Lal et al., 2012). CBL is the impetus that supports the current national and local healthcare initiatives of care coordination, patient safety, preventive health, and improving the health of at-risk populations (Sen et al., 2018).

Despite the renewed vigor campus-wide to support CBL, it is imperative faculty members at this Jesuit University embrace reflecting on one's teaching pedagogies to ensure a transformative educational experience for all students. Faculty members in the Department of Occupational Therapy have a responsibility to provide a transformative education through engaged, integrated, and global experiences that nurture personal and future professional growth. CBL experiences that challenge reflective practice and discernment are the catalyst to empower men and women to be agents of change for the

greater good of the world around us (Ash & Clayton, 2009). My revised approach to CBL pedagogy and evaluation embedded these evidence-based principles. I designed a CBL project to provide enriched learning experiences that stimulated changed perceptions, contemplation, and social sensitivities to societal issues that broadened students' worldviews.

Statement of the Problem

OTSS' past CBL experiences did not represent evidence of transformative learning related to changed self-perceptions of their own beliefs and feelings; how they viewed community needs differently; their role in advocating for occupational justice; or an appreciation for the lived experiences of others, different from their own.

CBL is a teaching pedagogy that helps prepare students for a rapidly changing and diverse society that can promote social, health, and cultural awareness about individuals and populations (Garner, 2014). As graduates of a Jesuit University and future healthcare practitioners, the students should experience a transformation that prepares them to be ethical, reflective, agents of change within their future professional roles and communities (University of Scranton, 2018b).

Purpose Statement

The purpose of this action research is to evaluate the effectiveness of implementing reflexive photography as a means for a transformative CBL experience.

Research Questions

The following research questions guided this study:

1. How does a reflexive photography project change how 1st year occupational therapy students view occupational justice?

2. How does a reflexive photography project change how 1st year occupational therapy students perceive their role as a socially responsive citizen for occupational justice within their local community?
3. How does a reflexive photography project influence 1st year occupational therapy students' awareness about contextual barriers that may impact community residents' health and wellness?

Researcher Subjectivities and Positionality

My personal life experiences help shape my outlook on life and professional aspirations. I am a middle child from a middle-class family where my father worked and my mother stayed home to care for me, my sister, and three brothers. I am the first daughter, followed by a sister born four years later with cerebral palsy. My sister and I have had a special bond since the day she came home and will till the day we depart. I believe as a middle child, first daughter, and sister to my siblings the propensity to care for others most in need has been engrained in me since my childhood; the instinctive desire has not ceased.

I am a licensed occupational therapist and faculty specialist at a Jesuit University. My background experience as a practicing occupational therapist is working with adults who have severe and chronic mental illness learn how to live life to their fullest despite their condition. I continue to work as a home health occupational therapist working with adults who have physical or neurological disabilities learn how to manage their everyday tasks so they can remain living in their homes. Before academia, I supervised occupational therapy students as a clinical fieldwork educator. Within the past ten years, I made the transition from a clinical fieldwork educator to a faculty specialist where I teach

undergraduate and graduate OTSs. On account of not having an undergraduate or graduate degree in education, my teaching pedagogy continues to evolve primarily through my persistent need to ask “why”. In addition, my experience supervising OTSs as a clinical fieldwork supervisor, working with marginalized populations, engaging in peer mentoring, and understanding the historical underpinnings of educating healthcare practitioners are all motivators that encourage me to continuously improve my practice as an educator. I decided to pursue a doctoral degree in educational technology because I feel I have an ethical responsibility to provide the most effective, valuable, and engaging academic experience to my students so they are better prepared for a rapidly changing and diverse society (Mohr & Mohr, 2017; Streetman, 2015).

As society continues to evolve, the generation of undergraduate students evolves; therefore, my teaching pedagogy should reflect current student learning behaviors. According to Seemiller & Grace (2016), modern students are proficient digital connoisseurs who prefer flipped classrooms, Google to answer questions, and YouTube videos as a means for self-instruction. Gen-Z students demonstrate a preference to work alone, yet fear being left out; describe themselves as inquisitive, yet lack creativity; and are compassionate, yet judge others (Mohr & Mohr, 2017). My research will be designed through a constructionist lens, shaped by the constructivist worldview, melding a project-based learning (PBL) approach, Ignatian CBL pedagogy, and educational technology to help nurture a student’s enquiring disposition that promotes personal and professional growth (Jin & Bridges, 2014; Streetman, 2015).

My action research examined if the RPP improved my students’ transformative learning experience, as a CBL requirement; hence, my positionality was an insider (Herr

& Anderson, 2005). Greene (2014) reports that inside research threatens objectivity and has the potential for being too biased when interpreting the data. I, myself as the researcher, remained subjective and did not project my personal experiences and interactions with my students to influence the results or how the students reacted, made meaning, or responded to qualitative inquiries; instead, I remained open to new insights from outside my own experiences and embraced the opportunity for my personal development. To account for becoming too immersed in my students' learning experience and risking being too biased, I consciously practiced reflective exercises throughout the research process (Greene, 2014). Lastly, I was aware of my position of authority and minimized any potential influence. Students were informed that there was no formal grade associated with the CBL requirement; all students were expected to actively engage in the collaborative learning process to become more comfortable questioning their thoughts, perceptions, and beliefs. I presented myself not only as the facilitator but as a learner in the process to equalize the power differential (Greene, 2014).

Viewing the world through a constructivist lens explains how reality is perceived through social processes and how others experience the world (Mertens, 2005). As a constructivist researcher, I had to be cognizant of my worldview that each research participant will develop one's perception of reality through their lived experiences (Mertens, 2005; O'Gorman & MacIntosh, 2014) and how it can impact the research study. Because I believe reality and all human knowledge are socially constructed and unique to each research participant, I expected that multiple perspectives will garner varied meanings and new knowledge (Mertens, 2005). As the facilitator of the educational process, I was cautious to not project my views onto the students; I

developed reflective exercises that engaged students in critical analysis of one's dissonance to generate their new perspectives and worldviews. I made a deliberate effort to consciously consider how the research design can produce the desired outcomes for students to make an impact on the world they live in and, in turn, enable the CBL experience to be transformative (Mertens, 2010). From an insider researcher looking through an interpretivist lens, I balanced my role as facilitator in the process and my eagerness to learn from the students, so it did not prevent my students from engaging in a genuine transformative learning experience that allowed them to conceptualize their changed view of the world and develop an inquisitive attitude for life-long learning (Carnicelli & Boluk, 2017).

Utilizing a PBL approach, I facilitated Gen Z students to take photographs of contextual barriers and research information, collaborate in small groups (peers and community partners) to decipher contextual barriers to community health, jointly develop a plan to solve a problem, and then present their findings back to a larger group for discussion and analysis (Beacham & Shambaugh, 2007; Scaffa & Wooster, 2004). As the instructor, I designed a transformative learning experience that was engaging and empowered my students to share their stories and insights honestly. The experience developed competencies in problem identification, team collaboration, accessing information resources, self-directed learning, and lifelong learning through self-reflection (Beacham & Shambaugh, 2007; Blumenfeld et al., 1991; Han & Bhattacharya, 2010). The goal was for my students to join in a form of discourse that resulted in consciously examining self-perceptions of their own beliefs and feelings; how they view community needs differently; and how they perceive their role changing as a socially responsive

citizen that reveals an appreciation for the lived experiences of others, different from their own.

Definition of Terms

Community-based Learning

CBL is an experiential learning pedagogy that enables students to learn and apply course content through community engagement, structured to meet community-defined needs (Furco, 1996). One fundamental principle among Jesuit Universities is inserting oneself into the community to provide service to the poor, marginalized, and hopeless to eradicate injustice and disparity through CBL (University of Scranton, 2018b). The University of Scranton offers community outreach and promotes solidarity among all persons, thereby enriching Ignatian pedagogy (University of Scranton, 2018b). CBL prepares students to understand common challenges facing humanity, identify systemic problems, and develop a commitment to their communities through conscious reflection (University of Scranton, 2018b; University of Scranton, 2018c).

Transformative Learning

Transformative learning is defined as a recursive process whereby a learner continually questions one's assimilated understandings, fixed assumptions, perspectives, values, and beliefs of the world with an open mind that may then validate or alter how one views current realities (Mezirow, 1997). Reflective thinking prompts transformative change by nurturing self-awareness and emotional and intellectual growth which enable learners to act upon life events in ways that support their well-being and integrity, as well as the well-being and integrity of others (Mezirow, 2003).

Reflective Inquiry

Reflective inquiry encompasses intentional deliberation of one's intellect, beliefs, and perceptions from concrete to abstract that is examined cyclically for facts and insights to broaden one's understanding and knowledge that prompts contemplation for action (Brookfield, 2012; Dewey, 1933, 1938; Giles & Eyler, 1994; Kolb, 1984).

Occupational Justice

Occupational justice is a term used by the occupational therapy profession, defined as “a justice that recognizes occupational rights to inclusive participation in everyday occupations for all persons in society, regardless of age, ability, gender, social class, or other differences” (Nilsson & Townsend, 2010, p. 58). Occupational justice is rooted in CBL principles of social justice. Social justice is defined as a human right that all persons should have equal opportunity to access services, wealth, health, and well-being (Bell, 1997). Occupational and social justice principles are embedded in the premise that equal access and full participation in life is afforded to all people within society, despite beliefs or abilities (AOTA, 2020b; Bell, 2007). Occupational justice and social justice is achieved through mutual collaboration and respect for all people, populations, and society.

Context

Occupational engagement in life activities occurs within contexts that are influenced by the interaction between environmental and personal factors (AOTA, 2020b). Environmental factors encompass physical, social, and attitudinal surroundings where people live, work, and play. Examples may include but are not limited to: natural

human-built environment; products and technology; support and relationships; services and policies; and societal customs, beliefs (AOTA, 2020b).

Personal factors capture the unique attributes of a person that constitute life experiences. Examples include, but are not limited to: age; gender; education level; socioeconomic status (SES); expected cultural attitudes, beliefs, and behaviors; race; professional identity; lifestyle; and other individualized traits. (AOTA, 2020b).

Collectively, the context is a dynamic interchange of external and internal features that influence how people live and conduct their lives. Contexts can be perceived as affordances that support occupational performance or barriers that impact engagement in occupations that nurture health and wellness (AOTA, 2020b; Amerson & Livingston, 2014).

Reflexive Photography

Reflexive photography was generally defined as a collection of photographs, taken by the research participants, which was used to portray societal problems using educational technology tools and software. Reflexive photography was used to generate critical consciousness through a reflective, collaborative process to identify the perceived needs of the local community and empower advocacy for occupational justice as interpreted by the research participants (Wang & Burris, 1997). 1st year OTSs captured images of community barriers to public health and wellness. Since the early 1990s photographs have been used as a participatory action research methodology for marginalized populations to photograph situational, attitudinal, or environmental concerns within their communities (Wang & Burris, 1999). Using photographs in research has since evolved and has been used successfully in disability, public health,

education, and refugees studies (Sutton-Brown, 2014). However, no current studies exist that show how 1st year OTSs use reflexive photography to enhance a transformative learning experience.

CHAPTER 2

LITERATURE REVIEW

The purpose of this action research is to evaluate the effectiveness of implementing reflexive photography as a means for a transformative community-based learning (CBL) experience. The review of related literature focuses on the following research questions: (a) How does a RPP change how 1st year occupational therapy students view occupational justice?, (b) How does a RPP change how 1st year occupational therapy students perceive their role as a socially responsive citizen for occupational justice within their local community?, and (c) How does a RPP influence 1st year occupational therapy students' awareness about contextual barriers that may impact community residents' health and wellness?.

Literature Review Methodology

Based on the research questions, four main variables were used to guide the literature search: (a) transformative learning in higher education, (b) community barriers to health and wellness, (c) occupational therapy's role as a socially responsive citizen, and (d) occupational justice. The resources for this review were collected through a variety of methods, including electronic databases, a web search engine, reviewing cited references in research articles, utilizing interlibrary loan services, accessing e-books, and consulting with an experienced researcher.

The electronic databases were accessed through the University of South Carolina and the University of Scranton library systems to search for articles from peer-reviewed

publications. Databases included *ERIC*, *Academic Search Elite*, *CINAHL*, *Health Source: Nursing/Academic Edition*, and *Education Source*. Combinations of the following keywords, including exclusions, were used: reflective inquiry, reflection, or critical reflection; transformative or experiential or occupational therapy and learning or education; CBL, or service + learning or pedagogy; project-based learning (PBL) not problem-based learning; group collaboration or team-based inquiry; dissonance or disorienting dilemma; community barriers or obstacles + health and wellness; community needs or health and wellness; occupational justice or social justice or health disparities or injustice; social responsibility or engaged citizen; reflexive photography or photovoice or photo elicitation or visual technology or visual research; occupational therapy or health care; higher education not K-12; and scaffolding + CBL.

To further narrow the focus of this literature review, I searched for articles dated within the past 10 years; however, on account of the brevity of research articles related to my specific research intervention in association with CBL and my discipline some older articles were included if they were applicable.

Additional resources I used for this literature review include: *Google Scholar* website accessible through the University of South Carolina's virtual private network utilizing combinations of the above keywords or specific articles referenced in or cited by other research articles. When articles or books were not available I requested copies or accessed eBooks through the Interlibrary Loan Department at each university. To further locate related materials that were useful to my study, I consulted with the Director of Assessment in the Office of Community Engagement at a prominent mid-western

university known for their CBL research who personally conducts research that evaluates CBL.

The review of this literature is organized into three major sections: CBL in higher education, PBL in higher education, and instructional design for transformative learning. CBL in higher education elaborates on the basic tenets of CBL, which include transformative learning, reflective inquiry, and occupational justice. Next, PBL in higher education is examined from a theoretical perspective and how it is implemented as it relates to CBL pedagogy and occupational therapy (OT) in higher education. Lastly, the final category examines both challenges and facilitators that can influence the instructional design process when creating a transformative CBL experience.

Community-based Learning in Higher Education

CBL provides a service in a community that facilitates academic learning. CBL is an intentional, organized experiential learning pedagogy that meets an identified community need and implements a reflective component to increase learning course content, awareness of academic discipline, and enhance social responsibility (Bringle & Hatcher, 1999). CBL varies across institutions of higher education, disciplines, and levels of commitment (Furco, 1996; Jacoby, 2015; Latta et al., 2018). For these reasons the terminology used to discuss CBL varies as well which warrants a further explanation to understand key terms related to this research study, specifically CBL and occupational justice. CBL was originally designated and still used today by some, as service-learning (SL) (Jacoby, 2015). Since CBL's renewed presence in higher education many institutions have chosen terms that better reflect their missions, beliefs, and purpose for CBL. Additional alternative names include, but are not limited to community-based

teaching, community engagement, civic education, and civic engagement (Bringle & Hatcher, 2000; Furco, 1996; Jacoby, 2015). CBL is the terminology used throughout this document.

When discussing social responsibility, civic engagement, citizenship, change agent, or similar terminology, the association among the interchangeable terms is the premise for social and occupational justice. It should be noted that social justice is the more common term discussed in CBL literature; however, for this research study, occupational justice will be the guiding principle that links social justice. Occupational justice was chosen because it further expands upon social justice to include how OT practitioners acknowledge the impact contextual factors have on all individuals, populations, and societal groupings' occupational rights to fully participate and interact in their world (AOTAb, 2020; Wilcock & Townsend, 2019). The essence of occupational justice is understanding humans, individually and collectively, as occupational beings interacting in a world of equality and inclusiveness.

In the subsequent section, principles of CBL are studied from a theoretical perspective as they relate to transformative learning models and CBL pedagogy in higher education. From a theoretical perspective, Mezirow's and Kiely's theories of learning are reviewed first as the underlying assumptions to transformative learning, followed by CBL's founding principles that are informed by Dewey's and Kolb's learning theories. Research on CBL's transformative learning process through reflective inquiry and occupational justice are shared to demonstrate how deepening intellectual understanding of how one views the world as reality changes and the effects of occupational injustice on participation in life transforms students to become agents of change.

Transformative Learning Process

Transformative Learning Models

Transformative learning, akin to critical thinking (Brookfield, 2012), is the thinking process by which we transform our engrained, “problematic” assumptions and perceptions of how one views the world “...to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action” (Mezirow, 2000, p. 8).

Taylor’s (2004, 2007) research substantiates the following non-sequential constructs evident in transformative learning, informed by Mezirow (2002): (a) disorienting dilemma, (b) self-reflective process, (c) contemplating assumptions, (d) dissonance as a shared process, (e) hypothesizing actions, (f) creating a plan of action, (g) skill acquisition/knowledge in implementing the plan, and (h) evaluating and integrating changed perceptions into one’s life as a result of the transformative process.

Mezirow originally proposed the transformative learning theory in adult education within the past 40 years, which is a core principle in CBL pedagogy. Conscious reflection, originally conferred by Dewey, provides the basis for learning by doing which is a prominent dynamic in both Mezirow’s and Kolb’s experiential learning theories (Kolb, 1984; Mezirow, 2003). The theoretical roots of CBL were founded in the constructivist works of Dewey and Kolb, both of which informed the cultivation of Mezirow’s transformational learning theory. The impetus for the transformative learning model was Mezirow’s interest in understanding how adult learners perceive the world and what internal processes and influences (culture, past experiences, personal identity, and knowledge) shape learners capacity to self-reflect as they challenge “habit of mind”,

explore new meanings, and contemplate “disorienting dilemmas” to grow personally and intellectually (Mezirow, 2000, 2012). CBL’s transformative process is not an independent action devoid of context, rather it is an active learning process while partaking in learner-directed, personally meaningful activities (Howie & Bagnall, 2013; Mezirow, 2000, 2012; Taylor, 2007). CBL is a high-impact, pedagogical approach to transform perspectives and cultivate socially responsible graduates who are empowered to commit to social justice and community sustainability throughout life.

Mezirow’s transformative learning theory is subject to constant review despite its established presence in adult education and CBL at present. Critical research on transformative learning does not exclusively question the facts of the theory suggesting rejection from a philosophical stance; instead, it suggests topics to explore further to improve or refine conceptualization of the theory (Howie & Bagnall, 2013; Taylor, 2007; Taylor & Laros, 2014). Factors sustaining further inquiry, specifically in higher education, include: subjective thereby resulting in varying interpretations from faculty and learners; the focus of research does not measure transformative theory as a construct, but instead becomes evident as a result of research; lack of an operationalized definition; insufficiently accounting for the complex nature of critical reflection; lacks association to learner-directed process; research design (small, purposeful samples); few comparability studies among different populations or other teaching approaches; limited quantitative measurements; and variability of contexts implementing transformative learning (Howie & Bagnall, 2013; Kiely, 2004; Taylor & Laros, 2014).

Despite the ambiguity of research, Kiely (2005) conducted a longitudinal case study, over six years, to better understand undergraduate student perceptions of

transformative learning before and after international CBL. Analysis of findings through pre-and post-surveys, photographs, journals, reflection papers, action plans, focus groups, and semi-structured and structured interviews resulted in five learning processes that provided the conceptual framework for Kiely's Service-Learning Model of Transformation (see Appendix B). The five learning processes, comparable to Mezirow's constructs, include contextual border crossing that includes personal (i.e. personality, learning style), structural (i.e. race, class, gender, and culture), historical (socioeconomic and political system of international country), and programmatic factors (degree of immersive experience, critical reflection with diverse perspectives); dissonance; personalizing; processing; and connecting (Kiely, 2005). The results from the multiple sources of data analysis provided compelling evidence of transformative change that compares to Mezirow's principles of transformative learning theory throughout and after the CBL experience (Kiely, 2004).

CBL Pedagogical Framework

Although CBL terminology may differ, the fundamental elements and underlying paradigms associated with CBL are the same, including reflection, reciprocity, project-oriented, and social change (Jacoby, 2015; Morton, 1995). CBL is an equal, collaborative partnership between academic institutions and the community that reciprocates mutual values and benefits through engagement in a community project (Jacoby, 2015). A CBL project is structured around an identified community problem that results in a commitment to address societal issues through meaningful action and social change (Furco, 1996; Jacoby, 2015; Morton, 1995).

CBL has its origins rooted in Dewey's philosophy of learning dated back to the early 1900s (Dewey, 1938). Dewey (1933) believed education should be an active, collaborative process that engages students in solving real-life problems that are evident in society. Dewey (1933) asserts genuine learning is derived from experience through reflective thinking. Reflective thinking encompasses intentional deliberation of one's intellect, beliefs, and perceptions that are examined cyclically for facts and insights to broaden one's understanding and knowledge (Dewey, 1933, 1938; Giles & Eyler, 1994). Dewey (1938) proclaimed that genuine education comes from practical experience; however, not all experiences are genuinely educational. Acquisition of genuine knowledge results from a conscientious analysis of how an experience touched oneself, including associated feelings (Cress, 2009; Dewey, 1933). Therefore, learning through knowledge acquisition and demonstrating the capacity to associate feelings to events or situations is an essential skill set that enables students to apply their talents and abilities to be change agents as engaged citizens in the local community (Cress, 2009; Dewey 1933, 1938). Dewey (1933, as cited in Cress, 2009) "argued that reflective thinking is the key to whether an experience is actually educative" (para. 11).

Kolb's (1984) Experiential Learning Model provides a theoretical framework for experiential teaching practice. Kolb's (1984) model consists of four key elements that cyclically move the learner through a process from concrete experience to action. Students critically reflect on the CBL experience, synthesize abstract concepts or issues related to the root causes for service, which ultimately results in plans of action to potentiate change in the community during and even after CBL (Jacoby, 2015; Kolb, 1984).

CBL is an experiential, transformative pedagogy that aligns with the paradigm shift in higher education (National Association of State Universities and Land-Grant Colleges, 2001). Learners gain academic knowledge and apply theory to practice first-hand as they address identified needs in their communities (Bettencourt, 2015; Bringle et al., 2004). Researchers at Vanderbilt University completed a thorough review of current research and consistently found CBL as a high-impact teaching pedagogy (Eyler et al., 2001). Studies confirmed CBL results in the following positive outcomes: academic learning (critical thinking, problem analysis, cognitive gains) (Dahan, 2016), applying knowledge/skills in a real-world context, personal development (spiritual growth, personal identity, self-efficacy), cultural awareness, dissipating cultural insensitivities (Mey et al., 2018), a commitment of social responsibility, and career development (Jacoby, 2015; Kuh, 2008). Experiential activities that closely align student learning outcomes with societal issues generate opportunities for learners to recognize and understand how social injustice impacts community members (Moely & Ilustre, 2014). Evidence of transformative learning emerges as learners acknowledge and become aware of societal issues that require change. As a result, learners contemplate solutions to societal problems and consider how they can help communities (Hullender et al., 2015). A learner's sense of social responsibility and transformed confidence in their role as a change agent in society is the impetus for a life-long commitment to sustaining healthy communities and preventing illness and disability.

Reflective Inquiry

Collaborative Reflection

CBL fosters teaching and learning through a cyclic reflective process throughout and beyond the experiential component of CBL. Reflection is defined as a conscious awareness when one examines and analyzes previous knowledge and experiences to promote a deeper understanding of realities and cognitive development, resulting in educated decisions or actions (Bringle & Hatcher, 1999; Brookfield, 2012; Moely & Ilustre, 2014). Critical reflection requires critical thinking, which is a higher-order cognitive skill that can stimulate a more in-depth analysis of a CBL experience that precipitates contemplation of personal awareness and exploration of causes for occupational justice inequalities and other societal concerns (Bettencourt, 2015; Brookfield, 2012).

Collaborative reflection is an essential thread interspersed throughout CBL and OT education (Ash & Clayton, 2009; Naidoo et al., 2018). Dialogue instigates new learning by investigating perceived truths through respectful dissonance as varied influential factors, such as solutions, hypotheses, motivations, and uncertainties are integrated and analyzed (Ash & Clayton, 2009; Naidoo et al., 2018). The Accreditation Council for Occupational Therapy Education ([ACOTE], 2018), although not specifically stated as reflection, requires entry-level therapists to demonstrate the ability to: reflect on one's practice to make unbiased and informed decisions; recognize social determinants of health; interpret, analyze, and advocate for equality among populations at risk for health disparities; and develop solutions that address societal needs. Similarly, the AOTA Code of Ethics states that practitioners must continuously evaluate how one's values and

beliefs impact on ethical decisions during the OT process when designing and implementing evidence-based interventions and advocating for occupational justice (AOTA, 2015; Cohn et al., 2010). The basic tenets of experiential learning are consistent with OT education in that learning is best actuated by doing (evaluation, analysis, hypothesis generation, intervention, and program planning) in context-specific settings that are guided by reflective learning (Knecht-Sabres, 2013; Parmenter & Thomas, 2015; Schon, 1983, 1987). Eyler et al. (1996) present “4 C’s” for high-quality reflection applicable across teaching approaches and professional development:

1. Continuous thread throughout CBL and other experiential learning
2. Connected to course learning objectives
3. Challenging prompts to demand learner effort, individually and collectively
4. Contextualized to match curriculum and learner needs

Research on effective reflective exercises indicates that the quality and nature of reflection produce greater gains in transformed worldviews and student learning outcomes more than the number of reflective exercises (Bringle & Hatcher, 1999; Clayton & Ash, 2004; Eyler & Giles, 1999; Hatcher et al., 2004; Marby, 1998). Features that improve the quality of reflections are providing clear expectations (Mey et al., 2018), sustained reflection (Dahan, 2016), supportive educator guidance, receiving and providing constructive criticism, and sharing through different formats (reflection papers, journals, semi-structured interviews, and focus groups) (Ash & Clayton, 2009; Eyler, 2002; Naidoo et al., 2018).

Transformative changes become evident through collaboration when students who participate in CBL acknowledge differences in how one defines or views societal issues

evident in society and begin to contemplate their roles in helping communities overcome contextual barriers (Hullender et al., 2015; Mitchell & Rost-Banik, 2020; Nilsson & Townsend, 2010). To assist in this process educators help students through episodes of disequilibrium by asking directed questions in a supportive manner which results in deeper contemplation and changed perceptions (Harkins et al., 2020; Hullender et al., 2015). Similarly, undergraduate students who participated in CBL courses reported the collaboration and guidance provided by their professors, community partners, and peer mentors increased civic engagement behaviors and social justice attitudes (Harkins et al., 2020; LaDuca et al., 2020). Students move from a superficial, cognitive way of processing current perceptions as truth to developing a capacity for exploring and understanding a phenomenon from different perspectives that motivates action (Eyler, 2002; Harkins et al., 2020; Hullender et al., 2015).

Developing the capacity to engage higher-order thinking that results in critical thinking, takes time. Practicing reflection over a period of time is a reoccurring theme throughout CBL research, which directly correlates with the quality of reflections (Coulson & Harvey, 2013). Research indicates that time can be a barrier to implementing reflective and transformative CBL collaborations. For example, short-term CBL projects (less than 15 weeks), resulted in students reporting lower community self-efficacy than students who participated in long-term CBL projects (greater than 15 weeks) or students who were assigned no CBL (Dahan, 2016). Latta et al. (2018) propose a different view about CBL's transformative learning process; instead of viewing transformative learning as an outcome achieved at a given point in time, one should consider transformative

learning as an ongoing evolving process that never comes to a culminating endpoint after graduation from an academic institution.

Exploring Assumptions and Dissonance

Central to the transformative process is how a student views the world through a single lens, to recreating an expanded world view that encompasses new knowledge, personal meaning, insightful comprehension of societal needs, and compassion for differences (Mitchell et al., 2015), that moves oneself to use acquired skills, abilities, and talents to prevent injustices and disparities in society (Greene, 1988; Kolb, 1984; Mitchell, 2017). Transformative learning allows students to create their meaning of reality by interpreting evidence that supports or challenges perspectives which will then guide their actions during and beyond the academic setting (Bamber & Hankin, 2011; Hullender et al., 2015). Proponents of CBL argue that transformative learning occurs when students engage in a process of reflective inquiry, which is precipitated by a disorienting dilemma or dissonance (Kolb, 1984; Mezirow, 2012). As students contemplate new realities, different perceptions and understandings are explored cyclically which then fosters a pattern of sustained inquiry (Jacoby, 2015; Naidoo et al., 2018).

Exploring assumptions and experiencing internal or external dissonance expands students' understandings of societal issues and stimulates a purpose for action. As Mezirow (1997) noted, a disorienting dilemma is a catalyst for reflective inquiry. Impactful disequilibrium directly correlates with the degree of influence on how open the student is to contemplate others' perspectives, hypothesize different ways of thinking, and

increase tolerance for divergent patterns of problem resolution (Kiely, 2005; Mezirow, 2003; Mitchell et al., 2015).

Research findings indicate that a higher level of dissonance experienced by a student can generate prolonged contemplation and changed perceptions (Christie et al., 2015; Kiely, 2005; Mattila, 2019). Comparably, as undergraduate and graduate students begin deliberating dissenting perspectives, they may initially experience a greater degree of frustration in one's confidence and ability to effect social change (Bazyk et al., 2010; Christie et al., 2015; Mattila, 2019; Naidoo et al., 2018). For example, undergraduate OTSs preconceived connotations towards populations at risk for social and health disparities different than their own (lower SES, persons with a mental illness, different cultural backgrounds) augmented a higher level of anxiety before CBL (Bazyk et al., 2010; Hansen et al., 2007; Sanders et al., 2016). Guided reflection exercises interspersed throughout CBL helped students develop the capacity to view populations at risk for social and health disparities from different perspectives that resulted in students reporting feeling more comfortable and confident when interacting with community partners (Bazyk et al., 2010; LaDuca et al., 2020; Liu & Lin, 2017; Mattila, 2019; Naidoo et al., 2018).

In OT practice, Jean Ayres conceptualized the phrase “just right challenge” when an OT practitioner designs an intervention with challenges that are achievable but not too demanding which results in the client preserving versus giving up on the task (Yerxa et al., 1990). The client self-directs the response to the intervention “challenge” whereby they adapt their behavior to produce a change in physical, cognitive, emotional, or psychosocial development (Schaaf & Miller, 2005). Similarly, Sanford (2009) argues the

necessity to balance the challenge when experiencing cognitive dissonance with an appropriate level of support to prevent the learner from becoming resistant to change or abandoning the task. Dissonance triggers new learning, stimulates personal growth, and assimilates new ways of thinking during periods of disequilibrium that require deepening contemplation or one risks complacency (Bringle & Hatcher, 1999; Eyler & Giles, 1999; Hullender et al., 2015; Kiely, 2005). It is essential in this process to establish a supportive learning community, often consisting of a combination of peers, community representatives, and faculty, who provide reassurance to the student as they commit to examining their presumptions at a deeper level despite feelings of vulnerability (Blakey et al., 2015). The goal for CBL is to graduate empowered citizens who have the fortitude, intellectual capacity, desire, and confidence to navigate and question the complexities evident in the world today and in the future while advancing social and occupational justice through action.

Occupational Justice

Impact of Contextual Barriers on Occupational Engagement

CBL and the occupational therapy profession are based on the premise of justice for all, equality, and reciprocal transformative learning to empower populations in developing sustainable communities that overcome barriers and instead afford opportunities to support participation in life (ACOTE, 2018; Jacoby, 2015). The distinction emphasizes the purpose for CBL is not to provide a service as charity or volunteer work, instead collectively address societal issues for the betterment of society as a whole. Occupational justice views humans as social beings within a collective society. When humans are enriched with knowledge, skill-sets, and commitment to

justice it directly impacts their quality of life, health, and wellness (Cohn et al., 2015; Fenzel & Leary, 1997; Hansen & Hinojosa, 2014; Nilsson & Townsend, 2010; Paul-Ward, 2009).

Quality of life, health, and wellness are basic human rights extended to all people, groups, and populations. Freedom to access facilities, services, entertainment, conveniences, and other available entities in society for the betterment of one's health and wellness despite the level of function, current circumstance, or life choice is a basic human and occupational right (Cohn et al., 2015; Hammel et al., 2015; Kallen, 2004; WHO, 2017). Occupational rights are defined as “the right of all people to engage in meaningful occupations that contribute positively to their own well-being and the well-being of their communities” (Hammel, 2008, p. 6, 2017). When contextual barriers exist, occupational rights are at risk which increases the potential for social determinants of health and health inequalities (Bass-Haugen, 2009; Hammel et al., 2015; Heffron et al. 2018). Contextual barriers can include a combination of personal and environmental factors. Personal factors include age, gender identity, culture, cultural beliefs, race, health, SES, education, and life experiences (AOTA, 2020b; Cohn et al., 2015). Similarly, environmental factors include social and attitudinal barriers; relationships; political or legal systems; services and policies; and natural and human-built surroundings (AOTA, 2020b, CDC, 2020, Cohn et al., 2015).

Research indicates that contextual barriers cause social determinants of health and health inequalities in communities, which results in higher rates of disability, disease, and illness among populations at risk for disparities throughout the lifespan (Bass-Haugen, 2009; CDC, 2020; Cohn et al., 2015; Hammel et al., 2015; WHO, 2017). When

contextual barriers exist, social isolation becomes prevalent. Social isolation, whether caused by real or perceived contextual barriers, results when access to community resources or leisure occupations is decreased which has been shown to negatively impact the health and wellness of older individuals (Nilsson, 2006), persons who experience homelessness (Massengale et al., 2016), individuals living with a disability (Deepak, 2014; Ripat et al., 2015), and other populations at risk for social or health disparities. Factors that have been shown to limit access to equal participation in life include lower SES (Bass-Haugen, 2009; CDC, 2021; Ramirez et al., 2008); limited transportation (Andonian, 2010; CDC, 2021; Chaudhury et al., 2012; Hammel et al., 2015); healthcare and education access, including quality (CDC, 2021); physical and mental disabilities (Bass-Haugen, 2009; Bunn et al., 2008; Ripat & Colatruglio, 2016); and attitudinal barriers (Heffron et al., 2018). As a result inequalities among populations exist that reveals detrimental effects on a community, ranging from physical ailments including cardiovascular disease, diabetes, respiratory illness, and cancers (Bass-Haugen, 2009; Ramirez et al., 2008) to emotional manifestations seen as higher rates of mental illness and substance abuse disorders (Ramirez et al., 2008), feelings of loneliness, depression, and fear related to safety (Bass-Haugen, 2009; Bunn et al., 2008; Ripat & Colatruglio, 2016; Ripat et al., 2015). Additionally, distinct from a person's physical, cognitive, or psychosocial abilities, societal attitudes (attitudinal barriers) is a prominent barrier that imposes community obstacles and restrictions among populations at risk for social and health disparities (AOTA, 2020a; Heffron et al., 2018). Equitable participation in life is achievable when learners and community partners become knowledgeable about contextual barriers that induce questioning political, social, and economic systemic

changes to help eradicate social disparities, improve health and wellness, and prevent illness and disability through action (Bass-Haugen, 2009; Hammel et al., 2015; LaDuca et al., 2020; WHO, 2017).

Cultivating Socially Responsive Citizens

Limited access to resources is one factor that impacts equitable participation in life. Consequential social and health disparities also ensue when a failure to act on overcoming barriers to equality occurs that results in persons and populations experiencing social exclusion (ACOTE, 2018; WHO, 2017). CBL pedagogy aligns with institutional values and OT education to nurture future healthcare professionals that embrace a commitment to occupational justice through action and perseverance despite resistance for the health and wellness of all individuals, populations, and society (ACOTE, 2018; Jacoby, 2015; Watson & Haas, 2011). This distinction clarifies the focus of CBL on social change and connectedness to action as opposed to providing a service as a charity (Bowen, 2014). In essence, this is the culminating outcome in a CBL relationship that inspires an unceasing commitment from all individuals involved during the transformative process to engage in advocating for social inclusion for all persons and populations regardless of age, race, gender, functional ability, or other differences (Nilsson & Townsend, 2010; Rehabilitation Act of 1973, 1978).

Factors have been identified that contribute to a student's level of confidence in enacting social change during CBL. The following components or strategies implemented during CBL contributed to a student's awareness that they can make a difference in the world. Examples include aligning CBL projects with students' interests; asking focused questions about who can have the greatest impact on addressing the community concerns

or what are ways you can communicate your concerns; creating artifacts that generate advocacy-related discussions; engaging in dialogue with others to gain a deeper interpretation of a problem and exploration of possible resolutions; and sharing actions or behaviors that can mitigate a societal problem (LaDuca et al., 2020; Massengale et al., 2016; Peabody, 2013). CBL experiences prompted undergraduate students to become more aware of occupational justice issues, thereby stimulating an innate desire to help others overcome perceived barriers that create disparities in one's community (Moely & Ilustre, 2014). Each CBL experience prompts learners to self-reflect and consciously evaluate how one's perceptions continue to evolve as they ponder a renewed sense of their role in society as a student, citizen, and advocate (Hullender et al., 2015).

Students applied acquired knowledge and skills to address identified needs in their communities (Bettencourt, 2015). CBL that closely aligns student learning outcomes with social issues generates opportunities for students to recognize and understand how occupational injustice impacts community members (Bazyk et al., 2010; Moely & Ilustre, 2014; Nilsson & Townsend, 2010). A qualitative analysis resulted in interwoven themes embedded in a variety of CBL initiatives that provoked new learning, personal growth, and social responsibility, including challenging preconceived stereotypes (Bazyk et al., 2010; Sanders et al., 2016), learning by doing, mindful planning, active engagement, dialogue between two or more individuals, and exploring current and future roles (Naidoo et al., 2018). Self-identities were transformed as students anticipated poignant roles in society where they can empower others to voice concerns or impact on policies that promote justice (Mitchell et al., 2015). Developing and partaking in CBL fosters meeting academic outcomes and provides an impetus for empowering OTSs to address

societal needs that eradicate recognized disparities within one's sphere of influence (Hammel et al., 2015; Hansen et al., 2007; Hansen & Hinojosa, 2014; Nilsson & Townsend, 2010).

Project-based Learning in Higher Education

Project-based learning (PBL) is an instructional model for teaching and learning designed to immerse students in an active, project-based learning process, whereby they apply classroom knowledge to address complex, “real-world” social issues or problems (Blumenfeld et al., 1991; Buck Institute for Education, n.d.; Piaget, 1969; Vygotsky, 1978). This research study implemented and evaluated a RPP as a component in conjunction with CBL.

In this section, principles of PBL are researched from a theoretical perspective as it relates to CBL pedagogy in higher education. The constructivist and constructionist theories are reviewed first as they relate to the underlying assumptions of PBL, followed by the PBL instructional model's precepts. Specific to this research study, PBL is further examined as an intervention approach to CBL pedagogy in OT higher education. Specifically, research is provided that demonstrates how reflexive photography is being used to facilitate transformative learning through increased awareness of contextual and social phenomena, knowledge acquisition, and as an impetus for social change.

Theoretical Framework for CBL and PBL

Constructivism

Dewey's notion that learning occurs by doing is the foundation in which constructivism originated. Piaget (cognitive constructivist) and Vygotsky (social constructivist) are two notable philosophers credited with explaining constructivism as an

educational philosophy symbolic of how learning happens primarily rooted in childhood development. Piaget believes that learners construct their knowledge and meanings based on personal experiences and understandings (Piaget, 1969; Smith, 1993). Central to this belief is the learners will engage in a continuous process of reflecting on what they know and new knowledge acquired during personal learning experiences (Mohammad & Rob, 2018; Smith, 1993). The result is new learning occurs and perceptions are changed as individuals gain a deeper understanding of themselves and the world that then guides further developmental stages of knowledge acquisition throughout life.

Social constructivism was originated by Vygotsky. Vygotsky's contributions lend an argument that learning cannot be separated from the social context that encompasses learning experiences (Vygotsky, 1978). Meaning, learning occurs through human activity and within the social and cultural constructs that interaction occurs. Essentially knowledge acquisition is a product of social interactions that deepen understanding and construction of meanings. Vygotsky's (1978) principles act on a premise known as Zone of Proximal Development (ZPD). The ZPD is defined as the point when optimal learning occurs. Learning is facilitated by a social exchange between someone more knowledgeable than the learner who can guide learning just beyond what is already known or understood by the learner. Scaffolding the amount of support offered during instruction or the structure of an assignment further enhances the development of new knowledge (Vygotsky, 1978). ZPD correlates with the "just right" challenge prominent in OT practice (Rebeiro & Polgar, 1999; Yerxa et al., 1990). The "just right" challenge is an optimal experience that matches a client's abilities and the demands of an activity that potentiates skill development (Rebeiro & Polgar, 1999; Yerxa et al., 1990). The concept

aligns with the notion of “flow” when skill development occurs, whereas if therapeutic intervention is not challenging enough, sustained attention or skill development does not occur, on the other hand, if it is too challenging the client will experience anxiety thus impact on the potential for skill development (Csikszentmihalyi, 2008).

Constructivism, in its broadest sense, poses learning as an active learning process in meaningful contexts that is facilitated by an educator for guidance and support, in comparison to being a passive recipient of knowledge (Piaget, 1969; Vygotsky, 1978). Learners become captivated recipients of knowledge when immersed in environments that facilitate engagement. Learners question what they know, interpret new information, and reflect individually or collaboratively with others in a cyclic process that generates new understandings and meanings (Smith, 1993; Vygotsky, 1978).

Constructionism

Papert’s introduction of constructionism augments Piaget’s constructivism as a theory of learning and a method for instruction (Ackermann, 2012). The premise of constructionism provides the same foundation as constructivism; however, Papert asserts that deeper learning occurs when an artifact, external from the learner, is created and shared with others (Ackermann, 2012; Mohammad & Rob, 2018; Papert, 1991).

The educator and learners have a shared responsibility during the learning process. The role of the educator is to provide the context of the problem, situation, or assignment within a real context and provide guidance throughout the process as needed to help the group progress throughout each stage of development (Han & Bhattacharya, 2010; Mohammad & Rob, 2018; Papert, 1991). Learners interrelate with others who have a shared outcome, with clear expectations. A learner-directed process of investigation is

initiated to explore the situation, consider strategies for achieving the outcome, collaborate with others outside of the instructional environment, re-evaluate and revise a plan of action, and then share results with others (Ackermann, 2012; Papert, 1991). The resultant outcome is in the form of a tangible or meaningful artifact that is external to the learners (Mohammad & Rob, 2018; Papert, 1991).

Integrating PBL, CBL, and OT Education

History of PBL Research in Higher Education

PBL research has been limited and predominantly situated in the K-12 setting, on account of a lag in higher education adopting the learning approach (Helle et al., 2006; Lee et al., 2014). Thomas (2000) completed an extensive review of PBL literature that highlighted contributing factors for the lack of research. Predominant factors include diversity in defining PBL; variability in implementing PBL among different educational settings and disciplines; and challenges distinguishing it from other teaching models with similar constructs, including PBL which is a more abstract conceptualization of problem resolution (Barrows, 1986); and experiential learning which excludes conscious reflection and action (Kilpatrick, 1921; Lee et al., 2014; Thomas, 2000). More recently, PBL has received an increased resurgence in attention since its conceptual constructs were first introduced by Kilpatrick's "The Project Model" in 1918 and other critiques by renowned philosophers, such as Dewey, questioning the "laissez-faire" attention to the cognitive processes involved in learning and the role of the educator (Kilpatrick, 1921; Larmer et al., 2015). Increased interest in PBL is associated with the demands to help learners master 21st-century skills who can demonstrate critical thinking, initiative, creative problem solving, reliable analysis skills, and teamwork (Boss et al., 2018; Larmer et al.,

2015). Recent proponents of PBL have been dedicating attention to the revitalized interest by researching PBL in practice and developing a guiding framework for educators as new educational initiatives are developed across all settings including higher education and corporations (Boss et al., 2018; Buck Institute for Education, n.d.; Larmer et al., 2015).

Synthesis of PBL, CBL, and OT Research in Higher Education

Recognized features of high-impact PBL that make it an effective and justifiable teaching approach in CBL higher education have been shown to include the following characteristics: (a) captive focus on a complex “real-world” problem or need, (b) meaningful to learners interests and academic objectives, (c) authentic, engaging, challenging learning experience, (d) community impact and involvement, (e) self, peer, and community reflective critique and learning, (f) student-directed choice and voice, (g) educator guidance, and (h) shareable final project (Boss et al., 2018; Brescia et al., 2009; Krajcik & Blumenfeld, 2006; Larmer et al., 2015; Thomas, 2000).

PBL (Blumenfeld et al., 1991; Krajcik & Blumenfeld, 2006), CBL (Jacoby, 2015), and OT education (Bazyk et al., 2010; Cohn et al., 2010) are not entirely distinct from each other, rather they share the same fundamental constructs of learning by doing within an authentic contextual framework to analyze, solve, or act on complex problems inherent in society, while engaging in a reflective practice of inquiry. Learning by doing impacts students' personal and professional growth, social responsibility, and awareness of community needs by engaging learners in community projects (Cohn et al., 2010; Krajcik & Blumenfeld, 2006).

CBL pedagogy is contributing to an increase in PBL and, albeit limited, OT research in higher education (Bazyk et al., 2010; Hansen, 2013; Hansen et al., 2007; Sanders et al., 2016). One of the goals for undergraduate OTSs engaging in CBL is to commit to occupational justice principles set forth by the profession, whereby students, the community, and the world experience transformative changes (Hansen, 2013; Hansen & Hinojosa, 2014). Guided by constructionist paradigms, researchers explored the learning process from the perspectives of undergraduate OTs (Bazyk et al., 2010; Naidoo et al., 2018) and other health-related disciplines (Hamel, 2001). First-year OTSs created preventive occupation-based groups for low-income urban youth exhibiting behavioral issues (Bazyk et al., 2010) and community-dwelling older adults at risk for poverty or living with a disability (Naidoo et al., 2018). Predictors of transformative learning emerged as stereotypes changed and disorienting dilemmas were examined and analyzed that resulted in students adapting responses (Bazyk et al., 2010; Hamel, 2001; Naidoo et al., 2018). First-year OTSs and physical therapy students had to reframe their thinking by synthesizing previous knowledge and modify their plans of action in response to unanticipated happenings or challenging behaviors encountered throughout the CBL experience (Bazyk et al., 2010; Hamel, 2001). Constructionist principles helped to guide research participants as they engaged in a continuous process of analysis and reflection-in-action throughout the CBL experience resulting in developing and modifying group projects to meet the dynamic needs of each population. Students imparted their knowledge as they interacted with the community and in return gained new knowledge from the experience.

Reflexive Photography Research

Reflexive photography is defined as a qualitative method of inquiry whereby research participants take photographs and then reflect, in writing or through dialogue, what the photographs represent and any associated meanings as interpreted by the research participants (Amerson & Livingston, 2014; Harrington & Schibik, 2003). Harper (2012), who is a sociologist, argues that using visual artifacts to view the world captures a different “story” with more in-depth interpretations and meanings than can be described using only verbal or written language. Visual artifacts can include photographs, drawings, videos, films, paintings, virtual creations, or other visual graphics (Harper, 2002; Torre & Murphy, 2015).

Research in reflexive photography provides a framework when designing CBL projects that is transformative, reflective, and life-changing. Reflexive photography is being used in research as a method of inquiry that uses visual artifacts as a form of visual communication as interpreted by research participants (Harper, 1988). Visual research has been more prominent in anthropology and sociology (Harper, 2002); however, it has been increasing within education research, marketing, and healthcare (Torre & Murphy, 2015). For example, visual ethnography and documentary photography are used primarily to help document and understand social reality (Harper, 1988), photovoice is used to give marginalized populations a voice to improve communities (Wang & Burris, 1997), and photo elicitation interviews are used when researchers use open-ended questions to understand how research participants interpret visual artifacts representing the world through their own eyes (Torre & Murphy, 2015).

Researcher and Participants Role in Reflexive Photography Research

A literature review on reflexive photography illustrates how it aligns with PBL and incites transformative experiences. The basic premise of reflexive photography research is demonstrating how visual artifacts enhance the richness of data collected; however, the methodology implemented will differ throughout each stage of the research process. Though the methodology will differ, a general format describes the researcher's role in reflexive photography research that represents paradigms evident in constructionism (Ackermann, 2012; Papert, 1991) and PBL (Krajcik & Blumenfeld, 2006; Larmer et al., 2015), including (a) selects the focused topic, (b) chooses research participants, (c) provides clear expectations, (d) generates dialogue between a research participant or group of research participants (Torre & Murphy, 2015), and (e) designs methods to enable recording and reflecting on learning exercises (Wang & Burris, 1997).

Learners capture photographic evidence of how they perceive their environment and then engage in a process of reflection. Reflexive photography provokes mindful contemplation as learners engage in a process of questioning what they see, including the significance to self and others (Amerson & Livingston, 2014; Hatcher et al., 2004). Visual artifacts allow learners to engage in a cyclic process of reflection further validating or questioning perceptions as new knowledge is gained or perceptions are changed (Amerson & Livingston, 2014; Hatcher et al., 2004; Moely & Ilustre, 2014) through guided verbal prompts or written narratives (Torre & Murphy, 2015).

Benefits of Reflexive Photography

Methods for reflecting on photographs may include written narratives, prompted by open-ended questions (Bonnycastle & Bonnycastle, 2015; Comeaux, 2013; Cooper et

al., 2017); observations (Cohn et al., 2010); videos (Amerson & Livingston, 2014); asking participants to manipulate photographs in relevance to a research topic (Smith et al., 2010); photo journaling (Brailsford Vaughs, 2017); and document review (Ash et al., 2005). A collective literature review on qualitative and action research using reflexive photography presents the following benefits:

- empowers participants
- builds trust between researcher and participant
- helps researchers better see through participants' eyes
- allows participants to manipulate photos (Torre & Murphy, 2015, p. 12; Wang & Burris, 1997)
- stimulates contemplation of interpretations and assumptions through dialogue (Harper, 2002)

Reflexive photography can provide a rich source of data. Perceptions will differ substantially among viewers depending on the context when the photograph was taken, background history, life experience, personal characteristics (age, life, ethnicity), and other factors (Amerson & Livingston, 2014; Harper, 2002; Torre & Murphy, 2015; Wang & Burris, 1997). Reflexive photography provides the researcher with a more in-depth understanding of how the research participant perceives a photograph within the world they live.

Reflexive Photography for Transformative Learning. Reflexive photography elicits transformative changes in students in the areas of understanding and applying acquired knowledge (Bonnycastle & Bonnycastle, 2015), personal growth (Brailsford Vaughs, 2017), and social responsibility (Amerson & Livingston, 2014; Cooper et al.,

2017; Wang, 1999). An essential aspect of CBL is reflection. Reflecting on visual artifacts and engaging in dialogue requires critical analysis of what one perceives and the associated meanings that substantiate one's perceptions as others question or share different understandings (Bringle & Hatcher, 1999; Harper, 2002; Hullender et al., 2015; Schon, 1987) as demonstrated in the following three categories.

Academic Outcomes. Teaching strategies that allow students to learn by doing result in better academic outcomes that are correlated with the application of theory to practice and abstract understanding of concepts (Cohn et al., 2010; Schell et al., 2009; Vygotsky, 1978). In response, institutions of higher education are implementing more experiential learning opportunities in the curriculum (Schell et al., 2009) that have revitalized an increase in CBL which enables students to apply classroom knowledge in a “real-life” context to address a community need (Jacoby, 2015). Experiential teaching strategies replace typical instructional methods, such as case studies, role-playing, and focus groups that attempt to replicate real practice scenarios (Schell et al., 2009). Instead, implementing a community-based RPP to address a societal need requires students to demonstrate higher-order thinking skills, initiative, teamwork, and creative problem solving that address real problems (Boss et al., 2018; Larmer et al., 2015). CBL is a viable pedagogy that aligns with accrediting bodies that require institutions of higher education to collate how teaching practices are connected to and assess student and institutional learning outcomes (Baker et al., 2012).

Reflexive photography enabled students to reflect more deeply to recognize how aspects previously overlooked, such as culture, affect (emotions), relationships (Amerson & Livingston, 2014), and environment (Brailsford Vaughns, 2017) impact community

health and wellness. Transformative changes were evident when, students demonstrated critical thinking skills by applying theory to practice as they modified future interactions to better address the specific needs of a community, thus increasing their confidence working with marginalized populations (Amerson & Livingston, 2014; Brailsford Vaughs, 2017). Engaging in a course of self-reflection and group processing allowed students to consider why planned interactions did not happen as expected (Amerson & Livingston, 2014) or perceptions were different than what was depicted in a photograph (Brailsford Vaughs, 2017). As a result, students faced disorienting dilemmas that required deeper reflection and additional research to better understand and contemplate how to address the needs of the community better or differently. In addition, an unanticipated but interesting finding revealed how students used visual artifacts to enhance communication and build community relationships as future healthcare practitioners that promote social change (Brailsford Vaughs, 2017; Massengale et al., 2016).

Implementing reflexive photography in CBL that directly connects with academic learning outcomes provided evidence of transformative learning, applying theory to practice, and social justice (Amerson & Livingston, 2014; Bonnycastle & Bonnycastle, 2015; Mattila, 2019). Engaging future practitioners in a reflective practice of inquiry will help prepare them to work with diverse populations (Mattila, 2019). Practitioners who appreciate the complex nature of individuals within a dynamic contextual framework and are open to critiquing how one's perceptions can impact practice will be more flexible and competent in response to future societal and healthcare needs (Cohn et al., 2010; Gitlow, 2011).

Personal Growth. Engaging learners in CBL that is self-directed and meaningful fosters the development of constructive personal attributes beneficial to future healthcare professionals (Bettencourt, 2015; Sanders et al., 2016). Implementing CBL at the onset of education can impart anxiety and uncertainty in unfamiliar environments (Bauer et al., 2015; Bonnycastle & Bonnycastle, 2015; Cooper et al., 2017). Designing CBL with guided reflective learning activities that foster personal growth in a supportive context can disperse anxiety to solidify a foundation in recognizing community needs from a new perspective of confidence, empowerment, and occupational engagement (Mattila, 2019; Naidoo et al., 2018). Reflexive photography is a cyclic process that sustains continued inquiry to validate assumptions or challenge discerning dilemmas that precipitate new learning or changed perceptions (Lal et al., 2012). Deliberating with a group of peers and responding to probing questions allowed students to share doubts, support each other during the process (Bonnycastle & Bonnycastle, 2015; Hullender et al., 2015), and learn how to work on an interdisciplinary team (Gitlow, 2011). Using reflexive photography, undergraduate nursing students stated they contemplated more in-depth that resulted in increased respect for different cultures (Amerson & Livingston, 2014); similarly, educators who implemented photovoice in an undergraduate health education course reported it increased their students' ethical awareness (Greene, 1997). Overall, students demonstrated initiative, self-confidence, openness to challenge perceptions, and teamwork.

Social Responsibility. Occupational justice is a “justice that recognizes occupational rights to inclusive participation in everyday occupations for all persons in society, regardless of age, ability, gender, social class, or other differences” (Bailliard et

al., 2020; Nilsson & Townsend, 2010, p. 58). This includes accessing community resources to maintain personal health and societal needs (AOTA, 2020b). Populations at risk for health and social disparities encounter barriers to community participation often not on account of functional limitations, but rather barriers imposed upon them by political, economic, or societal attitudes (Bailliard et al., 2020; Hammel et al., 2015; Hansen, 2013; Hansen & Hinojosa, 2014; Liu et al., 2020; Nilsson, 2006). Undergraduate students reported recognizing the causes of structural inequalities, such as racially biased school funding, increased their awareness of the extensive impact on many levels, including students in the classroom, schools, and communities (Liu et al., 2020). A fundamental principle of occupational therapy practice is eliminating barriers that perpetuate inequalities to promote health and wellness on an individual and a system-level (AOTA, 2021; Bailliard et al., 2020). Future practitioners need to acquire essential skills to confidently educate, interact, and partner with diverse populations (Mattila, 2019; Naidoo et al., 2018).

Contextualizing visual artifacts of community barriers through dialogue attempts to provide evidence of concrete and abstract barriers. Educators ask probing questions to incite the reflective process of questioning assumptions, facilitating dialogue, and researching to understand the problem better (Bowen, 2014; Cooper et al., 2017; Hullender et al., 2015; Massengale et al., 2014). Reflective inquiry increases awareness of different social norms from their own (Cooper et al., 2017), which enables students to make informed decisions when deciding the best strategies on how to address a societal problem (Peabody, 2013). Analysis of real social problems increases confidence when sharing or defending recommendations with others, including influential community

members (Mayfield-Johnson & Butler, 2017). Self-efficacy in advocating social change increases when undergraduate students engage in meaningful CBL to address real problems that have a direct impact on community health and wellness (Bonnycastle & Bonnycastle, 2015; Cooper et al., 2017).

Instructional Design for Transformative Learning

Concerns about CBL have been expressed regarding the quality of education and service provided in communities. Many dynamics exist that impact how CBL is implemented in higher education, from institutional limits and political factors to how it is viewed by some as “just” a time-consuming requirement (Butin, 2006). CBL research presents “ideal” experiences and different variations to facilitate transformative learning in higher education (Eyler, 2002; Jacoby, 2015; Kuh, 2008; McNaughton, 2016; McReynolds, 2014). CBL that motivates students to engage in reflection and transformative learning is the impetus for research that examines challenges and effective approaches that can impact the instructional design process (Bringle & Hatcher, 2000; Jacoby, 2015). Challenges are presented first, followed by supports that facilitate a transformative learning experience.

Challenges That Impact on Designing a Transformative Learning Experience

Logistical Factors. Logistical factors that can impact the design of CBL in higher education is dependent on its role either as a primary focus in a community-based course that guides the instructional strategies through an immersive, semester-long experience or as a time-limited experiential component within a course (Jacoby, 2015; Mitchell, 2008). There are staunch proponents of CBL who believe, and research that supports their beliefs, that CBL needs to be an immersive experience whereby students work side-by-

side with community partners over an extended period to experience transformative learning (Jacoby, 2015; LaDuca et al., 2020; Latta et al., 2018). Conversely, there is limited research that demonstrates transformative learning can be achieved when ideal CBL scenarios are not obtainable. The lack of research prevents designers of CBL experiences from being able to prove or disapprove that an ideal CBL scenario is required to result in transformative learning.

When CBL is a supplemental component within a course, inherent obstacles have a greater impact on the transformative learning experience, including decreased time spent with the community, lack of transportation, scheduling conflicts, (Darby et al., 2013; Mey et al., 2018; Mitchell, 2008), budgetary constraints (Hood, 2009; Wurdinger & Allison, 2017), limited community partners to meet academic demand (Lee et al., 2014), and large class sizes. PBL literature recognizes the size of a class presents challenges that require attention when implementing project-oriented CBL. PBL is more effective and manageable when classes are small. Large class sizes warrant additional support from other educators or tutored teaching assistants to accommodate the need to provide consistent guidance and feedback throughout the learning process (Helle et al., 2006). Notably, authors indicated group sizes of 3-5 students per group were feasible to prevent one group member from dominating in smaller groups and minimize scheduling conflicts in larger groups (Helle et al., 2006). Statistics indicated that more time spent in the community, degree of interaction with community partners, and frequency of quality reflections directly correlate to improved CBL outcomes (Dahan, 2016); however transformative learning is disrupted when large class sizes require additional community and educational resources to meet academic demands. When students encountered the

aforementioned obstacles they reported: decreased motivation, increased anxiety (Darby et al., 2013), and decreased commitment towards social change (Mitchell, 2008).

An educator's mindful awareness of logistical obstacles experienced during time-limited CBL enables a conscious instructional design process. When CBL is a time-limited experiential component within a course, an engaging, transformative experience has been achieved by communicating realistic expectations to the students (Mitchell, 2008), fostering community relationships (Darby et al., 2013), creating alternative means to engage with the community (Bauer et al., 2015; Howie & Bagnall, 2013), and choosing CBL projects that account for transportation and flexibility in scheduling (Mey et al., 2018). Students' motivation and desire to engage in CBL increased when they felt educators provided an environment that was responsive and considerate of their educational demands (Darby et al., 2013; Mey et al., 2018).

Developmental Readiness. Awareness of students' developmental readiness is imperative when designing CBL that facilitates transformative learning. To facilitate transformative learning at the onset of an undergraduate student's education, they require a formal introduction to CBL that describes the purpose within the context of the university's mission, an awareness of their expectations during the CBL experience, and an illustration of how academic content is relevant to the CBL project for application and generalization of theory to practice (Bauer et al., 2015; Hatcher et al., 2004). These same principles are resonated in PBL instruction whereby the educator provides adequate structure to authenticate the experience and spur student-centered inquiry that then enables incremental and continued motivation for learning throughout the CBL experience (Lee et al., 2014). The construction and examination of an artifact narrow the

gap between rote knowledge acquired in a traditional classroom format by engaging in a process of reflection in and on action (Schon, 1987) as students gain new knowledge in a collaborative process of progressive problem-solving (Helle et al., 2006). Students have more control in the learning process as they work collaboratively to understand new concepts encountered while partaking in developing tangible resolutions that address the driving question or identified problem (Blumenfeld et al., 1991).

Comparatively, 1st year students are experiencing their transition in self-identity which has been documented to impact the affective dimensions of transformative learning (Hullender et al., 2015). As a result, a student's ability to understand how assumptions impact how they view and interact with community members from a different culture, SES, or other risk factors for occupational injustice is hindered (Hullender et al., 2015; Watson & Haas, 2011). Developing creative alternatives to interact with the community (Hullender et al., 2015) and engaging collaborative exercises that explore and examine engrained discernments, fosters an openness for understanding the broader social issues that contribute to others' social identity and prevailing social disparities (Green, 2001; Wilcock & Hocking, 2015). Almost 80% of 397 college graduates who participated in CBL programs, attributed collaboration with their peers as a substantial factor that expanded their awareness about social justice and civic engagement (Mitchell & Rost-Banik, 2020). Collaborative exercises that are personalized and recursive through which others provide thoughtful feedback foster a desire to question and understand the meaning of societal issues that sustains continued engagement during successive years of CBL (Ash et al., 2005). Examining authentic props created by the student, such as visual artifacts, provides a familiar platform for students to share their creativity which helps to

further disperse angst while navigating and developing their ability to participate in a productive examination of dissonance (Hullender et al., 2015). Getting to know students, recognizing their learning capacity, and accurately determining their stage of readiness for exploring societal issues empowers educators to mindfully design CBL to enhance the transformative learning process.

Assessment. Evidence of how to assess CBL is fraught with ambiguity. Research demonstrating the connectedness between reflective practice in transformative learning to academic outcomes is underreported or anecdotal (Sanders et al., 2016) with a tendency for researchers to report improved outcomes without conducting formal research (Harvey et al., 2010). Subjectivity related to the core constructs of transformative learning, lack of an operationalized definition (Howie & Bagnall, 2013; Taylor & Laros, 2014), poor research design (small convenience samples and lack of comparison studies) (Mattila, 2019), and variability in the implementation of reflective practices (Howie & Bagnall, 2013) contributes to the lack of empirical research which echoes similar sentiments found in assessing PBL in higher education (Harvey et al., 2010; Helle et al., 2006; Lee et al., 2014). Few quantitative scales are available that measure multiple constructs specifically related to CBL pedagogy, such as social responsibility, moral development, and reflective practice (Bringle et al., 2004), thus requiring the use of multiple quantitative measures or modifying existing measures (Dahan, 2016). Comparatively, a comprehensive literature review on PBL indicates a need for quantitative and qualitative measures that demonstrate the impact of project-based pedagogy on student learning in higher education (Helle et al., 2006). The majority of published articles consist of course descriptions, void of any evidence demonstrating developing or improving 21st century

skills that are central to PBL, CBL, and OT education (Helle et al., 2006; Lee et al., 2014).

To further substantiate limited quantitative data when obtained from various assessments (Bringle et al., 2004), researchers implement qualitative measures, including reflection papers (Hullender et al., 2015), self-reports (Stover, 2016), community partner post-evaluations, and rubrics for reflective methods of data collection (McReynolds, 2014; Sanders et al., 2016). Applying a mixed-method approach allows a researcher to triangulate quantitative data with qualitative data to increase the credibility of the results and provide a more in-depth representation of the evidence (Miles et al., 2020; Rothbauer, 2008) that reflects a transformative change and sense of empowerment to enact change in one's community (Sanders et al., 2016; Stover, 2016).

Facilitators That Support a Transformative Learning Experience

Aligning of Academic Outcomes. CBL is a pedagogy adopted by higher education institutions that enable students to acquire, apply or deepen their understanding of academic content while focusing on promoting healthy communities and preventing disability (Gitlow, 2011). Academic outcomes provide a structure to CBL and communicate clear expectations to students (Harvey et al., 2010). Similarly, when engaging in a project-based CBL approach students need to understand and be prepared with the prerequisite knowledge and skills to successfully address societal problems (Blumenfeld et al., 1991). 1st year OTSs report they want to know how information learned in class is used in context with real people (Blakey et al., 2015). Designing reflective activities through guided narrative reflections with detailed instructions (Brailsford Vaughns, 2017) and probing questions that use the same terminology as the

academic outcomes resulted in greater gains in transformative learning (Bauer et al., 2015; Brailsford Vaughns, 2017; Sanders et al., 2016). Being mindful when creating quality reflective activities translated into greater academic gains in analytical skills, problem-solving, creativity, initiative, and social responsibility (Bettencourt, 2015; Hatcher et al., 2004). Educators can motivate students to engage in socially responsive activities for the betterment of society that inherently leads to greater improvement in students' intellectual knowledge.

Scaffold Learning. To maximize transformative learning, educators must make informed decisions about how to design and scaffold a CBL experience for a targeted group of students, such as 1st year undergraduate students (Eyler et al., 2001; Jacoby, 2015; Latta et al., 2018; McNaughton, 2016). The prevalence of literature focusing on the role of reflection in transformative learning informs readers of the central focus and foundation that is essential for transformative learning to occur (Mezirow, 2012; Taylor & Laros, 2014). Intentionally developed, reflective learning activities lead to more engaged learners who become more receptive to changed perspectives, respect new meanings, evaluate solutions to problems, and promote personal and professional development for the betterment of society (Eyler & Giles, 1999). The degree of effectiveness when scaffolding learning activities is dependent upon attention given to each of the following interdependent characteristics that encompass transformative learning: type and purpose of the CBL project (Krajcik & Blumenfeld, 2006); students' reflection skill level from basic to a deeper level, akin to critical reflection (Brookfield, 2012; Coulson & Harvey, 2013; Harvey et al., 2010); and students' comprehension of their expectations in the reflective learning process (Coulson & Harvey, 2013; Harvey et al., 2016). Disregarding

the interdependence of the preceding characteristics has prevented transformative learning (Bringle & Hatcher, 1999). When designing CBL, it is imperative to define the type and purpose of CBL at the onset to establish a foundation to accurately investigate factors that support transformative learning. The subsequent focus for scaffolding learning focuses on time-limited CBL that is a component within a course versus the primary focus within a dedicated CBL course.

Categories of manageable factors for consideration to scaffold during the design phase and the interrelatedness that impact the transformative learning process include preparation (Bauer et al., 2015), types of reflective learning activities (Bain et al., 2002; Coulson & Harvey, 2013), formative feedback (Coulson & Harvey, 2013), and time (Coulson & Harvey, 2013; McNaughton, 2016). Literature indicates that reflection skills improve when students engage in reflective exercises that challenge how personal life experiences attribute to shaping current assumptions (Coulson & Harvey, 2013) that are further enhanced when combined with empathetic feedback (Bain et al., 2002), resulting in openness to construct new meanings from the experience (Eyler & Giles, 1999). Given the logistical limitation of time, educators need to be creative when determining the type of reflective activities to implement throughout the project to help deepen understandings, analyze problems, and consider resolutions to the community concerns or problems. Written reflections and online discussions are the most prevalent forms of reflection evident in the literature (Coulson & Harvey, 2013); however, they lack intimacy for providing feedback and lack evidence of deep reflections for 1st year undergraduate students (Howe et al., 2014; Mitchell et al., 2015). Exploration of alternative means for reflection through electronic media encouraged creativity such as

photography, interactive presentations, and storytelling (Ash & Clayton, 2009; Harvey et al., 2016) which align better with students developmental readiness and capacity for reflection as 1st year students (Bauer et al., 2015; Howie & Bagnall, 2013). Similarly, alumni of CBL reported dialogue-based reflection activities were more impactful (Mitchell et al., 2015). Scaffolding the design of an engaging, meaningful CBL experience at the onset of a student's education will help shape their attitude towards future CBL throughout the curriculum and as future healthcare professionals (Bauer et al., 2015; Howie & Bagnall, 2013).

Faculty Commitment. Effective project-based instructional design is an educator's responsibility to facilitate a transformative learning experience. Although limited, research on faculty members' experiences who implement CBL pedagogy as a transformative experience is increasing (Bazyk et al., 2010; Blakey et al., 2015; Hansen, 2013; Sanders et al., 2016). Faculty who are committed to creating transformative CBL projects partake in a recursive process of evaluating their teaching approaches and review current literature to learn how to tailor CBL for their students, including factors that support or may impede an effective transformative learning experience (Blakey et al., 2015).

Faculty have to be skilled and knowledgeable about how to design impactful project-based CBL to help prevent challenges of implementing CBL, which can include: considerable time commitment for instructional design (Helle et al., 2006; Lee et al., 2014), establishing sustainable community partnerships that allow for flexibility in scheduling and cultivate long-term commitments (Darby et al., 2013; Kerrigan et al., 2015), difficulties assessing student outcomes (Bringle et al., 2004; Taylor & Laros,

2014), having the capacity to direct students in meaningful reflection as they explore new perspectives and debate dissonance (Hullender et al., 2015), reduced in-class instruction time, and relinquishing instructor role to facilitator of instruction (Russell-Stamp, 2015). Although time is a prevalent factor when developing CBL, the time commitment diminishes after the preparation phase as the CBL portion begins. Chaos is expected at this stage as students explore PBL and discover a new way of learning, while faculty guide, instead of direct, the process (Wurdinger & Allison, 2017). Comparably, faculty who became actively engaged at the onset in the process of getting to know the community's mission and distinct contributions to society resulted in better communication, a better insight into how the academic institutions can effect change in the community, and a more accurate framework to guide students during project-based CBL (Kerrigan et al., 2015; Trentaz, 2020).

Offices dedicated to CBL are being established at universities in response to the increased interest in CBL as an effective experiential learning pedagogy (Hou, 2010; Russell-Stamp, 2015). CBL offices are establishing faculty development programs that offer education about CBL as a pedagogy, mentoring from experienced faculty who implement CBL, CBL resources, and support to faculty for their efforts in dedicating the time to develop effective, meaningful CBL experiences (Lee et al., 2014). Despite the increase in establishing CBL offices to support faculty efforts there remains a lack of support from colleagues who are reticent to implement CBL or PBL (Butin, 2006; Lee et al., 2014). Resistance is further perpetuated because CBL is not recognized in the promotion and tenure process at the majority of universities, which results in faculty choosing not to dedicate time or the effort in establishing CBL (Butin, 2006; Hou, 2010).

Resources are available for faculty who are committed to improving their teaching practices to meet the demands in higher education to educate life-long learners who can think critically, collaborate, analyze problems, and adapt to an evolving society (The Brookings Institution, 2020). Published research, organizations, and other entities dedicated to PBL and CBL are reliable sources for faculty to develop a supportive community of practice as they explore innovative, evidence-based teaching approaches (Campus Compact, 2020; Larmer et al., 2015).

Chapter Summary

Developing a transformative CBL experience takes time and a commitment from educators. Becoming knowledgeable about research that aligns closely with a targeted population of students, research setting, and purpose of the CBL experience will enable researchers to make informed decisions when designing, implementing, and evaluating the effectiveness of an innovative CBL approach.

The research presented described CBL as it relates to PBL and OT education. Theoretical perspectives provided the basis for describing the pedagogies, followed by research that embedded the variables being investigated in this research study as they contribute to transformative learning. Challenges related to the variability of CBL and approaches to implementation were discovered that directly impact the design and methods of assessing the basic constructs of a project-based CBL experience for evidence of transformative learning. Comparably, factors that support a transformative learning experience were investigated, which when intentionally interwoven in the design phase can potentially contribute to a transformative learning experience.

This research study was designed using an action research approach that guided the innovation, implementation, evaluation, and critical examination of the processes applied for evidence of a transformative educational experience using reflexive photography. 1st year OTSs participated in a RPP to deepen their understanding of how contextual barriers in the community inherently impact the health and wellness of people, communities, and populations by preventing participation in meaningful occupations. The methodology implemented guided OTSs as they photographed perceived community barriers; interpreted, collaborated, and shared “stories” embedded in the photographs that epitomize disparities in humanity; and reflected on their role in advocating for an inclusive society that promotes health and wellness for all persons and populations.

CHAPTER 3

METHOD

The purpose of this action research was to evaluate the effectiveness of implementing reflexive photography as a means for a transformative community-based learning (CBL) experience. This study addressed the following research questions: (a) How does a RPP change how 1st year occupational therapy students view occupational justice?, (b) How does a RPP change how 1st year occupational therapy students perceive their role as a socially responsive citizen for occupational justice within their local community?, and (c) How does a RPP influence 1st year occupational therapy students' awareness about contextual barriers that may impact community residents' health and wellness?

Research Design

This study applied an action research process of inquiry. Action research is a systematic process of inquiry utilized by researchers who have a vested interest in studying a local problem within their sphere of influence; whereas, traditional researchers generally are apart from the environment where the study is being conducted (Mertler, 2017). The systematic process of inquiry includes conceptualizing a local problem, planning how to solve the problem, implementing an action to solve the problem, evaluating the effectiveness of the intervention, and reflecting on the process to inform or improve future practice (Johnson & Christensen, 2014; Mertler, 2017). Action research is not meant to test a theory; in comparison to traditional research, the intended purpose is

to be a responsive approach that solves a problem that has a direct impact on improving educational practice (Creswell, 2014; Mills, 2000).

Action research utilizes quantitative, qualitative, or mixed methods of inquiry (Mertler, 2017). A convergent parallel mixed methods research design is appropriate to effectively answer this study's research questions. This research design involves collecting objective change, coupled with evidence of personal transformation simultaneously to determine how implementing a RPP improves 1st year occupational therapy students views of occupational justice, personal and environmental context, and sense of social responsibility (Carlisle et al., 2017; Carnicelli & Boluk, 2017; Eyler et al., 1997; Howe et al., n.d.; Jacoby, 2015). Both quantitative and qualitative data are examined with equal emphasis to gain a more in-depth understanding of the research participants' changed perceptions (Mertler, 2017; Mills, 2000). Reflecting on reliable and valid quantitative and qualitative data measures will allow me to evaluate the effectiveness of the RPP. In addition, I will learn how to modify future reiterations of the intervention to further improve my 1st year OTSs transformative CBL experience.

Applying an action research method of inquiry will enable me to further improve teaching pedagogies in the future and contribute to the growing CBL body of knowledge (Baxter & Jack, 2008). Improving teaching pedagogies will help educate students to recognize societal problems, empower them to contemplate action, and effect change for the betterment of humanity and the people of the world (Eyler et al., 1997).

Setting

This study took place at a Jesuit university located in the Northeast region of the United States. The university actively works with the local community through direct engagement to prepare students in understanding societal problems, recognizing risks to humanity, and develop a commitment to end injustices. As of 2019, the estimated population of the city where the university is located is 76,653; median household income is \$40,608, in comparison to the national median income of \$61,937; poverty rate is 23.2% compared to the county's 14.1% level; and racial and ethnic diversity is increasing from 83.1% white, 14.8% Hispanic, 5.9% Black, and 4.7% Asian (Data USA, n.d.; United States Census Bureau, 2019). Specific to this research study, the intervention took place in the downtown area, within walking distance from the university.

This research study was conducted with students enrolled in the occupational therapy academic program of study. The Department of Occupational Therapy requires students to begin CBL during their first spring semester and every semester thereafter as part of the undergraduate occupational therapy program. CBL is integrated as a component in a core occupational therapy course each semester; whereby, the course instructor is responsible to design a CBL project and determine the requirements for completion.

All OTSs who take OT121: Occupational Performance are required to complete CBL. This will be the OTSs first time completing a department-approved CBL project. The course engages students in exploring and analyzing occupations throughout the lifespan in individuals and populations at home, in the community, and within other varied contexts. Collaborative learning, problem-solving, and reflection are core

principles embedded in the course to help students achieve the following course objectives:

- Demonstrate emerging critical thinking skills when analyzing activities that support achieving health, wellness, and participation in life through engagement in occupations.
- Demonstrate an understanding of how persons at risk for social injustice, occupational deprivation, and disparity affect the health and wellness of persons.

The course, OT121: Occupational Performance, is typically taught in a classroom setting that has a designated seminar lab space with an open floor plan. On account of the restrictions related to the Covid-19 pandemic, this course was taught remotely via ZOOM during the 2020-2021 academic year.

This research setting was equipped with the latest technology infrastructure that supported distance education. The technology-enriched environment enabled all users an accessible means to collaborate with others (including other students, community stakeholders, and other guests), complete assignments, use and display various forms of media, record presentations, and interact with live audiences. This research setting provided online connectivity to the infrastructure via secured passwords (both on and off campus), mediated facilities, and computer/mobile devices. If technology assistance was required, the university provided technical support to students and instructors on weekdays from 8:00 a.m. to 10:00 p.m. and weekends (Saturday 9:00 a.m. to 5:00 p.m. and Sunday 12:00 p.m. to 8:00 p.m.).

Participants

The population for this study was 1st year occupational therapy undergraduate students currently enrolled in a 5-year, entry-level, Master of Science degree program with an option to earn a clinical doctorate in Occupational Therapy. Greater than 90% of 1st year occupational therapy students at this research setting are white, 18 year-old, females, who have a history of volunteering in their home communities. According to the AOTA (2012), the student demographics mirror the national trend of current students enrolled in occupational therapy academic programs.

Participants were selected using purposeful sampling (Suri, 2011) and organized into small groups (3 groups of 5 students each and 1 group of 4 students) for optimal interaction and learning (Helle et al., 2006). Twenty 1st year OTSs were invited and consented to participate in this research study. One student had to be identified. As a result, the student was excluded from this research study because all data had to be de-identified as a condition to receive approval from the research setting's Institutional Review Board (IRB).

Nineteen 1st year OTSs participated in this research study. All of the students were 18-19 years old, which included 18 who identified as a “woman” and one as a “man”. Table 3.1 illustrates complete demographic information about the student participants.

Table 3.1 *Demographics of Student Participants (n = 19)*

Demographic	Frequency
Age	
18-19 years old	19
Gender Identity	
Woman	18
Man	1
Race/Ethnicity	
White	17
Hispanic, Latino, or Spanish Origin	1
Black or African American	1
Years of Volunteer Experience	
1 year	2
2 years	1
3 years	1
4 years or more	15

All potential research participants, whether they consented or not to participate in this study, were required to complete the CBL project as a course requirement. Only data from students who consented to participate in the research was collected and analyzed.

Intervention

A RPP, guided by the principles of PBL (see Table 3.2), was implemented as a catalyst for a transformative CBL experience (Boss et al., 2018; Brescia et al., 2009; Krajcik & Blumenfeld, 2006; Larmer et al., 2015; Thomas, 2000). The RPP spanned over a series of six weeks, within a 15-week semester, with the intervention beginning the 1st week of the semester. Each week required 75 minutes of dedicated time during seminar. During seminar, students completed individual and group reflective learning activities that specifically related to the principles of PBL. An additional expectation was for students to spend extra time outside of seminar to complete additional CBL requirements,

interact with the local community partner(s), and complete reflections about their learning experience.

Table 3.2 *PBL Alignment Chart*

Core Principles of PBL	RPP Component(s)
Community impact: Driving question that proposes a “real-world” problem	<ul style="list-style-type: none"> • “How can we use the principles of occupational therapy to help communities promote engagement in occupations that support health and wellness for individuals and populations?” • Solutions to societal problems
Connect academic outcomes:	
1. Demonstrate an understanding of how persons at risk for social injustice, occupational deprivation, and disparity affects the health and wellness of persons	<ul style="list-style-type: none"> • Self-reflections • RPP Questionnaire • Community photographs • Artifact
2. Demonstrate emerging critical thinking skills when analyzing activities that support achieving health, wellness, and participation in life through engagement in occupations	<ul style="list-style-type: none"> • Self-reflections • RPP Questionnaire • Analyzing photographs • Peer/community collaboration • Solutions to societal problems • Artifact
Motivating “event”	<ul style="list-style-type: none"> • Videos of occupational injustice • Guest speaker
Student-centered: choice and voice	<ul style="list-style-type: none"> • Community photographs • Solution to societal problems • Artifact
Independent research	<ul style="list-style-type: none"> • Choice of community photographs • Solutions to societal problems
Collaboration	<ul style="list-style-type: none"> • Community partnership • Peer collaboration • Artifact
Reflective critique	<ul style="list-style-type: none"> • Self-reflections • Peer/community collaboration • Artifact • Presentation (Q & A)
Artifact	<ul style="list-style-type: none"> • Presentation

This was the first time the students were introduced to CBL as a course requirement that will continue each semester through their 4th year as undergraduate students. Accordingly, the students' degree of immersion and interaction with the community and community partner(s) is gradual and limited when initially introduced, yet informative and valuable to their learning experience. The Covid-19 pandemic further limited community immersion, however, the RPP was developed with the expectation that it would be completed remotely.

Similar to the gradual level of engagement in the community, the weekly learning and reflective exercises, were scaffolded throughout the RPP. Scaffolding the learning experiences and level of guidance provided by me during the project are key principles of PBL and OT education to further enhance the development of a transformative learning experience (Krajcik & Blumenfeld, 2006; McNaughton, 2016; Rebeiro & Polgar, 1999; Vygotsky, 1978). The learning and reflective exercises were intentionally created to augment the application of past knowledge with newly acquired knowledge to solve a real-life problem. The purpose was to transform students to be more receptive to changed perspectives, explore new meanings, evaluate solutions to societal problems, and promote personal and professional development for the betterment of society (Eyler & Giles, 1999).

The catalyst that initiated the learning process was the driving question, "How can we use the principles of occupational therapy to help communities promote engagement in occupations that support health and wellness for individuals and populations?". Students then took individual photographs of contextual barriers, researched information, collaborated in small groups with peers to decipher contextual

barriers to community health, jointly developed a plan to solve a societal problem, and then presented their findings back to a larger group for discussion and analysis.

Week 1

Pre-seminar

Before the semester started, I consulted with the university Office of Community-based Learning to establish a partnership with the Director of City Planning to assist them with their Walkability study. I consulted with a city representative responsible for spearheading the Walkability study to discuss how the students can assist in identifying barriers, including but not limited to: transportation, language barriers, accessible facilities, representation of culture-specific services, and other issues that can impact community health and wellness. It was established that the students would assist in locating and documenting contextual barriers, occupational injustices, or any other evidence that can impact community health and wellness. Locations focused on the downtown area to accommodate for the lack of readily available transportation to 1st year OTSs. Students would then collaborate with others, identify resources or solutions on how to alleviate identified barriers, and share their findings with interested stakeholders.

It was determined to assist with communication, I or my research assistant would facilitate any dialogue with the community partner via email. Establishing this dedicated approach was to organize communication, prevent excessive emails from multiple students, and maintain a rapport with the community partner. It should be noted that within 2 weeks after the RPP started, the community contact changed and the pre-established expectations were reviewed. No changes were identified and the RPP continued as planned.

Seminar

During the 1st week of seminar, I described how PBL pedagogy would guide the students' learning process throughout the course and provided a brief description of CBL and the RPP.

Week 2

Pre-seminar

All students were instructed to complete the self-paced PowerPoint presentation that described CBL and readings that explained occupational therapy's definition of contexts (personal and environment), occupational justice/injustice, and occupational deprivation (AOTA, 2020b).

Seminar

During seminar, I further expanded on how CBL relates to PBL and the RPP. The focus was to help the students gain foundational knowledge about CBL, PBL, and contexts. Student expectations and responsibilities throughout the project were discussed concerning the CBL requirements, including taking photographs following the Royals Safe Together Plan, learning and applying academic knowledge through community engagement, becoming socially responsive citizens and professionals, and promoting occupational justice. The Royals Safe Together plan is a framework designed in response to the Covid-19 pandemic to address public safety. A weekly timeline (see Figure 3.1) and descriptions of the learning and reflective exercises were provided as they answered the driving question, "How can we use the principles of occupational therapy to help communities promote engagement in occupations that support health and wellness for individuals and populations?".

<p>Week 2 (2/9/21)</p> <p>Pre-seminar Complete the self-paced PowerPoint presentation that describes CBL and readings on occupational therapy's definition of personal and environmental contexts and occupational justice (AOTA, 2020) posted in the syllabus and on D2L.</p> <p>Post-seminar In preparation for next week, mindfully observe your natural communities as you navigate throughout each day from an occupational therapy perspective. Note observations of contextual barriers that you may have inadvertently overlooked previously. You will be asked to share your observations during week 3 seminar. Begin to consider what you can do to help eradicate community barriers to health & wellness. Ask yourself:</p> <ul style="list-style-type: none"> • What can I do? • Who can I partner with in the community? • What resources are available?
<p>Week 3 (2/16/21)</p> <p>Pre-seminar Watch the "Zach Anner and The Quest for the Rainbow Bagel" video (Cerebral Palsy Foundation, 2017) and the video provided by the guest speaker posted on D2L. Document personal and environment contexts evident in the videos that impact on occupational performance in the home and in the community.</p> <p>Seminar We will discuss how your perceptions of community barriers changed as a result of your natural observations and watching the video.</p> <p>Post-seminar Complete self-reflection exercise #1 posted on D2L. Reminder: Please use your participant number, not your name.</p>
<p>Week 4 (2/23/21)</p> <p>Pre-seminar Choose at least 3 out of the following public places, events, or happenings:</p> <ul style="list-style-type: none"> ○ Sporting event ○ Cultural event ○ Food pantry

Figure 3.1 Excerpt of the Timeline

I shared examples of community-based photographs that represented personal and environmental contexts. Through a class discussion, students began to recognize and identify contextual factors that were explicitly or implicitly evident in each photograph and the impact they can have on community health and wellness. Finally, students began to discuss possible solutions on what they can do to advocate for occupational justice.

Post-seminar

I sent an email (see Figure 3.2) to reiterate what was discussed during seminar and serve as a reminder to read the Royals Safe Together plan and share any concerns.

Good Afternoon Section 302,

I am finalizing the CBL RPP. I would like you to review the [Royals Safe Together Program](#). After reviewing the program, please let me know if you will have concerns taking photographs within the local community following the requirements of masking, social distancing, etc. It will **not be mandatory**, however the information will be helpful for me as I finalize the project.

In brief, we are partnering with the city of Scranton who is completing a Walkability Study close to campus and at Nay Aug park. I attached 2 maps of the projected areas. Our role will be to recognize and document (via photographs) personal and environment contexts that may impact on community health & wellness. Thereafter we will explore ways to help the community overcome potential barriers to health & wellness for all individuals.

Please email me to let me know if you want to volunteer to take photographs or if you have concerns no later than this Thursday Feb. 4th by 5:00 p.m.

Thank you for your timely reply.

Figure 3.2. Royal Safe Together

In preparation for the 3rd week of intervention, students were instructed to mindfully observe their natural communities as they navigated throughout each day from an occupational therapy perspective. I asked students to note observations of contextual barriers that they may have inadvertently overlooked previously that would then be shared during the 3rd week of seminar.

At this point, students were instructed to sign-up for a working group of 4-5 students (see Figure 3.3). Students self-selected their groups based on individual interests and designated geographic areas within walking distance from the university. A Google document that included two maps (see Figure 3.4) of the geographic areas was posted on the university learning management system (LMS).

Good Morning,

I hope you all had a successful 1st week. I am writing to offer your section of seminar to sign-up for your [CBL/RPP groups](#). Note: The group sign-up sheet indicates specific areas outlined on the attached maps so please choose an area that interests you the most. Also, this applies to only your section of seminar at this time, therefore if you room with others taking OT121 but are in a different section this does NOT apply.

Considering this is the 1st weekend and you may venture out (per the Royal Safe Together Plan) during your natural daily routine. If you perceive a barrier to community health & wellness in the geographic areas you signed up for... take a photograph. However read the [RPP Community Photograph Assignment](#) document before taking photographs. As stated, you must follow the guidelines provided about the legality of taking photographs in public.

I understand you may not be aware of what potential contextual barriers are this time, however given the events, such as the Ice Festival in Scranton, this weekend you may be inspired to get out and soak in some sunshine. That said, if you see something and question if a barrier is evident (physical, cultural, socioeconomic, attitudinal, or other), snap a photograph. We can further explore the photographs as a part of the CBL project.

Do not feel obligated to explore the community before learning more about the CBL project. Instead consider this as an opportunity to help facilitate learning about contexts, if you completed the readings for this Tuesday already.

Be well and enjoy the rest of your weekend!

Pattie

Figure 3.3 Working Groups

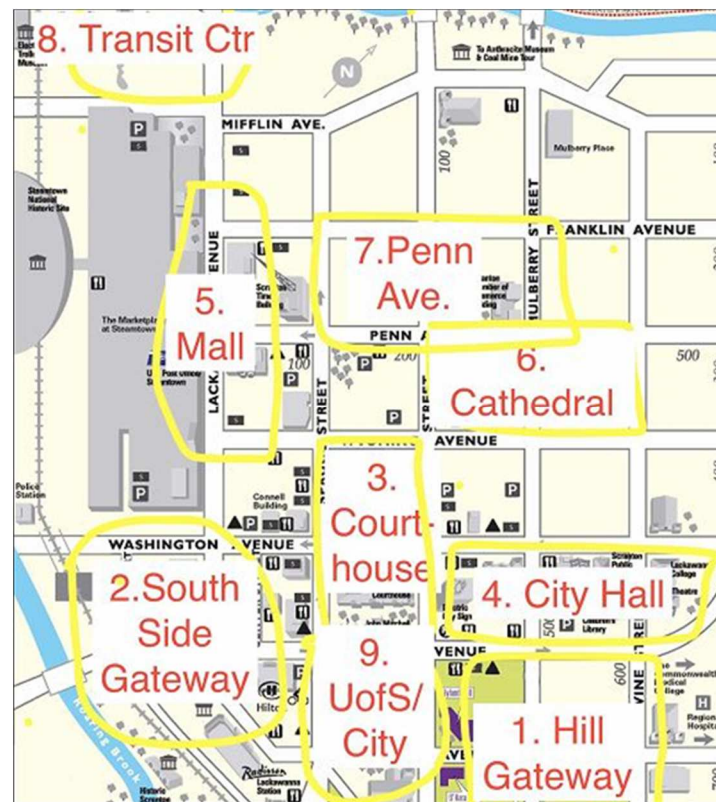


Figure 3.4 Geographic Areas

Week 3

Pre-seminar

Students watched the “Zach Anner and The Quest for the Rainbow Bagel” video (Cerebral Palsy Foundation, 2017). Students were instructed to document personal and environmental contexts evident in the video that impacted Anner’s community engagement. Additionally, during Week 3, the guest speaker shared an 8-minute video, in which the speaker and a peer who both shared their life experiences of living with a disability in their home and surrounding community. The video provided examples of adaptive equipment, universal design concepts, and information on how they accommodate for barriers they encounter regularly.

Seminar

The motivating “event” (Blumenfeld et al., 1991) to capture the students' interest and sustain motivation throughout the RPP was listening to and interacting with a guest speaker. A guest speaker from the Center for Independent Living shared and educated the students about their experience living with a disability. The guest speaker lives independently, uses a wheelchair for mobility, and requires assistance for dressing, bathing, meal preparation, and eating. The guest speaker and I engaged the students in a form of discourse about their perceptions of community barriers as a result of their natural observations and listening to the guest speaker. In response to students' questions, we provided examples of real-life solutions, challenges encountered when advocating for change, and other conditions that incite occupational injustice.

Post-seminar

All students completed self-reflection exercise #1 (see Appendix D). A link to the anonymous self-reflection was posted on the university LMS. Before completing self-reflection #1, each student was given an individual participant number, from 001-020, as a personal identifier to assist with collating the data and to ensure the data was anonymous.

To generate deeper contemplation and reflection about occupational justice, contextual barriers, and advocacy, I provided feedback either verbally during the next seminar or via email (see Figure 3.5) for students to further engage in a process of inquiry. Feedback focused on recognizing evidence of new understandings and/or ask guiding questions, such as “What if...”, “Why do you think this exists?”, “What can you do about this” or “Can this be interpreted differently?” (Ash & Clayton, 2009) to deepen reflective thinking and expand their awareness.

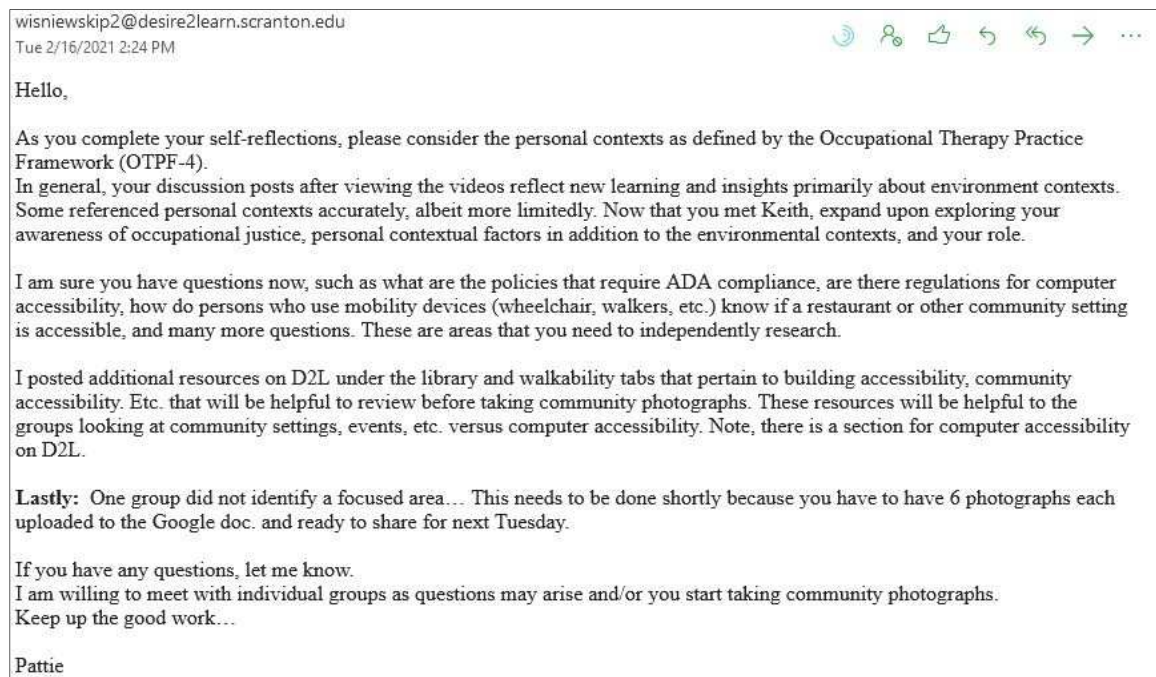


Figure 3.5 Self-reflection #1 Feedback

Week 4

Pre-seminar

Each student was instructed to complete the following tasks:

- Choose at least 3 public places, events, or happenings in their geographic area. I provided an example of public events and places where others engage in their communities (see Appendix F).
- Take at least 2 photographs, at each community setting, of barriers that represent various personal and environmental contexts that impact actively engaging in community-based occupations. Examples may include physical obstacles, displays of occupational injustice, derogatory forms of art, cultural biases, or any other representations that impact community health and wellness.
- Post photographs on the Google document posted on the university LMS. Include a description of the explicit and implicit contextual barriers evident in each photograph.
- Describe how the barriers can impact the health and wellness of community individuals and populations.

Students used their devices such as smartphones, iPads, or other digital equipment to take photographs.

Before taking any photographs, students were educated on current laws about taking pictures in public. In the United States, it is legal to take photographs in public places unless it constitutes an expectation of privacy, such as in a public restroom (Krages, 2017). No laws exist that prohibit taking pictures in public spaces (Krages, 2017). Students were instructed to limit taking photographs of people's faces or other

identifying information such as a license plate number. If it occurred, students were informed to filter out the area before sharing it with others. Similarly, students were advised that the photographs are for educational purposes only and that they are not allowed to post photographs on social media or any other public forum. Students were expected to uphold the standards of the research setting and the profession of occupational therapy in an ethical, responsible manner by adhering to professional behaviors that respect others' privacy (AOTA, 2015).

Seminar

Each working group shared their digital photographs and discussed what they perceived as being contextual barriers in each photograph. As the discussions progressed, I instructed each group to explore the photographs for common threads while beginning to brainstorm ideas on how to eliminate or prevent the contextual barriers. Lastly, groups were encouraged to identify other community partners, organizations, or entities with who they can consult to share what they learned and discuss possible actions to promote occupational justice.

As the students deliberated, I circulated from group to group to provide guided brainstorming that focused a group's attention on the driving question and desired outcomes. I encouraged the students to develop a list of questions to ask the community partner. Student questions pertained to local ordinances about snow removal. Students offered more suggestions versus questions, which I helped clarify by validating their suggestions or offering resources (see Figure 3.6) to sustain their commitment and excitement in partaking in the RPP.









⋮	How to Make Cities More Walkable ▼	✓
	 Link	
⋮	WalkingChecklist ▼	✓
	 PDF document	
⋮	ADA Checklist Form ▼	✓
	 Word Document	
	This is a nice, user-friendly, checklist individuals can use to evaluate indoor/outdoor accessibility.	
⋮	Building Better Maps for the Disability Community ▼	✓
	 Link	
⋮	Destination Access ▼	✓
	 Link	
⋮	AXS Map ▼	✓
	 Link	
⋮	Home Safety Assessment Checklist ▼	✓
	 PDF document	
	Although this is a home safety evaluation, it can be helpful in helping you to recognize potential barriers in the community	
⋮	HSSAT CHECKLIST IDENTIFY HOME HAZARDS to PREVENT FALLS ▼	✓
	 PDF document	
	Although this is a home safety evaluation, it can be helpful in helping you to recognize potential barriers in the community	

Figure 3.6 Resources

Post-seminar

All students completed self-reflection exercise #2 (see Appendix D). A link to the anonymous self-reflection was posted on the university LMS. As previously described, I provided feedback that recognized new learning and asked guiding questions specific to each reflection.

I sent an email to our community partner inquiring about local ordinances. The community contact did not respond, which necessitated a follow-up email. Email response was received after Week 5 of the intervention (see Figure 3.7).



Figure 3.7 Response from Community Contact

Week 5

Pre-seminar

Each working group was instructed to collaboratively create a prototype of a digital presentation to share with others. Each presentation was no more than 15 minutes long and included evidence of the following elements: community contextual barriers; impact on individual and population health and wellness; and practical solutions to prevent, eliminate, or overcome community barriers. Students were provided with examples of solutions including creating public service announcements, partnering with advocacy groups to develop educational community events, writing letters to local and state constituents, and other practical approaches that promote occupational justice.

If needed, students had access to university-owned computers for use when creating their prototypes. University-owned computers are located in computer labs dispersed throughout campus or students may borrow one for short-term use through the university library.

Working groups were allowed to use any software to create their presentations, including Adobe Spark for Higher Education (Adobe, 2019) and Sway (Microsoft, 2020) which are provided for free by the university, Prezi, or other student-chosen presentation software. I posted examples using various educational technology tools and a list of different tools to create presentations or educational materials such as but not limited to: YouTube videos, storyboards, infographics, interactive pamphlets/charts, free website builders, and software technology (see Figure 3.8).

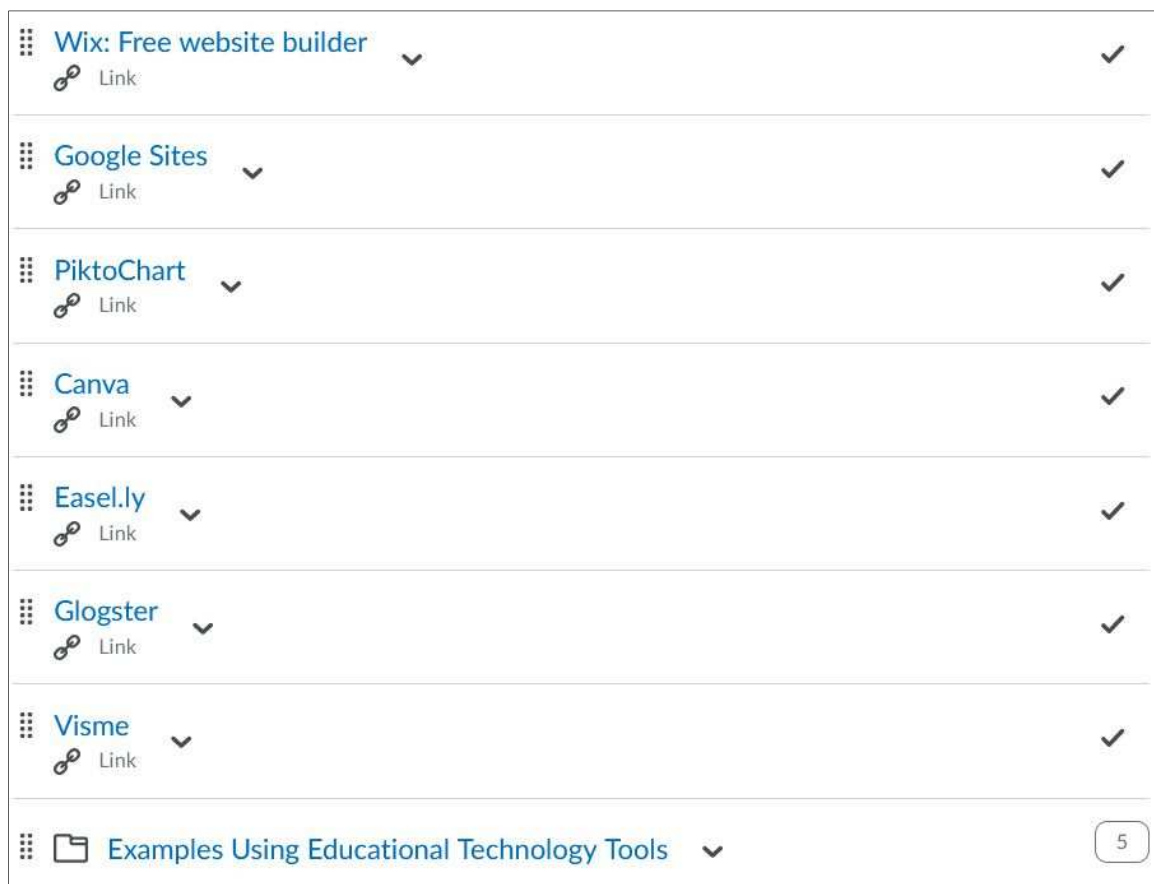


Figure 3.8 Educational Technology Tools

Seminar

I met with each working group to review their prototype and facilitated reflective thinking as they contemplated further actions needed to finalize their presentation. I

asked guiding questions to elicit awareness of knowledge learned, connections among relevant contextual barriers, depictions of health and wellness in their local communities, and representations of occupational injustices. Examples of questions specific to each working group included reiterations of the guiding questions previously shared.

Depending upon the student responses and the specific needs of each group, I provided suggestions of topics that can be further explored, shared questions that I or others may ask during their presentations, or encouraged considering additional questions to ask the community partner(s). Revisions of their prototypes were expected and encouraged as each group continued to deliberate before finalizing their presentations.

Post-seminar

All students completed self-reflection exercise #3 (see Appendix D). A link to the anonymous self-reflection was posted on the university LMS. I provided feedback to incite broadening their awareness of how others influenced how they interpreted community barriers, challenged them to contemplate how their perceptions may have changed since beginning the project, and encouraged them to apply occupational therapy principles in their role as agents of change for occupational justice.

Feedback about the working groups' prototypes and reminders in preparation for the RPP presentations was provided via email (see Figure 3.9).

Sent	Mar 9, 2021 8:17 AM
	▶ Show course offerings
Subject	RPP: Practice
<p>Good Morning,</p> <p>I hope you all had an enjoyable weekend and get to enjoy the sunshine today.</p> <p>These are some reminders as you continue to prepare for Thursday.</p> <p>As you practice your RPPs, I want to remind you to save all the supplemental information you will be sharing (assuming you wrote it down so you don't forget suggestions, observations, etc.). We will be compiling a report of barriers and suggestions to share with the community and the information will be helpful.</p> <p>In addition, I suggested to a couple groups to research additional areas, such as standard measurements for accessibility, evaluate practicality of suggestions (remember not all barriers can be eliminated), and review the language used during the presentation and on slides to reflect lingo used for observations and suggestions versus "has to be changed", inaccessible (when in fact it is accessible for a specific population), etc....</p> <p>The community partners and the University of Scranton CBL office are looking forward to hearing about your findings and are grateful for your commitment to the local community.</p> <p>Let me know if you have any questions. In the meantime, enjoy your day!</p> <p>Pattie</p>	

Figure 3.9 Prototypes

Additionally, an invitation was sent via email to our community partner and the university's Office of Community-based Learning staff who shared a vested interest in the RPP student presentations. Two staff members from the Office of Community-based Learning acknowledged that they would attend the presentations, however, there was no correspondence from the community partner.

Week 6

Seminar

Each group presented their RPP, followed by a 5 minute Q&A session. The university's Assistant Vice President of Community Engagement & Government Affairs and the Community & Civic Engagement Coordinator both attended the presentations.

Following the presentations, the students were informed to complete the Reflexive Photography Project Questionnaire and retrospective survey. A description was provided to inform the students about the retrospective methodology format used to gather the data.

Post-seminar

Each student completed the Reflexive Photography Project Questionnaire (see Appendix E) and retrospective survey (see Appendix G) within two days after the student presentations. Links to the questionnaire and retrospective survey were posted on the university LMS.

A follow-up email (see Figure 3.10) was sent to all working groups in preparation for disseminating their findings with our community partners and to remind them to complete the Reflexive Photography Project Questionnaire and retrospective survey.

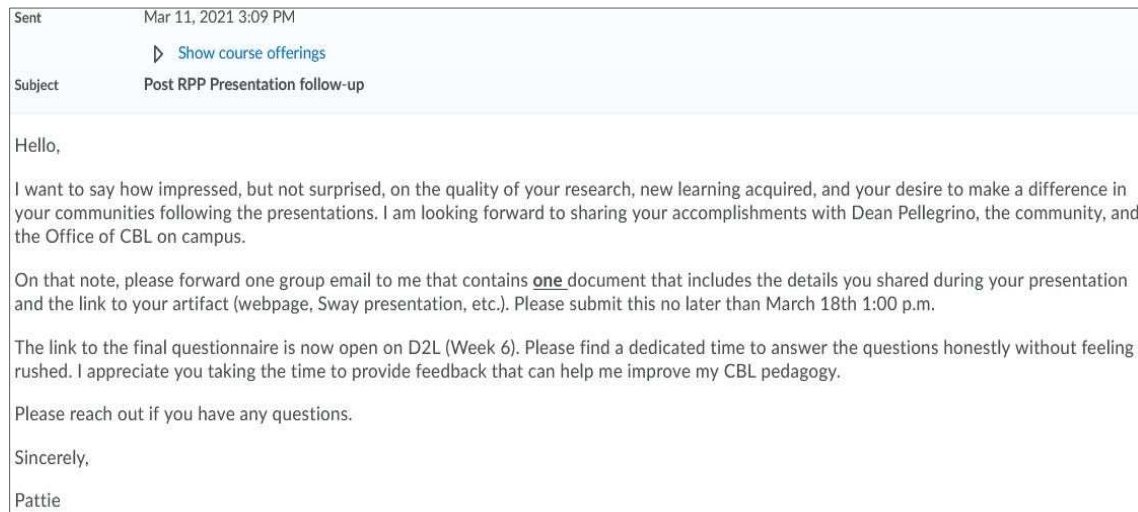


Figure 3.10 Dissemination of Artifacts

Per the research setting's IRB approval for conducting this study using my students as the research participants, permission to use data collected from the formative assessments occurred at the end of the semester. A link to the anonymous consent form (see Appendix C) was posted on the university LMS.

Data Collection

This study applied a convergent parallel mixed methods research design. Quantitative and qualitative data were collected throughout the study using multiple

assessment methods (Creswell & Plano, 2018; Mertler, 2017). Evidence collected demonstrated how the students view occupational justice, recognize contextual factors that impact community residents, and how students perceived themselves as change agents in the community to support health and wellness.

Aligning academic outcomes and reflections are essential principles of both PBL and CBL required for a transformative learning experience (Bringle et al., 2004; Bringle & Hatcher, 1999; Krajcik & Blumenfeld, 2006). Specifically for this study, the chosen assessment methods purposely integrated the academic outcomes and reflections to evaluate the effectiveness of the RPP. The academic outcomes are:

- Demonstrate an understanding of how persons at risk for social injustice, occupational deprivation, and disparity affects the health and wellness of persons
- Demonstrate emerging critical thinking skills when analyzing activities that support achieving health, wellness, and participation in life through engagement in occupations.

PBL and CBL literature validates using the following data collection methods to measure this study's variables: a retrospective survey (see Appendix G), self-reflections (see Appendix D), and a questionnaire (see Appendix E) (see Table 3.3) (Hatcher et al., 2004; Helle et al., 2006; Lee et al., 2014).

As the researcher who conducted this study and professor teaching the CBL course, all of the students received the intervention and completed the formative evaluations. The student participants each were given a participant number (001-020) to ensure all data was de-identified throughout the data collection and data analysis phase.

Survey Monkey was used to collect the data for the retrospective survey and Google Forms were used for the self-reflections and questionnaire.

Table 3.3 *Research Questions and Methods of Inquiry*

Research Questions	Data Sources
How does a reflexive photography project change how 1 st year occupational therapy students view occupational justice?	Social Justice Attitudes subscale (see Appendix G) Self-reflection (see Appendix D) Reflexive Photography Project Questionnaire (see Appendix E)
How does a reflexive photography project change how 1 st year occupational therapy students perceive their role as a socially responsive citizen for occupational justice within their local community?	Civic Action subscale (see Appendix G) Self-reflection (see Appendix D) Reflexive Photography Project Questionnaire (see Appendix E)
How does a reflexive photography project influence 1 st year occupational therapy students' awareness about contextual barriers that may impact community residents' health and wellness?	Contextual Barriers Survey (CBS) (see Appendix G) Self-reflection (see Appendix D) Reflexive Photography Project Questionnaire (see Appendix E)

A retrospective pretest and posttest survey (see Appendix G) was used to collect quantitative data. The survey included three data sources, each addressing a specific research question (see Table 3.3). The data sources included the (a) Civic Action subscale, (b) Social Justice Attitudes subscale, and (c) Contextual Barrier Survey (CBS). The subscales are components from the published Civic Attitudes and Skills Questionnaire (CASQ) (Moely et al., 2002).

To minimize response shift bias and overestimation of results, a retrospective methodology was implemented. A retrospective methodology is a method used in short-

term studies to measure self-report pretest-posttest behaviors or thoughts simultaneously at the end of an intervention (Howard, 1980; Little et al., 2020). Response shift bias results in skewed baseline data when the research participants may have limited comprehension of the content being studied resulting in an overestimation of their actual knowledge preceding an intervention (Howard, 1980; Howard & Dailey, 1979; Pratt et al., 2000). Overestimation using traditional pretest-posttest scores can result in no statistical change after the study, when in fact the intervention may have resulted in explicit gains (Drennan & Hyde, 2008; Howard, 1980; Little et al., 2020; Pratt et al., 2000).

The Civic Action subscale, Social Justice Attitudes subscale (Moely et al., 2002), and CBS provided insights on the degree of a student's transformative change and awareness of community needs following CBL. The quantitative measures each aligned with an independent construct explored in this research study. Students completed the online retrospective survey within two days after presenting their findings to interested stakeholders.

Quantitative Measures

The CASQ was used to measure student attitudes, skills, and behavioral intentions following CBL (Moely et al., 2002). Specific to this research study, 2 out of 6 subscales from the CASQ were used: (a) Civic Action subscale and (b) Social Justice Attitudes subscale that measured student perceptions about community engagement and their attitudes regarding occupational justice (Moely et al., 2002). The subscales' construct validity (correlation coefficient) and internal consistency (Cronbach's alpha coefficient) proved the CASQ subscales' reliability (Moely et al., 2002) (see Table 3.4). Recent

research studies confirmed the validity and reliability of the CASQ's subscales, using undergraduate research participants (Moely & Illustre, 2011, 2013; Schamber & Mahoney, 2008; Simons & Cleary, 2005).

Table 3.4 *Psychometric Properties and Correlates of the Civic Action and Social Justice Attitudes Subscales*

Measure	Sample 1 n= 212	Sample 2 n= 221	Pre n= 760	Post n= 718
	r	r	α	α
Civic Action Subscale	.74	.71	.86	.88
Social Justice Attitudes Subscale	.74	.68	.70	.69

Note. r = correlation coefficient. α = Cronbach's alpha coefficients

Questions on the CASQ subscales used a rating scale from 1 (*completely disagree*) to 5 (*agree completely*) (see Appendix G) (Moely et al., 2002). For this research study, the 5-point Likert scale was changed to 1 (*strongly disagree*) to 5 (*strongly agree*).

Civic Action Subscale

Student perceptions about community engagement and commitment to potentiate societal change following CBL were measured using the CASQ's Civic Action subscale (Moely et al., 2002). Students rated their level agreement on eight statements. Example statements include:

- I plan to become an active member of my community.
- I plan to help others who are in difficulty.

- I am committed to making a positive difference.

Students rated their level of agreement on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Social Justice Attitudes Subscale

To measure student attitudes related to social factors, cultural diversity, and how they view other races, the Social Justice Attitudes subscale (see Appendix G) was used (Moely et al., 2002). The subscale included eight statements that encompass occupational justice principles such as:

- People are poor because they choose to be poor.
- Individuals are responsible for their own misfortunes.
- We need to institute reforms within the current system to change our communities.
- We need to change people's attitudes in order to solve social problems.

Students rated their level of agreement about each statement on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Contextual Barriers Survey

Currently, no OT, PBL, or CBL quantitative instruments exist that measure occupational therapy student's awareness of the impact contextual factors have on individual and community health and wellness, as defined by the AOTA (2020b). As a result, I created the CBS (see Appendix G) to measure students' awareness about personal and environmental contextual barriers that can impact a community's health and wellness. The personal context includes the following 13 factors unique to an individual: (a) age, (b) sexual orientation, (c), gender identity, (d) race, (e) culture, (f) social status,

(g) life history, (h) behavioral patterns, (i) psychological assets, (j) education, (k) professional identity, (l) lifestyle, and (m) other health conditions (AOTA, 2020b). The environment context includes the following five places and the social and attitudinal settings that encompass people's lives: (a) natural environment, (b) technology, (c) support, (d) attitudes, and (e) systemic policies (AOTA, 2020b).

A subject matter expert (SME) and my research chair reviewed the CBS to ensure the structure and content were created in such a way that students understand the objective of the survey. To achieve content validity the individual survey items for personal and environmental context were reviewed by the SME and my research chair until correct terminology, format, grammar, and readability were established (AOTA, 2020b; Blackstone, 2019; Braburn et al., 2004). The questions on the CBS used a rating scale from 1 (*no impact*) to 5 (*significant impact*). Students rated their level of agreement on how each personal and environmental factor impacts an individual's or population's health and wellness.

Qualitative Measures

This study implemented qualitative measures to help explain the students' learning experiences (Mertler, 2017). Qualitative measures were used to gain a more in-depth understanding of the meanings associated with the phenomenon being studied which involved a more collaborative method of inquiry (Mertler, 2017). Qualitative findings supplemented and/or justified the statistical significance of quantitative findings (Miles et al., 2020). Students completed self-reflections and a questionnaire as a means to collate the qualitative data. Specifically, the purpose was to gain a deeper understanding

of the students' transformative learning experiences, perceptions, and awareness during and after completing the RPP.

Self-reflections

Self-reflection is a method of self-evaluation, whereby the student reports thoughts, desires, and feelings (Glaser-Ziduka, 2012). The purpose of self-reflection is to demonstrate critical thinking and encourage deeper contemplation (Lew & Schmidt, 2011). In this study, self-reflections were used to make students:

- Evaluate their individual learning experiences (Lew & Schmidt, 2011)
- Consider issues that are personally meaningful to them (Glaser-Ziduka, 2012)
- Explore judgments, perceptions, or opinions while they address societal problems (Giles & Eyler, 1994)

The end goal of self-reflection was for the student to engage in a transformative learning experience (Boss et al., 2018; Bringle & Hatcher, 1999; Krajcik & Blumenfeld, 2006).

Students completed three consecutive independent self-reflections (see Appendix D), each scaffolded to build on previous and new academic knowledge and skills acquired by participating in the weekly learning and reflective exercises (Coulson & Harvey, 2013; Krajcik & Blumenfeld, 2006). The self-reflections were comprised of three open-ended questions that each addressed a different construct being studied: occupational justice, context, and role as a socially responsive citizen.

Self-reflection #1. Self-reflection #1 (see Appendix D) prompted students to recognize their developing awareness and understandings about occupational justice, context, and their role in advocating for individual and community health and wellness.

Self-reflection #2. Self-reflection #2 (see Appendix D) sought to understand students learning and reflective thinking concerning occupational justice and inclusive environments; contexts within the students' local community; and the students' confidence in stimulating societal change.

Self-reflection #3. Self-reflection #3 (see Appendix D) attempted to generate evidence of a student's transformative learning as a result of partaking in collaborative learning activities (Ash & Clayton, 2009). Each question guided the student to consider how others expanded their thinking, understandings, and personal meanings of the phenomena being studied as they applied to a real societal problem.

Questionnaire

The purpose of the Reflexive Photography Project Questionnaire (see Appendix E) was to gain a better understanding of the students' overall perception of their learning experience after the RPP. The open-ended structure of the questions enabled me to gather rich data to gain a more in-depth understanding of the students' learning experiences. Each question was a descriptive inquiry that represented the basic tenets of the research questions (see Appendix E) (Harrell & Bradley, 2009).

Data Analysis

In this convergent parallel mixed methods research study, quantitative and qualitative data were obtained and analyzed to answer the research questions. Quantitative data included a self-report pretest-posttest retrospective survey and the qualitative data sources included a series of three individual self-reflections and one questionnaire. Table 3.5 demonstrates the alignment of the data sources and data analysis related to each research question.

Table 3.5 *Research Questions, Methods of Inquiry, and Data Analysis Procedures*

Research Questions	Data Sources	Data Analysis
How does a reflexive photography project change how 1 st year occupational therapy students view occupational justice?	Social Justice Attitudes subscale (see Appendix G)	Descriptive statistics, Wilcoxon Signed Ranks Test, and effect size
	Self-reflections (see Appendix D)	Thematic analysis
	Reflexive Photography Project Questionnaire (see Appendix E)	Thematic analysis
How does a reflexive photography project change how 1 st year occupational therapy students perceive their role as a socially responsive citizen for occupational justice within their local community?	Civic Action subscale (see Appendix G)	Descriptive statistics, Wilcoxon Signed Ranks Test, and effect size
	Self-reflections (see Appendix D)	Thematic analysis
	Reflexive Photography Project Questionnaire (see Appendix E)	Thematic analysis
How does a reflexive photography project influence 1 st year occupational therapy students' awareness about contextual barriers that may impact community residents' health and wellness?	Contextual Barriers Survey (CBS) (see Appendix G)	Descriptive statistics, Wilcoxon Signed Ranks Test, and effect size
	Self-reflections (see Appendix D)	Thematic analysis
	Reflexive Photography Project Questionnaire (see Appendix E)	Thematic analysis

Chapter 4 explains the methods and processes of quantitative and qualitative data analysis applied to this research study; findings are augmented by narratives, tables, and figures that provide detailed descriptions.

Procedures

The procedures for this study were organized into four phases. Figure 3.11 presents an overview of the timeline, my responsibilities as the researcher, and the activities student participants completed during each phase. This research study was completed over the 1st 6-weeks in a 15-week course during the spring 2021 semester.

Phase/ Student and Researcher Roles	1	2	3	4	5	6	-	15+
Phase 1								
Introduce PBL and CBL								
Phase 2								
Describe PBL and CBL more in-depth								
Create student groups								
Engage in weekly reflective exercises								
Facilitate weekly reflective exercises								
Phase 3								
Post self-reflection links								
Complete self-reflections (#1-#3)								
Post RPP questionnaire and survey link								
Complete RPP questionnaire and retrospective survey								
Phase 4								
Describe research study and request consent								
Complete consent forms								
Descriptive and inferential statistics for surveys								
Code and interpret qualitative data								
Triangulation of data								

Figure 3.11 Timeline of Intervention. Colors designate the student role ○ and researcher role ●

Phase 1

A brief introduction to PBL, CBL, and the RPP was provided the 1st week of the semester. A description of student expectations throughout the intervention was provided in the course syllabus and posted on the university LMS.

Phase 2

A more in-depth description of the reflective exercises and expectations throughout the RPP was provided. The intervention entailed weekly learning activities and requirements that formally began the 2nd week and continued through the 6th week of the semester.

Through the 2nd-6th weeks of the semester, I facilitated weekly active learning exercises that included a reflective component. Each weekly learning exercise occurred during a 75-minute seminar session. During the final week of intervention, each working group (four in total) presented their culminating projects. For specific details about the intervention, refer to the “Intervention” section of this document.

Phase 3

Preliminary collection of data occurred on four separate occasions throughout the research study. During the 3rd, 4th, and 5th weeks, students completed self-reflections (see Appendix D) following each weekly learning exercise. During week 6, students completed the online Reflexive Photography Project questionnaire (see Appendix E) and the retrospective pretest-posttest survey (see Appendix G). Students were given two days to complete each qualitative and quantitative measure, taking no more than 30 minutes to complete each measure. Additional time may have been required for the questionnaire and retrospective survey depending on the depth of responses. Each self-reflection was

reviewed by the researcher and feedback was provided via weekly emails to the working groups or shared during the next scheduled seminar. Students accessed the self-reflection, questionnaire, and retrospective survey links on the university LMS.

Phase 4

Recruiting student research participants occurred at the end of the semester. All students were informed about the purpose of this research study. A link to the consent form (see Appendix C) was posted on the university LMS. One verbal reminder and an opportunity to ask questions were provided during the final week of the course. After consent was received, official data analysis began.

Rigor and Trustworthiness

Intentional systems used to improve confidence that the research findings are reliable were interwoven throughout the research process to eliminate any potential bias from this researcher or the research participants (Mertler, 2017; Miles et al., 2020; Shenton, 2004).

The research participants were my students and they all had to complete the RPP. To minimize any disruption in the teaching and learning dynamics that naturally occur during seminar and prevent coercion, I implemented the following intentional systems to further enhance the rigor and trustworthiness of the findings:

1. Students may be influenced when responding to the formative evaluations interspersed throughout the RPP and not provide an accurate assessment of their learning process. To support honest responses to the self-reflections and questionnaire each student received a participant number from a research assistant, who kept the information private. Each student used their participant

number to sign the consent form, self-reflections, and questionnaire to ensure the information they shared could not be directly linked to them or identified. The purpose was to minimize a student's compulsion to embellish a response different than what they knew, felt, or experienced.

2. To further strengthen the integrity of this research study, I asked for permission to use the student participant's data at the end of the semester. This included not divulging details about this research study until asking for permission. A link to the consent form, via an anonymous Google Form, was posted on the university LMS to ensure the complete anonymity of the students. This intentional process was implemented to improve the reliability of the findings by eliminating potential bias or coercion.
3. I attempted to elicit dependable feedback, throughout the RPP, by clarifying the purpose for asking student opinions and inform them that their honest responses, whether positive or constructive, will help me better understand their lived experience from their perspectives (Brodsky, 2008; Sandelowski, 2008).

These intentional approaches persevered maintaining an amicable collaboration between the students and myself from the onset through the end of the RPP. Anonymity, open and trustworthy communication, and reciprocal participation contributed to reliable data and successful implementation of the intervention.

In addition, multiple sources of quantitative and qualitative data were collected. The quantitative and qualitative sources included a self-report retrospective pretest-posttest survey, self-reflections, and a questionnaire. The reliability and validity of the

quantitative measures were discussed in the Data Collection section. This section focuses on additional methods used to establish the trustworthiness of the qualitative measures. Rigor and trustworthiness were established by incorporating a combination of different methods including peer debriefing, triangulation, and thick, rich description (Creswell, 2014; Miles et al., 2020).

Peer Debriefing

Peer debriefing occurred in two different forms. I asked a SME and a content expert to review the self-reflections and the CBS until correct terminology, format, grammar, and readability were established (Blackstone, 2019; Braburn et al., 2004). Equally, peer debriefing entailed meeting with my dissertation chair weekly.

During weekly meetings and communication via email, I collaborated with my dissertation chair who provided expert feedback from an experienced action researcher during the development, analysis, and reporting stages (Miles et al., 2020; Shenton, 2004; ThêNguyin, 2008). Receiving constructive feedback enabled me to design a robust, reliable, and valid action research study, which reinforced engaging more deeply with sound data (Nowell et al., 2017; Shenton, 2004). For example, reflections and interpretations were explored reciprocally, anticipated problems or potential for bias were addressed, and alternative solutions or strategies were discerned to ensure the research study was rigorous and impartial from the onset (Shenton, 2004). In response, my dissertation chair asked questions and provided verbal and written feedback that generated brainstorming sessions during our weekly meetings and through email correspondence.

Triangulation

Triangulation of the data collection methods and sources increased the credibility of the resulting themes and provided a more in-depth representation of the evidence that supported a transformative change (Miles et al., 2020; Rothbauer, 2008). The sources of data collection included three rounds of self-reflections and a questionnaire. In addition to using multiple methods of data collection, all quantitative and qualitative datasets were combined and compared to capture participants' changed perceptions, behaviors, and actions that were evident of a transformative change (Mezirow, 1997). Merging the data sets explained, verified, or disproved the research findings to increase validity (Creswell, 2014; Rothbauer, 2008). To further support validity, I provided examples of direct quotes from the self-reflections and questionnaires.

Thick, Rich Description

Thick, rich descriptions provided the reader with detailed information about the research methodology. Rich narratives provided the reader descriptions about the intentional processes implemented to strengthen the interpretability and trustworthiness of the findings. This study explored evidence relating to the research design, intervention techniques implemented, the data analysis process, and the resulting outcomes so others can implement similar approaches to teaching within their spheres of influence (Creswell, 2014; Shenton, 2004).

Plan for Sharing and Communicating Findings

The findings of this research will be shared with numerous stakeholders who have an interest in learning how a RPP can be implemented to support student transformative learning during CBL. The research setting's Department of Occupational Therapy

faculty, Office of the Dean, and Office of Community-based Learning all have a vested local interest in learning how CBL supports a student's transformation as an engaged citizen who is sensitive to social disparities and community needs. Charts displaying evidence of the research findings and sharing the students' final projects (Mertler, 2017) will be shared during formal and informal meetings with each identified university department or office to allow colleagues an opportunity to ask questions, provide feedback, and analyze the implemented action research process. Information garnered through the dissemination process at the local level will be used to further improve CBL pedagogy, guide future faculty-mentored community-based participatory research, and explore how the RPP can be used as a community resource that provides evidence supporting a need for change (Wallerstein et al., 2018).

Although the purpose of this action research was intended for a specific local audience, the research methodology can be generalized to a broader regional and national context including the CBL educational community and the occupational therapy profession; therefore, I plan to submit proposals to present my research at the International Association for Research on Service-Learning and Civic Engagement (IARSLCE) Conference, the American Occupational Therapy Association (AOTA) Conference, and the Pennsylvania Occupational Therapy Association Conference. Separately, I plan to submit my research to the following peer-reviewed publications: the IARSLCE online journal and the American Journal of Occupational Therapy; and OT Practice which is the professional magazine of the AOTA to inform other occupational therapy educators about the benefits of embedding CBL projects in occupational therapy

education and how it promotes social, health, and cultural awareness for future healthcare practitioners (Garner, 2014).

Finally, although complete anonymity of the participants is unavoidable to the local stakeholders, any results will be associated with a participant number, from 001-019, to protect the anonymity of the study participants. Similarly, the place of education will be referred to as a Jesuit University.

CHAPTER 4

FINDINGS AND INTERPRETATIONS

This action research study evaluated the effectiveness of implementing reflexive photography as a means for a transformative CBL experience. The findings from this study provided an understanding about 1st year OTSs (a) perceived role as a socially responsive citizen (b) view on occupational justice, and (c) recognition of contextual barriers on community health and wellness. This chapter reports the quantitative and qualitative findings to address the following research questions:

1. How does a reflexive photography project change how 1st year occupational therapy students perceive their role as a socially responsive citizen for occupational justice within their local community?
2. How does a reflexive photography project change how 1st year occupational therapy students view occupational justice?
3. How does a reflexive photography project influence 1st year occupational therapy students' awareness about contextual barriers that may impact community residents' health and wellness?

This chapter is organized by presenting the findings in two sections: (a) quantitative results from a self-report pretest-posttest retrospective survey and (b) qualitative findings from self-reflections and an open-ended questionnaire.

Quantitative Analysis and Findings

Quantitative data were obtained from an anonymous self-report pretest-posttest retrospective survey to determine if the RPP resulted in a transformative CBL experience. The survey consisted of the following three data sources: Civic Action subscale, Social Justice Attitudes subscale, and the Contextual Barriers Survey (CBS) (see Appendix G). To measure self-perceptions of change, students rated each survey item twice at the same time after completing the RPP (Little et al., 2020). Students first rated their current perception for each survey item, followed by thinking retrospectively of what their perception would have been before the RPP (Little et al., 2020). Each data source used a 5-point Likert scale from Strongly Agree or Significant Impact (5 points) to Strongly Disagree or No Impact (1 point) (see Appendix G).

The quantitative data were analyzed using SPSS. The intent was to calculate paired sample t-tests, however, the Shapiro-Wilk test for normality determined the data sources to be non-normal (Cronk, 2020). As a result, nonparametric Wilcoxon Signed Ranks tests were used to compare differences between each set of “current” scores and “before” scores (Cronk, 2020). To determine the meaningfulness of the findings, the effect size r was calculated. Effect size indicates the practical or clinical implications of the RPP contributing to a transformative learning experience (Aron et al., 2013). The following scale was used to estimate the degree of the effect: (a) .20 is a small effect, (b) .50 is a medium/moderate effect, and (c) .80 is a large effect (Rosenthal, 1993).

This section presents the descriptive and nonparametric inferential statistics for each data source.

Civic Action Subscale

The Civic Action subscale (see Appendix G) was used to assess how students perceive themselves as change agents in the community. The subscale included eight statements that students rated the extent they agree or disagree with each statement (see Appendix G). The subscale gauged how a student's perception of their desire to become an engaged and socially responsive citizen changed after completing the RPP. The reliability of the Civic Action subscale was tested with posttest data ($n = 19$) for the eight items. Cronbach's alpha indicated the Civic Action subscale to reach acceptable reliability ($\alpha = .81$).

Descriptive Statistics

Students' ratings for their perceptions of civic engagement after the RPP ($M = 4.63$, $SD = 0.35$, $Mdn = 4.75$) were higher than their ratings for their perceptions of civic engagement prior to beginning the RPP ($M = 4.04$, $SD = 0.56$, $Mdn = 4.13$). Table 4.1 presents the descriptive statistics for the Civic Action subscale.

Table 4.1 *Descriptive Statistics of the Civic Action Subscale ($n = 19$)*

	<i>M</i>	<i>SD</i>	<i>Mdn</i>
Perceptions of Civic Actions Before the RPP	4.04	0.56	4.13
Perceptions of Civic Actions After the RPP	4.63	0.35	4.75

Inferential Statistics

A Wilcoxon Signed Ranks test evaluated whether students perceived their role as a socially responsive citizen change after completing the RPP. A significant difference between scores ($Z = -3.74$, $p = <0.001$) was found, indicating students' perceptions of

their role in the community increased after the RPP. The effect size ($r = 0.61$) indicated a moderate effect.

Social Justice Attitudes Subscale

The Social Justice Attitudes subscale (see Appendix G) measured students' perceptions about the causes of and solutions for occupational injustices. The subscale included eight statements that students rated the extent they agree or disagree (see Appendix G). The subscale evaluated how a student's perception about people's attitudes impacting social problems changed after the RPP. Four statements were negatively worded so they were reverse coded before data analysis (see Appendix H).

The reliability analysis showed social justice attitudes had a low reliability score ($\alpha = .45$). A good measure should have an alpha level of at least .60, but preferably closer to .90 (Aron et al., 2013). Four out of the eight statements indicated a poor correlation, resulting in a decreased alpha level. However, deleting the items with low correlation did not significantly change the coefficient for the Social Justice Attitudes subscale. Therefore, none of the items were removed from the subscale before the analysis.

Descriptive Statistics

Students' ratings for their perceptions of social justice attitudes after the RPP ($M = 4.45$, $SD = 0.35$, $Mdn = 4.50$) were higher than their perception ratings before the RPP ($M = 4.00$, $SD = 0.51$, $Mdn = 4.13$). Table 4.2 presents the descriptive statistics for the Social Justice Attitudes subscale.

Table 4.2 *Descriptive Statistics of the Social Justice Attitudes Subscale (n = 19)*

	<i>M</i>	<i>SD</i>	<i>Mdn</i>
Perceptions of Social Justice Attitudes Before the RPP	4.00	0.51	4.13
Perceptions of Social Justice Attitudes After the RPP	4.45	0.35	4.50

Inferential Statistics

A Wilcoxon Signed Ranks test was conducted to evaluate if the students' perceptions scores about the causes and solutions to occupational injustices changed after the RPP. Results showed that the students' perceptions increased after the RPP, indicating the difference between students' ratings for their perceptions before the RPP and their perceptions after the RPP was significant ($Z = -3.56, p = <.001$). The effect size ($r = 0.58$) indicated a moderate effect.

Contextual Barrier Survey

I developed the CBS (see Appendix G) to measure students' awareness about the contextual factors that can impact community health and wellness. The CBS consisted of two sections: personal context and environment context.

The personal context included 13 items about a person's "unique features" and the environment context consisted of five aspects about "physical, social, and attitudinal" qualities or traits (see Appendix G) (AOTA, 2020b). This survey gauged how a student's awareness transformed how they perceived the level of impact contextual factors have on achieving health, wellness, and participation in life through engagement in occupations. Each section of the CBS is reported separately.

Because this survey was developed for this action research study, there were no previous reports of reliability. A SME and my research chair reviewed each item to establish content validity. As a result, data analysis entailed analyzing each item as an independent variable.

Personal Context

Descriptive Statistics. Overall, students' perceptions about their awareness ratings of how they perceive personal contextual factors could impact community health and wellness increased after completing the RPP. Median scores for 12 out of the 13 personal context areas increased by one value point (e.g. $Mdn = 3.00$ to 4.00 or 4.00 to 5.00), other than "education" (see Table 4.3). Students rated their level of awareness on education's impact on achieving healthy outcomes as having a "Significant Impact" ($Mdn = 5.00$) both before the RPP ($M = 4.32$, $SD = 1.00$) and after the RPP ($M = 4.68$, $SD = 0.58$). Table 4.3 presents the recorded descriptive statistics for each personal context area.

Table 4.3 *Descriptive Statistics of the Contextual Barrier Survey: Personal Context (n = 19)*

	Before the RPP			After the RPP		
	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>
Age	3.32	1.16	3.00	4.16	1.01	4.00
Gender identity	3.21	1.03	3.00	3.74	0.93	4.00
Sexual orientation	3.32	1.11	3.00	3.74	1.15	4.00
Cultural identity	3.63	1.12	4.00	4.37	0.76	5.00
Race and ethnicity	3.89	.99	4.00	4.58	0.90	5.00
Social and SES	4.21	0.92	4.00	4.89	0.32	5.00
Life history	3.21	1.13	3.00	4.11	0.81	4.00
Habits and behavior patterns	3.68	1.11	4.00	4.58	0.61	5.00
Personality traits	3.21	1.23	3.00	4.11	0.81	4.00
Education	4.32	1.00	5.00	4.68	0.58	5.00
Professional identity	3.26	0.99	3.00	4.00	0.94	4.00
Lifestyle	3.79	0.98	4.00	4.53	0.61	5.00
Health conditions and fitness	4.05	0.91	4.00	4.68	0.48	5.00

Inferential Statistics. Since 13 separate nonparametric tests were needed, the desired alpha significance level ($\alpha = .05$) was adjusted using the Bonferroni correction. Accordingly, *p*-values less than .004 (.05/13) were considered significant.

Separate Wilcoxon Signed Ranks tests were conducted to evaluate whether students' awareness of how each personal context item could impact community health

and wellness changed after the RPP (See Table 4.4). The outputs indicated significant differences between students' ratings for their perceptions prior to the RPP and their perceptions after the RPP in four out of the 13 items: age ($Z = -3.23, p = .001, r = .52$), social and SES ($Z = -2.97, p = .003, r = .48$), life history ($Z = -2.94, p = .003, r = .48$), and habits and behavior patterns ($Z = -2.95, p = .003, r = .48$). The calculated effect sizes indicated a moderate effect for each item.

The Wilcoxon Signed Ranks tests did not report a significant difference between students' awareness ratings for the following personal context items, (a) gender identity, (b) sexual orientation, (c) cultural identity, (d) race and ethnicity, (e) personality traits, (f) education, (g) professional identity, (h) lifestyle, and (i) health conditions and fitness. Effect sizes scores for the remaining items ranged from $r = .27$ to $r = .47$; thereby, indicating a small to moderate effect. Table 4.4 presents the inferential statistics for the personal context portion of the CBS.

Table 4.4 *Inferential Statistics of the Contextual Barrier Survey: Personal Context (n = 19)*

	<i>Z</i>	<i>p</i>	<i>r</i>
Age	-3.23	.001	.52
Gender identity	-2.33	.020	.38
Sexual orientation	-1.65	.098	.27
Cultural identity	-2.80	.005	.45
Race and ethnicity	-2.65	.008	.43
Social and SES	-2.97	.003	.48
Life history	-2.94	.003	.48
Habits and behavior patterns	-2.95	.003	.48
Personality traits	-2.86	.004	.46
Education	-1.82	.068	.30
Professional identity	-2.57	.010	.42
Lifestyle	-2.89	.004	.47
Health conditions and fitness	-2.59	.010	.42

Environment Context

One student did not score all items in the environment context section. As a result, the student was excluded from this portion of the quantitative data analysis ($n = 18$).

Descriptive Statistics. Students' scores of how they perceive each environment context item impacting community health and wellness increased after completing the RPP (see Table 4.5). The median scores increased one value point (4.00 to 5.00) for all

items, except for “Products and technology”, which increased 1.5 value points after the RPP ($M = 4.89$, $SD = 0.62$, $Mdn = 5.00$), compared to before the RPP ($M = 3.72$, $SD = 0.83$, $Mdn = 3.50$). Table 4.5 presents the descriptive statistics for each of the five environment context items.

Table 4.5 *Descriptive Statistics of the Contextual Barrier Survey: Environment Context ($n = 18$)*

	Before the RPP			After the RPP		
	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>
Natural and human-made changes to the environment	3.72	1.02	4.00	4.61	0.61	5.00
Products and technology	3.72	0.83	3.50	4.89	0.62	5.00
Support and relationships	4.06	0.94	4.00	4.89	0.32	5.00
Attitudes and perceptions	3.89	0.96	4.00	4.83	0.38	5.00
Services, systems, and policies	3.72	0.89	4.00	4.72	0.46	5.00

Inferential Statistics. A separate Wilcoxon Signed Ranks test examined if a difference occurred between student awareness scores for each environment context item before and after the RPP (see Table 4.6). Because five separate nonparametric tests were conducted, the desired alpha significance level, $\alpha = .05$, was adjusted using the Bonferroni correction to $p = .01$ ($.05/5$). Results showed a significant difference for each item: natural and human-made changes to the environment ($Z = -3.03$, $p = .002$, $r = .50$); products and technology ($Z = -3.04$, $p = .002$, $r = .51$); support and relationships ($Z = -2.88$, $p = .004$, $r = .48$); attitudes and perceptions ($Z = -3.17$, $p = .002$, $r = .53$); and services, systems, and policies ($Z = -3.45$, $p = .001$, $r = .58$). Effect sizes for each item

indicated the RPP had a moderate effect. Table 4.6 presents the inferential statistics for the environment context.

Table 4.6 *Inferential Statistics of the Contextual Barrier Survey: Environment Context (n = 18)*

	<i>Z</i>	<i>p</i>	<i>r</i>
Natural and human-made changes to the environment	-3.03	.002	.50
Products and technology	-3.04	.002	.51
Support and relationships	-2.88	.004	.48
Attitudes and perceptions	-3.17	.002	.53
Services, systems, and policies	-3.45	.001	.58

Qualitative Analysis and Findings

A thematic analysis approach was used to analyze two sources of qualitative data. I analyzed three self-reflections per student (see Appendix D) that resulted in 19 transcripts; and an open-ended questionnaire (see Appendix E) per student, for a total of 38 transcripts. The purpose of collecting this data was to gain a more in-depth understanding of the meanings associated with the student's transformative learning experience throughout the RPP. The self-reflections and questionnaire were administered via anonymous Google Forms that permitted easy access and collating the data in preparation for analysis.

Table 4.7 presents the quantity of qualitative data by the source to reflect on the richness of information contributing to the findings. The thematic analysis of this data entailed a recursive process of coding data from the transcripts. The following sections describe the analysis process and describe the themes that emerged from this study.

Table 4.7 *Quantity of Qualitative Data by Source*

Types of Qualitative Data	Number	Total Number of Codes Applied
Questionnaire transcripts	19	167
Self-reflection transcripts	19	170
Totals	38	337

Qualitative Data Sources

Self-reflections

The self-reflections were a series of weekly reflections that followed a learning activity at the onset of the RPP. The self-reflections were comprised of three open-ended questions that each addressed a different construct being studied: (a) occupational justice, (b) contextual barriers, (c) and role as a socially responsive citizen. Questions were scaffolded weekly to evaluate previous and new academic knowledge and perceptions acquired by participating in weekly learning and reflective exercises.

I reviewed each weekly self-reflection to gain a deeper understanding of the students' perceptions and awareness about occupational justice, contexts, and their perceived role in society from their perspective. I read through each electronic transcript twice to familiarize myself with the content (Bogdan & Biklen, 2003). I used the highlighter feature and made notes in a separate column to begin organizing the data according to this study's variables (occupational justice, context, and advocacy) that represented a transformative change in awareness, understandings, or perceptions (See Figure 4.1). Additionally, I included impressions, patterns, and recurring words in the margins of each document. No codes were assigned at this time, on account of the data

analysis phase commencing after the course. This information enabled me to begin familiarizing myself with the data and provide the students weekly feedback to help facilitate their transformative learning experience.

Question 2: What were the most intriguing aspects others shared that have helped change how you perceive contextual barriers differently?			
001	SF 3	Something that helped me was not only discussing what we noticed, but discussing ways of solving those issues. I think that as an OT we need to think on our feet and creatively to help our clients. When doing our CBL project, we all noticed common things that are environmental and personal barriers. But something that honestly helped me was listening to my groups ideas on how to improve those barriers. It allowed me to look at things much differently, especially when say "lets add a ramp", because you have to think of socioeconomic factors within the area and back up plans as well. This changed my perspective on perceiving contextual barriers differently by not always going to the first solution that pops up in my head. It's important to think more in depth to consider all factors that go into barriers of a town. Overall, this allowed me to be in depth with my solutions and not always go with my first choice.	How to creatively think of ways to overcome the barriers You have to consider the cost of recommendations Consider more than one option
002	SF 3	As I mentioned in number one the language barrier was one that I never really thought of. This was a point that I should have thought of before but coming from a hometown where the demographics show that 66.20% of people are white and 4.13% of the population is Hispanic or Latino, I was not exposed very much to signage with different languages except for big areas like the mall. I am mentioning the Hispanic population because that is mainly what we discussed in my group since the demographics of Scranton show that 14.8% of the population are Hispanic or Latino. My group members specifically mentioned the bus signage since that may be an essential method of transportation that many people use everyday to get to work, appointments, or into and out of the city. This is definitely something that I am now aware of and will notice a lot once I go back home and start looking around. All in all my group mates sharing their views on contextual barriers helped to widen my view on certain barriers and helped me to expand my knowledge in some areas.	Personal background includes limited exposure to different cultures in respect to signage in different languages is limited
003	SF 3	Some intriguing aspects others in my group shared that helped change how I perceive contextual barriers are barriers to the visually impaired. When we talked about barriers in my group, we discussed how those	EC PC- Visually impaired and auditory disability versus only

Figure 4.1 Excerpt from Self-reflection #3

After consultation with my dissertation chair, it was determined that a transcript containing each of the student's responses would better represent the data for analysis, resulting in 19 individual Google transcripts. Each Google transcript was organized according to student participant number and each construct being studied, which then listed the student weekly responses as outlined in Figure 4.2. This process was repeated for each additional student participant. The Google transcript was then converted to a Microsoft Word document to import into Delve (2019) (see Figure 4.2).

009 R.docx

Transcript and Codes

Participant Information

Q

Q 1

Occupational justice

Occupational justice is the equal opportunity for all individuals to participate in occupations despite differences in gender, age, sexual orientation, disability, health condition, or other variations. To promote occupational justice, it is essential to advocate for respect, fairness, and most importantly equity. To achieve independence in occupation, the individual must be given tools and resources that allow him or herself to successfully participate in their chosen occupation. Instead of enforcing equality, we need to realize that different problems warrant different solutions. Although these solutions may not appear equal, they result in the same end goal. The lack of occupational justice leads to negative outcomes such as occupational marginalization, or the exclusion of populations from occupations, and health disparities, or the gaps seen in the quality of care. By being conscientious of differences, our society can better support individuals with varying health conditions and make our community a more accessible place.

1, 2 believes communities need to provide accessible services/resources to improve people's lives 1, 2 marginalized populations experience the greatest OJs (discrimination), perpetuating OJs
1, 2, 3 Oj results in negative implications 1, 2, 3 OJ affords equal opportunities and equitable services, etc. to all 1, 2, 3 people have individualized needs/attributes/desires that support OP
1, 2, 3 recognition that inclusive environments (barrier-free contexts) affords OP for all 1, 2, 3 recognizes engaging in everyday tasks are barrier-free to most, but others may encounter barriers
1, 2, 3 respect that all individuals have a right & access to participate in chosen meaningful occupations Health implications isolation

Occupational justice is an equal opportunity for all individuals to participate in activities and occupations. Individuals should be allowed the chance to complete occupations despite differences such as race, ethnicity, sexual orientation, health condition, religion, or other variations. By ensuring occupational justice for everyone, the community becomes more inclusive of its population. For example, if a school makes its newly built playground accessible to all children of different ages, learning levels, physical abilities, and cognitive skills, then all students can participate in the occupations of leisure and play. Although this is a very simple example of children playing on a playground, inclusion is seen on a massive scale in everyday life. It is crucial that occupational justice is advocated for all people. If this is not achieved, groups in the population lose out on the opportunity to engage in meaningful occupations and occupational marginalization becomes a bigger problem.

1, 2 marginalized populations experience the greatest OJs (discrimination), perpetuating OJs 1, 2 OJs/disparities deny, exclude, or restrict access to meaningful occupations afforded to others
1, 2, 3 inclusive community mindset 1, 2, 3 impact on social interaction for health & wellness 1, 2, 3 OJ affords equal opportunities and equitable services, etc. to all
1, 2, 3 OJ means thinking more about others' and what is needed to engage in their communities 1, 2, 3 recognition that inclusive environments (barrier-free contexts) affords OP for all
1, 2, 3 respect that all individuals have a right & access to participate in chosen meaningful occupations

After collaborating with my group members, my peer's views about occupational justice supported how I perceive occupational justice. Through our group conversations, we discussed a range of differences that may impact the way individuals in the community participate in occupations and activities in our designated area. We acknowledged not only physical conditions, but vision impairments, variety in languages, pets, and parking. By listing these differences outside of health conditions, our group understood that occupational justice pertains to everyone in the community. We considered categories such as age, ethnicity, backgrounds, and language instead of visual health conditions. This highlighted the importance of making all spaces inclusive to allow everyone to participate in their chosen occupation. We looked outside our own privilege and abilities to recognize that others may not be able to do the same things that we can do. I was taken out of the mindset that prevented me from thinking twice before I walked up the stairs to the bathroom.

Figure 4.2 Self-reflection transcript

Reflexive Photography Project Questionnaire

The purpose of the Reflexive Photography Project Questionnaire (see Appendix E) was to gain a better understanding of the students' overall perceptions of their learning experience after the RPP. The open-ended structure of the questions enabled me to gather rich data in understanding the students' learning experiences more in-depth. Each question was a descriptive inquiry that represented the basic tenets of the research questions.

The Google Form, used to collect the data, was converted to a Google transcript, organized by each question. As described above, it was determined that a transcript containing each of the student's responses would better represent the data for analysis, resulting in 19 individual Google transcripts. Each Google transcript was then converted to a Microsoft Word document (see Figure 4.3).

In 150 or more words, how does occupational INJUSTICE and occupational DEPRIVATION impact the local community's health and wellness?

Occupational injustice is the unequal opportunity for individuals to participate in a chosen activity or occupation based on a personal or environmental hindrance. This exclusion leads to a decrease in life satisfaction. Occupational deprivation occurs over time as the individual is continuously not able to engage in certain occupations. Both of these concepts prevent individuals from participating in meaningful occupations. One major thing I have learned from this project is there is a large amount of personal and environmental barriers throughout the community. Whether it is in Nay Aug Park, the local library, or public websites, these small inconveniences quickly add up. Depending on the individual, these hindrances can prevent the person from partially or fully participating in the same experience. Over time, occupational deprivation occurs, and these individuals grow frustrated and may lose the motivation to use community resources and areas. This leads to certain groups becoming marginalized.

Why do you think occupational injustices exist in society? Provide an example?

I think occupational injustices exist in society because the majority of people do not understand how inequalities or hindrances affect others. This ignorance allows occupational injustices to continue within communities. With a bigger initiative to educate the general public, occupational injustices have the potential to become less prominent. For example, if a private business researches building accessibility before reviewing their construction plans, necessary infrastructure can be installed to allow a building to be accessible. This way any individual looking to participate in occupations pertaining to the business can participate.

Describe how you perceive specific personal and environment contexts that have the most significant impact on Scranton's health & wellness.

One major personal context that is significant to Scranton's health and wellness is ensuring that words on signs, maps, and information can be read by everyone in the community. As Spanish becomes more prevalent in the United States, it is important to account for the populations that do not speak English as their first language. For example, since the maps at Nay Aug Park are not translated, the individuals who cannot read English cannot participate in occupations including exercise and leisure. Another major environmental context is the sidewalks on the side of roads. Some of the sidewalks contain holes, snow, ice, broken glass, crumbling cement, and uneven surfaces. These hindrances make movement difficult for individuals with walking devices and sight impairments.

Figure 4.3 Excerpt of the Reflexive Photography Questionnaire

In preparation for coding the data and after consultation with my dissertation chair, it was determined that each set of transcripts (Questionnaire and Self-reflections) would be imported into Delve (2019), an online qualitative data analysis tool, as a separate project (see Figure 4.4). Individual projects allowed concurrent coding between

the sets of transcripts for similarities and coding specifically related to the purpose for each source of qualitative data.

Projects	
Project	Owner
Wisniewski Self-reflections	Patricia Wisniewski
Wisniewski Questionnaires	Patricia Wisniewski

Figure 4.4 Qualitative Data Analysis Projects in Delve

Qualitative Data Analysis

Coding the data commenced after the course. I analyzed the data through a process of thematic analysis for any changes in students' perceptions, understandings, or behaviors across multiple cycles of coding (Saldaña, 2021). To ensure accuracy and mindfully engage in the constant comparative method, I re-examined the transcripts throughout the process to add, change, or discard codes, categories, and themes through interpretation and peer review sessions with my dissertation chair (Glaser, 1965; Miles et al., 2020). The coding process started by assigning codes, sentence-by-sentence, followed by employing a multilayered process of coding that was further refined, resulting in themes and assertions.

An eclectic coding approach was applied. Eclectic coding (a form of open coding) entailed a repertoire of coding methods concurrently to label learning experiences and emerging phenomena specific to the research questions (Saldaña, 2021). Structural, Descriptive, Subcoding, Simultaneous, and In Vivo Coding comprised the first rounds of coding, followed by Pattern Coding to establish relationships for categorization and

theme development (Blackstone, 2019; Bogdan & Biklen, 2003; Glaser, 1965; Johnson & Christensen, 2014; Saldaña, 2021).

Before beginning the coding process, I re-visited and read the highlighted transcripts and notes (see Figure 4.1). A preliminary set of structural codes and descriptive codes related to each research question transpired from the raw data (Bogdan & Biklen, 2003; Saldaña, 2021). Figure 4.5 provides an example of the structural codes that guided this process.

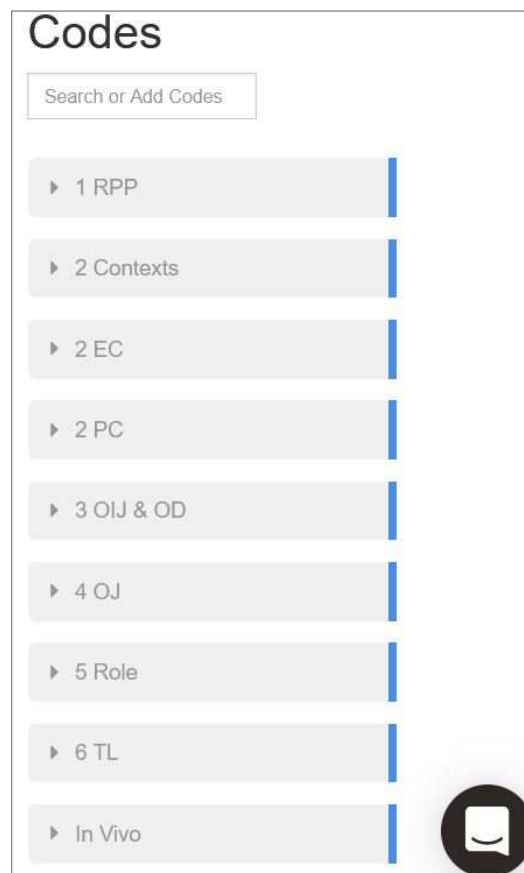


Figure 4.5 Structural Coding in Delve

A process of Descriptive Coding, Subcoding, Simultaneous Coding, and In Vivo Coding ensued as it related to each structural code. The structural code “RPP” included the following descriptive codes: challenges, class discussions, client factors, community

collaboration, group collaboration, guest speaker, photographs, videos, and others. The descriptive codes created a list of subtopics related to the structural code “RPP” (Saldaña, 2021, p. 94). This process enabled a more focused analysis of the data using Subcoding to capture the meanings of the students’ perspectives as seen in Figure 4.6 (Saldaña, 2021, p. 94). This concurrent process of coding provided a more comprehensive method to capture excerpts related to all of the constructs of this study versus focusing on each construct individually and risk missing important associations with the other constructs (Saldaña, 2021). The process resulted in more detailed descriptions and captured multiple meanings assigned to each code for further analysis (Saldaña, 2021). Figure 4.6 illustrates an example of the descriptive codes “Community Collaboration” and “Group Collaboration”, with the subcodes listed under each descriptive code that provides details and deepens the meaning of each code (Miles et al., 2020; Saldaña, 2021).

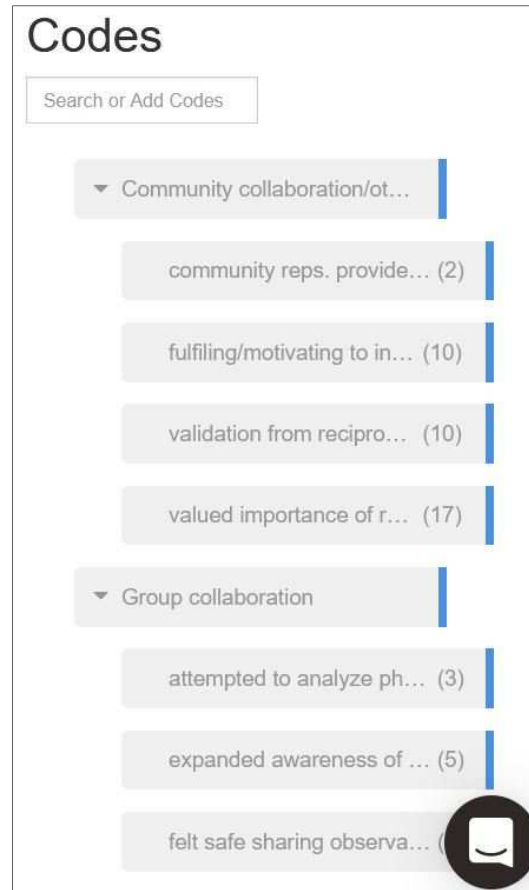


Figure 4.6 Descriptive Coding and Subcoding in Delve

Similarly, a highlighted sentence from Participant 14 received two simultaneous codes “decreased meaningful activities has negative implications on well-being” and “denied, excluded, or restricted from meaningful occupations afforded to others” (see Figure 4.7). This example reveals the multiple meanings of the sentence concerning two of the study constructs: occupational justice and contexts, which were captured as a result of the Eclectic Coding process.

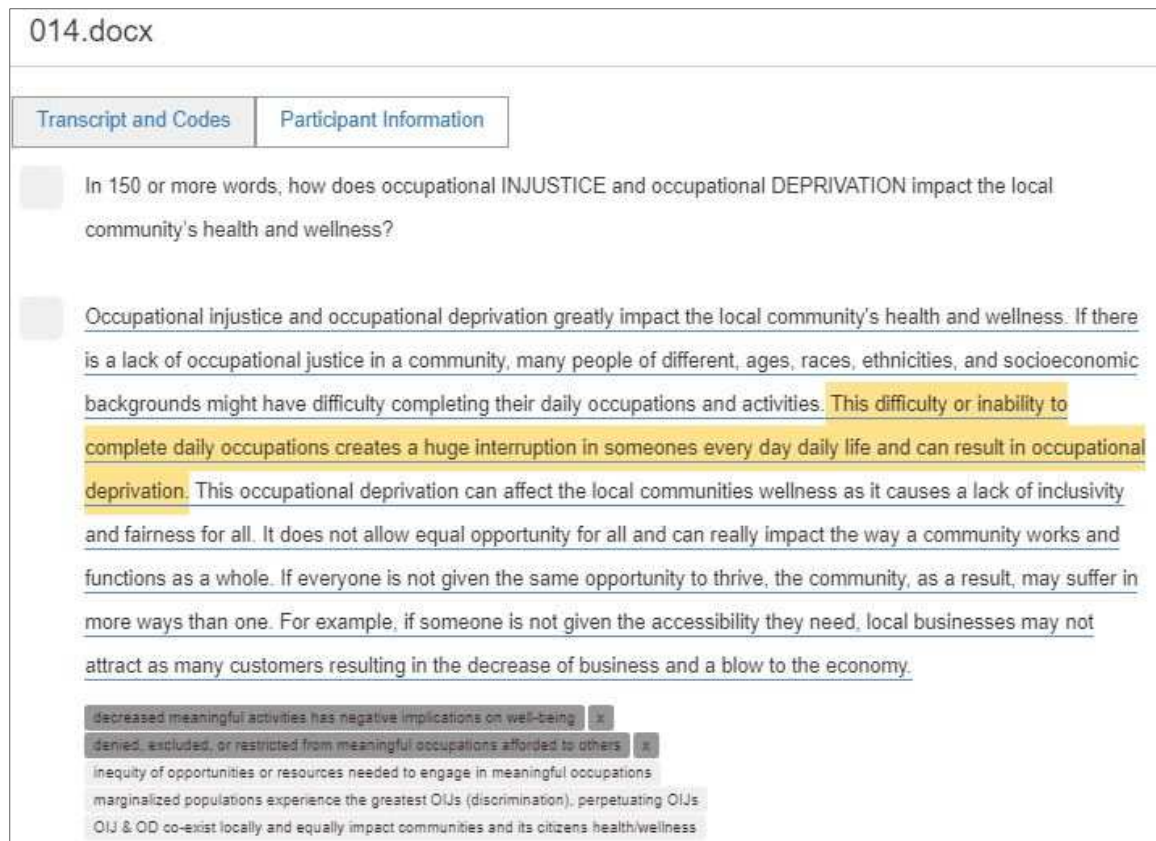


Figure 4.7 Simultaneous Coding in Delve

Throughout the coding process, In Vivo codes were added to validate the students' lived experiences (Saldaña, 2021). Direct quotations were coded and organized according to each construct of this study. In Vivo codes from the self-reflection transcripts included the number of the self-reflection and the construct (see Figure 4.8). For example, the first In Vivo code in Figure 4.8 indicates that it was the 3rd response to the research question about environment and personal contexts which demonstrates a change in how the student views contexts differently, which includes simultaneous codes highlighted in gray at the bottom to capture the meaning of the quotation.

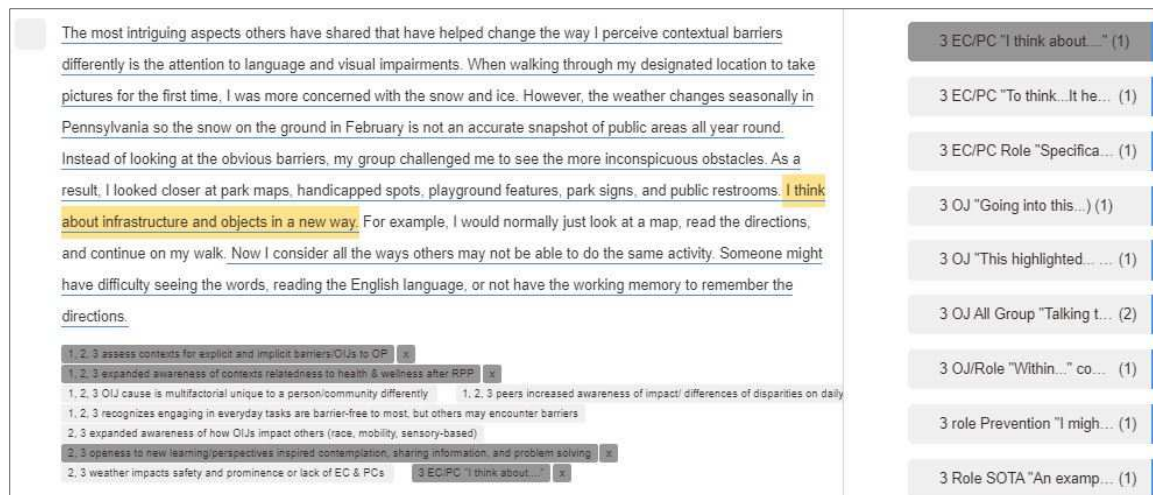


Figure 4.8 In Vivo Coding and Simultaneous Coding in Delve

Throughout the process, I met weekly with my dissertation chair for peer debriefing sessions to validate my coding process. This resulted in subsequent rounds of data analysis to explore new concepts, definitions, or understandings from the data, which included comparing codes of the self-reflections and questionnaires to ensure continuity of similar codes and recognize differences (Miles et al., 2020; Saldaña, 2021). This iterative process of coding continued until central categories and themes were determined and defined (Miles et al., 2020; Saldaña, 2021).

The next round of coding entailed a more responsive process of narrowing codes into categories and themes using Pattern Coding. Pattern Coding was applied to organize the codes from the 1st cycles of coding into meaningful categories (Bogdan & Biklen, 2003; Saldaña, 2021). The 1st round of coding resulted in 337 codes. A process of code mapping followed that included printing out the codes, cutting each one out, and then grouping them into general categories (Saldaña, 2021). Initial groupings included challenges to the learning process, facilitators to the learning process, new understandings, application of learned concepts, occupational justice, the impact of

example of how I organized the groupings of codes, labels, categories, and emergent theme related to PBL. Separate boards were created for the remaining constructs.

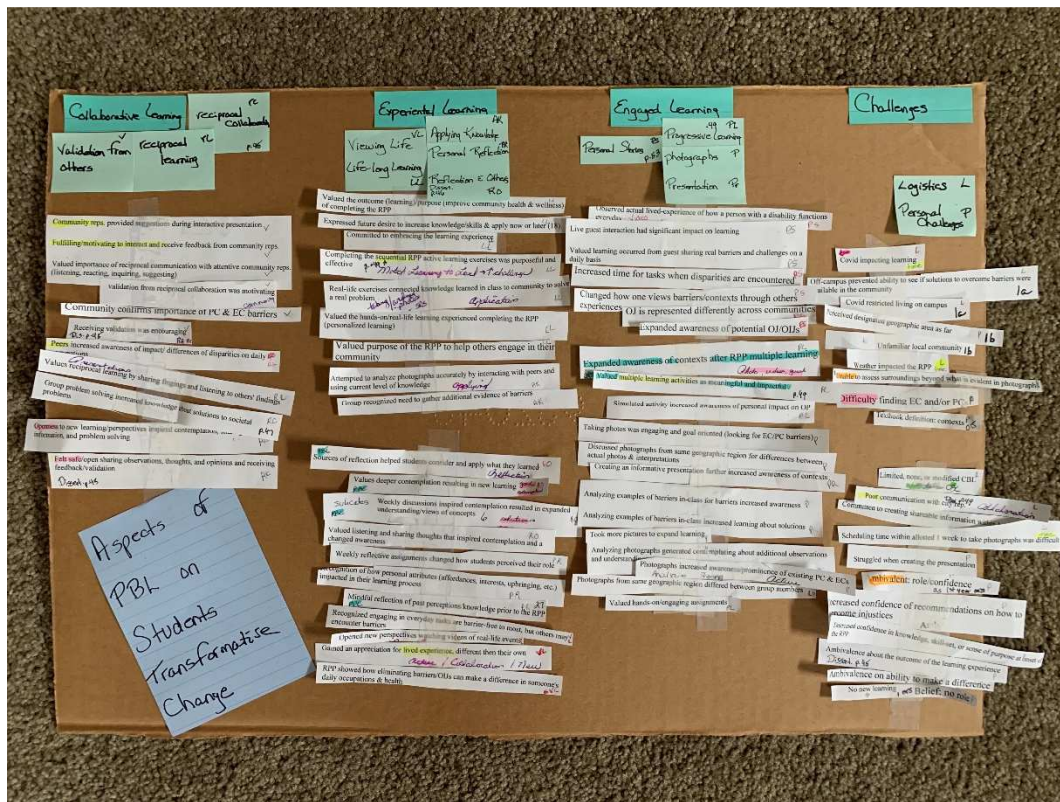


Figure 4.10 Example of Subsequent Round of Pattern Coding

For example, the category “Collaborative Learning” included three condensed groupings of codes that depicted how meaningful group collaboration contributed to the students’ learning, in a supportive environment for students during the RPP (see Figure 4.10). The condensed codes included (a) collaboration with others (b) reciprocal learning, and (c) validation. Under the code “collaboration with others” the following codes were listed: group problem solving increased knowledge about solutions to societal problems; openness to new learning/perspectives inspired contemplation, sharing information, and problem-solving; and felt safe/open sharing observations, thoughts, and opinions and receiving feedback/validation. A peer debriefing session with my dissertation chair and

the continuous process of reviewing the codes allowed justification that the codes supported each category.

As the coding process evolved, I created a chart in Microsoft Word (see Table Figure 5.1) that allowed me to compare similarities, differences, and frequencies that resulted in condensing the data as significant concepts emerged (Creswell, 2014; Mertler, 2017; Saldaña, 2021). I started to identify themes and corroborate the theming with student responses for accuracy and justification for each theme. Eventually, 41 condensed codes were established. This process enabled me to create an audit trail to verify the validity of the coding process and the resultant categories and themes (see Figure 4.8). After the central themes were established, I compared them with the research questions to ensure they correlated with the purpose of the study or needed to be modified to be more accurate and representative of this research study (Bogdan & Biklen, 2003; Mertler, 2017; Saldaña, 2021). Four major themes emerged: (a) changes in awareness of occupational justice, (b) changes in awareness of contextual factors, (c) changed perceived role, and (d) aspects of PBL (see Table 4.8).

Table 4.8 *Analysis and Coding Process Chart*

Theme #1: Changes in Awareness of Occupational Justice	Theme #2: Changes in Awareness of Contextual Factors	Theme #3: Changed Perceived Role	Theme #4: Aspects of PBL
<u>Aspects that support occupational justice</u> <ul style="list-style-type: none"> - inclusive mindset (6) - engagement in meaningful activities (5) - offer choices (2) - view surroundings differently (5) - communal commitment (3) - provide equitable services (3) 	<u>Recognition of environmental contexts</u> <ul style="list-style-type: none"> - natural and human-made (13) - societal attitudes (1) - relationships (1) - services and systems (1) 	<u>Communal commitment</u> <ul style="list-style-type: none"> - confidence (5) - advocacy (8) - evidence of evolving roles (4) 	<u>Engaged learning</u> <ul style="list-style-type: none"> - guest speaker (5) - videos (2) - taking, sharing, and analyzing photographs (8) - creating the presentation (1) - scaffolding learning exercises (4)
<u>Factors that perpetuate occupational injustice</u> <ul style="list-style-type: none"> - attitudinal barriers (7) - inequity of services (7) - limited choices (5) - insufficient community resources (4) - feelings of exclusion (5) 	<u>Recognition of personal contexts</u> <ul style="list-style-type: none"> - individualized needs (4) - age (4) - culture (3) - SES (2) - life experiences (1) - psychological aspects (1) 	<u>Education</u> <ul style="list-style-type: none"> - self-education (6) - community education (9) 	<u>Collaborative learning</u> <ul style="list-style-type: none"> - peer collaboration (2) - collaboration with others (9)
	<u>Implications on health and wellness</u> <ul style="list-style-type: none"> - community health (3) - individual health and well-being (12) 		<u>Experiential learning</u> <ul style="list-style-type: none"> - personal reflection (9) - commitment to life-long learning (8) - applied knowledge (3)
			<u>Challenges</u> <ul style="list-style-type: none"> - logistical constraints (10) - personal experiences (11)

Assertions for each theme were ascertained and shared with my dissertation chair for feedback during a peer mentoring session. The Delve qualitative analysis tool allowed me to compare students' changed perceptions throughout the RPP, which verified that the students' CBL was a positive transformative experience.

When reviewing the students' perceptions about their perceived role as socially responsive citizens at the onset of the RPP compared to two weeks later, all of the students reported a change in their confidence level in making a difference in their community and/or identified a role. Evidence supports the assertion that the RPP had a positive impact on students' confidence and active role in helping communities overcome occupational injustices. For example, this process of analysis established the prevalence of multiple students' statements about their role as socially responsive citizens. The frequency of codes and student quotations led to two major categories: commitment to their community and educating themselves and others that each contributed to how they view their role. The recursive process of analyzing the data indicated that the RPP had a positive change on the students' perceived roles in society as evidenced in the following statement from participant 12,

I feel so much more confident that I can make a difference in my community. Before this project, I didn't know all of the ways to speak with our city and didn't even know all the things that needed changing. I now know that my voice does make a difference. Our project of taking pictures around the community has allowed us to first-hand experience making an actual difference in the community. That has allowed us to gain so much confidence in what we are doing. Especially as future occupational therapists now we know how much impact our voices

actually make, whenever things are brought to my attention in later years I'll know that I have the power to use my voice and demand change. Another thing is that maybe before this I would not have tried to make a difference because I would've thought well somebody else will do it but now I have realized that we need to take initiative against things that are wrong in our community.

Multiple students expressed similar sentiments that supported the categories and theme. This same process of analysis was then used to analyze and verify the remaining nine categories of themes and assertions.

Presentation of Findings

Four themes emerged from the qualitative data analysis (see Table 4.9). Student responses to the self-reflections and questionnaire described the following experiences after completing the RPP, (a) changes in awareness of occupational justice, (b) changes in awareness of contextual factors, (c) changed perceived role, and (d) aspects of PBL that impacted their transformative change. Each theme is explained further in the next section.

Table 4.9 *Themes, Assertions, and Categories from Qualitative Data*

Themes	Assertions	Categories
1. Changes in Awareness of Occupational Justice	Students experienced an increased awareness of aspects that support or negatively impact occupational justice	<ul style="list-style-type: none">• Aspects that support occupational justice• Factors that perpetuate occupational injustices
2. Changes in Awareness of Contextual Factors	Students demonstrated an increased awareness of how the environment and personal contexts impact community health and wellness.	<ul style="list-style-type: none">• Recognition of environmental contexts• Recognition of personal contexts• Implications on health and wellness
3. Changed Perceived Role	The RPP had a positive impact on students' confidence and active role in helping communities overcome occupational injustices	<ul style="list-style-type: none">• Communal commitment• Education
4. Aspects of PBL	The RPP design facilitated students' transformative learning experience	<ul style="list-style-type: none">• Engaged learning• Collaborative learning• Experiential learning• Challenges

Theme 1: Changes in Awareness of Occupational Justice

The 1st year OTSs experienced a positive impact in their awareness of occupational justice after completing the RPP. Previous research identified how CBL enables students to address specific societal needs through active engagement in the community that eradicates social and health disparities among individuals who are at risk for occupational deprivation (Hullender et al., 2015; Moely & Ilustre, 2014). The principles of occupational justice are rooted in CBL and is defined as “a justice that recognizes occupational rights to inclusive participation in everyday occupations for all persons in society, regardless of age, ability, gender, social class, or other differences”

(Nilsson & Townsend, 2010, p. 58). For this study, changes in students' awareness of occupational justice refer to an expanded view of factors that impact the local community's ability to afford equal access and participation to all people or aspects that negatively impact inclusion.

The students were asked to describe how they define occupational justice and describe how their awareness changed through a series of weekly reflections and a questionnaire after the RPP. The self-reflections followed learning activities that included (a) readings about occupational justice, interacting with a guest speaker who lives with a disability, and watching videos of persons living with a disability, (b) taking photographs of barriers in the local community, and (c) collaborating with group members. The questionnaire asked how 1st year OTSs would describe occupational injustice and deprivation in the local community, including causes. Analysis of the data indicated changes in awareness of occupational justice by identifying (a) aspects that support occupational justice and (b) factors that perpetuate occupational injustices.

Aspects that Support Occupational Justice. The students learned how the OT profession defines occupational justice in comparison to social justice. The profession acknowledges the impact communities can have on each individual's occupational rights and capacity for communal equity, full participation in meaningful occupations, and choice of opportunities in their everyday lives (AOTA, 2020b; Wilcock & Townsend, 2019). The mission for future OT professionals is to eliminate barriers that perpetuate inequalities to promote inclusivity and health and wellness where people live and work (AOTA, 2021; Bailliard et al., 2020).

The student responses to questions about occupational justice after (a) completing the required readings, (b) interacting with the guest speaker, (c) watching the videos of persons lived experiences navigating in their communities, (d) taking photographs of contextual barriers, and (e) collaborating with others reflected a change in awareness of factors that support occupational justice. The students demonstrated an inclusive mindset that resulted in them, (a) viewing their surroundings from others' perspectives different than before (b) providing choices of equitable services that are meaningful to individuals, and (c) recognizing occupational justice requires a collective effort to promote inclusivity.

For example, Participant 4 demonstrates an inclusive mindset by recognizing that occupational justice includes all individuals:

In my first reflection, I focused more on achieving justice for people with disabilities, whereas now I know that occupational justice is promoting meaningful and significant activities to everyone's daily lives, regardless of their abilities or disabilities...people with disabilities are not the only people affected by these barriers. Personal factors such as age, sexual orientation, gender identity, race, ethnicity, cultural identity, socioeconomic status, upbringing, habits, education, professional identity, lifestyle, and psychological assets are not disabilities.

Similarly, Participant 11 stated, "Occupational justice seeks to provide all people with the opportunity to participate in daily occupations that are meaningful to them. This is not limited to only those with disabilities, because there are many factors that influence all people". The keywords *everyone* and *all* indicated that the students now view

occupational justice to be inclusive of all people and *meaningful* signifies the importance of choosing equitable services that individuals want and need to do daily to maintain health.

When not asked directly about occupational justice, but instead asked to describe the learning activities that attributed the most to their CBL experience, Participant 9 replied:

At the beginning of the project, I found myself stuck within a certain mindset.

Throughout my life, I have been privileged enough to not have had to experience many physical and mental hindrances. My experience listening to our guest speaker opened my eyes to a new world. Instead of carelessly performing my everyday activities, I consciously looked to identify ways in which others may not be able to participate in the same activities and occupations....I was forced to recognize new hindrances. I looked past the obvious physical barriers to see how public spaces could be adapted to accommodate everyone's needs.

This response reflected a change in how they currently view their surroundings that respect how others' experiences may differ depending on one's abilities or other factors that impact engagement in everyday activities. The same student when directly asked about occupational justice stated, "As a community, there should be a mindset to help out one another and support who we are". This comment resonates with Participant 1, who commented "It's important to include all within a town because at the end of the day, [we] are a community" and Participant 17, "the promotion of inclusivity through occupational justice fosters a place where different ideas, cultures, and people can come

together and learn from each other”. These responses recognize that occupational justice is a communal responsibility to deter social determinants (LaDuca et al., 2020).

The student responses, whether asked directly or indirectly about occupational justice, consistently provided evidence to support the assertion that the students experienced an increased awareness of aspects that support occupational justice after completing the RPP.

Factors that Perpetuate Occupational Injustice. In this study, occupational injustice is defined as any restriction that impedes participation in occupations that prevent individuals from achieving health and wellness (Wilcock & Townsend, 2019). Recognizing an imbalance in an occupationally unjust society perpetuates injustices and societal health problems (Bailliard et al., 2020; Wilcock & Townsend, 2019). Collectively, researchers recognized how CBL resulted in students becoming more aware of factors that cause occupational injustice (Bazyk et al., 2010; Hammel et al., 2015; Liu et al., 2020; Moely & Ilustre, 2014; Nilsson, 2006).

The student responses demonstrated an increased awareness of multifactorial causes that perpetuate occupational injustices, including (a) attitudinal barriers, (b) inequity of services, (c) limited choices, (d) insufficient community resources, (e) weak communal commitment, and (e) feelings of exclusion.

Similar to the 3rd year OTSs studied by Sanders et al.’s (2016), the 1st year OTSs reported experiencing changes in understanding the impact attitudinal barriers have on others, including limited choices and inequitable services. When asked why occupational injustices exist in society Participant 2 reported:

Some stereotypes have to do with socioeconomic status or gender. Those who come from a lower socioeconomic area or may not have had the same educational opportunities as others may be seen as not having the correct qualifications as others...A stereotype based on gender may be that women are not capable of the same work as men.

Participant 1 provided an example of an attitudinal barrier of a person who uses a wheelchair for mobility, “In society, we know that a nurse has to be able to think quick and move quick... they might deny someone away from this job due to a mobility issue...[These] injustices exist because they are embedded in many stereotypes”.

Participant 17 contributes similar sentiments from a systemic perspective, with resulting implications at a local level:

Occupational injustices exist, in part, due to a lack of consistent and thorough education throughout the world and society in general. Schools with lesser funding may not be able to provide a comprehensive, inclusive education. This, while an occupational injustice in and of itself, results in students growing up with a narrow view of the world, limiting their ability to see unfairness in their community. For example, someone who is not exposed to people with disabilities will have difficulty understanding why some contextual barrier, such as using negative language like the “R word,” harms people in that community.

This same student provided examples of additional occupational injustices when describing her perceived role as an engaged citizen:

A community may not be actively excluding a certain population of people, but it may not be actively including it either, which in essence does the same thing. It

contributes to prejudice and isolation of certain minority groups. Additionally, people with lower incomes may experience different treatment and opportunities than those who are more financially well-off. This may include limited access to healthy food within their community, which could contribute to health problems. The aforementioned examples reflect how attitudinal barriers, such as stereotypes and systemic or structural inequities can limit access to equitable services. OT practitioners who are not aware of factors that cause occupational injustices may not ethically embrace a justice-informed practice (Bailliard et al., 2020).

Several students reflected on how community resources may not be readily available to eliminate barriers that create occupational injustices. The following excerpts indicate an awareness of how a lack of community resources, whether financial or otherwise, can perpetuate occupational injustices.

Participant 5 recognized, “There [are] so many possible barriers throughout communities that it makes it super difficult to address each one especially in communities who cannot afford to add things like ramps, more signs, paved roads”, whereas Participant 15, suggested a more cost-effective alternative when a community may not have sufficient resources, “It would be more cost effective to make [handicap] parking spots...closer to the curb [cuts] than making new curb [cuts]”.

Participant 6 provided additional examples of insufficient community resources and attitudinal barriers that prevent individuals from participating in healthy occupations, including options to overcome obstacles:

Occupational injustices occur in communities because of economic status of the people that are in that area. If an area is lower in socioeconomic status more fast-

food areas will be around, and not as many healthier options because most people won't be able to afford that... Money can be a big impact on the occupational injustice in a community but instead of letting that hold people back, we need to find ways to work around that. Such as partnering with certain companies to see if they would be able to donate some healthy foods... Another reason occupational injustice can occur is because people in the community don't see it as an issue. Just because a certain problem doesn't automatically affect them doesn't mean it's not an issue for others.

The students also recognized the impact occupational injustices have on other individuals. For example, Participant 4 commented:

A black gay woman living in a typically all white upper-class neighborhood might have trouble fitting in to her environment. The community activities and/or social contexts might not be targeted towards someone like her, making her feel uncomfortable or unwelcome in that environment... if the woman had support, good relationships, and welcoming and safe community activities, she will thrive in her new environment.

This example indicated the student's awareness of how marginalized populations experience the greatest occupational injustices that create implications such as feelings related to personal safety or feeling unrespected within the community where they live (Hansen, 2013).

Collectively, throughout the RPP, all students provided evidence supporting that they experienced an increased awareness of multifactorial aspects that negatively impact occupational injustice throughout the RPP.

Theme 2: Changes in Awareness of Contextual Factors

Occupational engagement in life activities occurs within a physical and social context that includes a dynamic interaction between environmental and personal factors (AOTA, 2020b). For this study, the environment and personal contexts align with the guiding principles established by the OT profession for practitioners and students, other allied health care professionals, consumers, and interested stakeholders. The contextual factors include the dynamic interchange of external and personal features of an environment that prevents or affords individuals access to community services, resources, or opportunities that impact engagement in meaningful and life-sustaining occupations. External features include physical, social, and attitudinal elements of an environment; whereas, personal features include unique, internal attributes of an individual, such as age, gender, and life experiences.

Recognition of Environmental Contexts. Previous research showed that environmental contexts that limit or prevent engagement in desired occupations can negatively influence participation in health sustaining activities and result in health inequities (Dwyer-Lindgren et al., 2017; Hammel et al., 2015). The students' reflections indicated that their awareness of environmental contexts increased after taking photographs of environmental barriers in the local community, collaborating with their peers, and interacting with community partners. The most common environmental contexts described by the students when taking photographs included the natural environment and human-made environments for public use, which are readily visible. However, after collaborating with others, students' reflections indicated an increased

awareness of societal attitudes, community policies, and relationships or supports, which are not as apparent.

Natural and Human-made. The most recognized environment context that can limit or prevent engagement in life activities was the natural/human-made barriers. The students' reflections provided examples of geographic, climate, and human-made barriers, as indicated in the following reflections:

- Participant 2: "The stairs provide the same issue for those with mobility devices and in some places ramps are not available which limits where people can go"
- Participant 8: "The common hills might make it more difficult for someone in a wheelchair or even crutches to get around"
- Participant 13: "Our campus alone is one steep hill"
- Participant 16: "I've realized what stores are not handicap accessible due to stairs at the entrance, how bad weather can cover bus stops or cause difficulty in accessing public transportation, how broken sidewalks or curbs can promote injury to someone that uses a wheelchair, etc."

Participant 14 described how their awareness increased about low curbs (less than 2" high) that can impede an individual's community mobility. This occurred after the guest speaker described how their wheelchair flipped backward when trying to get on the sidewalk on their way to lunch, "[i]t never occurred to me that something as simple as a little lift in the curb could heavily affect their individual plan".

Societal Attitudes. Societal attitudes are defined as any form of discrimination, stigma, or implicit bias towards an individual or population that results in an occupational imbalance, injustice, or disparities (AOTA, 2020a). The next prevalent environment context students recognized were societal attitudes that perpetuate discrimination, marginalization of populations, ignorance, and social and health disparities. Participant 5

expressed, “We must get rid of the ignorant idea of our society that having a disability makes an individual weaker or not as much as an individual because it is so far from the truth”. Participant 8 provides a specific example related to cultural discrimination,

Black people were literally treated as if they were not human. While slavery may not be a practice in the [U]nited [S]tates anymore black people are still experiencing diverse effects and occupational injustices because of it. The same could be said about how our country treats immigrants or anyone who is different. The marginalized populations are most likely to experience occupational injustices (Hansen, 2013; Wilcock & Townsend, 2019). Every student reflection described multiple observations of natural or human-made and/or societal attitude barriers existing in the local community.

Relationships and Supports. Greater than 50% of the students described examples of how relationships and support can be a barrier or an asset. For instance, two students observed graffiti in the local community and how it may impact others. Participant 1 stated, “[i]n my group, we included two different photos of graffiti...[that] could associate [with] gang violence within our own community” and Participant 4 shared a similar comment, “Many places [had] graffiti spray painted on them, which can be a personal barrier by making residents feel unsafe”. Although both students associated the graffiti with factors that indicate negative relationships or supports in the community, gang-associated graffiti represents solidarity with gang members. In essence, this would be a symbol of support to the gang members, albeit still a negative relationship to community health and safety. A different example of deficient community supports was identified by another student. Participant 4 suggested how choice and access to practice

spiritual beliefs are impacted when places of worship are either lacking and/or located blocks away from the downtown area, “[A] contextual barrier I noticed is that for someone who practices Islam in Scranton, there is only one mosque”. This represents a negative relationship or support system to individuals whose religious or spiritual practices differ from the majority population.

Alternatively, several students reported an increased awareness of how supportive relationships can have a positive impact on others. Participant 17 described how their perception changed after listening to the guest speaker, “[Guest speaker] showed me that having a good support system can help eliminate some barriers, such as by helping [them] eat and dress” and Participant 10 experienced a changed perception after watching the videos, “I really feel as though those helped me understand how many contexts are impacting us at once and how there are certain contexts that we cannot even see, such as attitude or support”. Participant 6 described an example of a positive community relationship/support recognized on campus. The student reflection references accommodating special dietary needs and the University’s efforts to establish a sense of “community” on campus, “There are factors that do help a person’s well-being such as the food accessible to students on campus, and the relationships and support here on campus”.

Service, Systems, and Policies. Less than 50% of the students provided examples related to services, systems, or policies. For example, Participant 9 referred to learning about the ADA guidelines for accessible parking:

I can identify local and federal regulations for public and private spaces to make sure that these standards are followed. One area that I have become more aware of

is handicapped parking. I avidly check parking lots to assess the handicapped spots. I check to see if the spots are close to the entrances of buildings and if the spots are clear of objects and snow.

Participant 16 also referred to the ADA guidelines, “These guidelines connect to heights of stairs, what's needed to build a ramp, the height of the bus stop sign, etc. I am now more aware that state guidelines impact environmental barriers and architecture”. A different perception related to community change was shared from a macrosystem perspective. Participant 11 indicated the importance of analyzing how systems and policies affect individual and population needs at the community level, “When disparities are systemic, it is often a continuous cycle that is difficult to get out of, so it is important to work towards policy change”.

This was the first time the students were introduced to the topic of contexts. Additionally, the students were not directed to locate each type of environmental context. Instead, the students were instructed to self-explore their community for perceived barriers. Considering natural and human-made environments are more readily observed, than those that are more inconspicuous, such as community supports and system-wide policies, the findings were predictable. Despite the decreased number of reflections addressing some aspects of the environmental context, all students provided examples of environmental contexts in the community that can impact individuals’ engagement in meaningful occupations.

Recognition of Personal Contexts. Engagement in meaningful occupations is essential to maintain health and sustain a satisfying life. The ability for an individual to achieve fulfillment and comfort is dependent on their personal contexts, which are

internal attributes, unique to a person (AOTA, 2020b). Accordingly, the students provided examples of personal contexts that support or hinder an individual's ability to engage in chosen activities, modify behaviors, or interact in their community. The students' reflections focused on the individuality of persons from a generalized perspective or focused their reflections according to specific personal contexts, including age, culture and race, life experiences, psychological aspects, and education.

Individualized Needs. Participant 4 and Participant 2 provided a generalized awareness that addresses the importance of understanding an individual's interdependent, unique attributes that can impact daily function:

By taking into account someone's socioeconomic background, cultural values, past education, employment, transportation use, ...community support, and considering [personal] contextual factors such as age, gender, sexuality, disability, spirituality, and social networks, we can figure out a plan to adapt the environment based on specific client factors that might be barriers to that person's well-being (Participant 4) and

"Equal opportunities do not just apply for those who may have a disability but also those who may face inequalities based on their gender, age, religion, race, or ethnicity" (Participant 2). The student reflections represent the diversity of unique, internal attributes of an individual that can impact access to equitable community supports.

Age. Other students provided more focused reflections on how a person's age can impact engagement in daily occupations. For example, Participant 11 shared the following example:

[s]ome personal factors such as age can also impact engagement...someone who is younger in age may have the ability to walk farther to stores or social activities, as well as have the technological skills necessary to check a city website for events coming up. Someone who is older might have a difficult time walking long distances and [upstairs], and also may lack the skills necessary to check a website. Comparably, Participant 16 commented, “The elderly people may deal with stiff joints when completing simple occupations such as getting out of bed or picking something off the floor”. The student reflections demonstrate their awareness of how age-related factors, such as physical and cognitive function, can limit engagement in meaningful occupations.

Culture and Race. Culture and race was a common personal context as evidenced in the students’ reflections. Multiple reflections recognized language barriers as a personal context that can impede receptive communication and engagement in the community. Participant 13 commented, “Personal contexts that I find have the most significant impact on...health and wellness are the language barriers throughout the city”. Participant 2 noticed more specifically how numerous street signs and supplemental audio cues for the hearing impaired were written or spoken in English, which they further elaborated on in their reflection, “[T]his serves as a barrier for the large Hispanic and Latino... community that makes up just around 15% of the population”. Whereas, Participant 5 combined an individual’s quality of vision as an additional personal impediment to reading a street sign, “Some individuals could struggle reading signs due to vision impairment or speaking a different language”. Additional reflections that included culture or race primarily involved spiritual practices as Participant 4 indicated,

“[A] personal contextual barrier I noticed is that for someone who practices Islam...there is only one mosque”. The students demonstrated an increased awareness of how an individual’s culture and race can impact full participation in their community.

Socioeconomic Status. SES was a prevailing personal context mentioned among the students’ reflections. The more detailed reflections associated SES with affordable food choices. Participant 5 inferred, “Healthy food options might not be accessible due to their low socioeconomic status” and Participant 17 described the meaning of occupational justice, by providing this example, “ It could also include making healthy food choices inaccessible to those in lower income neighborhoods...the...[city] has many fast food options but no lower-priced grocery stores or healthy restaurants”. The remaining students’ reflections that related to SES were from a broader perspective, such as Participant 18 provided an example of occupational deprivation, “People with lower socioeconomic backgrounds aren’t afforded as many opportunities” and Participant 12 described their perception of a cause for systemic racism, “I think that barriers having to do with low socioeconomic status a lot of the time...[causes] systemic racism”. These student reflections show their awareness of how a lower SES, different than the majority of the local population, can limit access to equitable resources or services.

Life Experiences and Psychological Attributes. A noteworthy finding that contributed to increasing the students’ awareness of personal contexts in their reflections was interacting with the guest speaker and watching videos of individuals who live life with a disability. Many students’ reflections acknowledged how life experiences and psychological aspects can have a direct influence on someone’s ability to live a satisfying life. Examples included the following:

Participant 17: “[Guest speaker] has an extremely positive attitude and optimistic mindset, these things help motivate him to push himself to his body’s absolute limit and encourage him to remain happy and content though he cannot do everything other people can do”

Participant 2: “We could see how the men had a positive view going through their everyday activities and that plays a large part in the success that they have”

Participant 7: “We learned how someone’s personal attitude towards their condition can make a great impact on their life”

Although the students’ reflections about personal contexts were not as detailed or varied as the reflections about the environment contexts, this was not a surprising finding considering personal contexts are internal attributes of individuals as opposed to the external attributes of a community. Notwithstanding, all of the students expressed an increased awareness of how personal contexts may influence an individual’s ability to fully engage in their community.

Implications on Community Health and Wellness. In this study, community health and wellness refer to the community as an entity and the individuals who live in the community or others who access services or resources provided by the community. The student reflections revealed two sub-categories related to the negative implications of existing contextual barriers on a community’s health and the health and well-being of individuals.

Community Health. Community health refers to a sustainable community that provides equitable services and resources to accommodate community members’ individualized needs. The following reflections focused on the impact communities confront when individuals are unable to access services, resources, or events in the community. For example:

Participant 16: “A community can begin to fall apart or just generally become damaged when its members cannot access resources to promote well-being”

Participant 18: “[Barriers] impact the local communities health and wellness as they limit occupations, making it harder for people to achieve satisfaction in their life”

The following reflection referenced how the frequency of encountering community barriers “WILL” make individuals leave the area and provided a rationale for promoting inclusion,

“[Citizens] WILL look elsewhere. We need to keep our community happy and healthy to make sure that our community stays whole. So these two things really hurt our community health and wellness especially when it holds us back from getting healthy foods, exercising, and engaging in community activities. We need to always make sure that our community is being taken care of”. (Participant 12)

The student reflections demonstrated how they are more aware of how existing community contextual barriers can risk the health and safety of individuals and prevent a more inclusive and progressive community that supports individuality.

Individual Health and Well-being. When individuals are restricted from engaging in meaningful occupations that support mental and physical well-being, secondary to contextual factors, they risk enduring social and health disparities. Research outcomes have established that individuals who encounter environmental and personal contextual barriers experience negative consequences to their health and well-being (Hammel et al., 2015; Hansen et al., 2007). For example, Participant 17 provided occurrences of personal contextual barriers (culture, race, and SES) that can result in decreased motivation to participate in activities, physical decline, and social isolation:

I now see cultural barriers, like how a community may not be actively excluding a certain population of people, but it may not be actively including it either, which in essence does the same thing. It contributes to prejudice and isolation of certain minority groups...the presence of racism within a community may pose barriers to people of color, effectively decreasing their participation in community activities. From these factors, individuals of color may find less motivation, a personal factor, to engage with community occupations in the first place, leading to isolation...people with lower incomes may experience different treatment and opportunities than those who are more financially well-off. This may include limited access to healthy food within their community, which could contribute to health problems.

Similarly, the following students' reflections suggested how multiple environments and personal contextual factors (natural and human-made environments, social supports, social status, health conditions, culture, race, and professional identity) can result in isolation and poorer health outcomes:

- Participant 11: "The inability for some people to obtain affordable healthcare, lack of accessibility in communities, and biases in both social and medical situation[s] in regards to race, gender, or age"
- Participant 18: "Can include but are not limited to the lack of work or social experiences due to disability, lack of opportunity due to low economic statuses, and the health disadvantages due to the environment in which they may live"
- Participant 8: "Include many conditions like high blood pressure and type one diabetes...personal factor of their [obesity] they now have a much harder time maneuvering through their environmental contexts"

Additional students' reflections referred to contextual barriers that result in negative implications on both an individual's mental and physical health, including:

Participant 20: "When a person is unable to complete tasks that they enjoy, this will affect their overall mental and physical health"

Participant 16: "Can take a toll on individuals mental and physical health"

Participant 1: "Not only does this decrease participation levels within the local community but it can affect one's physical and mental well-being"

These student reflections support past research in recognizing how contextual factors can limit engagement in health sustaining activities that result in negative health implications.

Collectively, the students' reflections embraced occupational therapy's principle that for individuals to truly achieve life satisfaction, they must be able to live, work, and play comfortably within their distinctive environment and personal contexts (AOTA, 2020b; Hansen & Hinojosa, 2014; Nilsson & Townsend, 2010). At the onset of their education, it is a goal for OTSs to adopt an understanding of the multiple interrelated contextual factors that can influence the quality and sense of satisfaction individuals experience performing occupations they need and desire to achieve. The OTSs reflections established that they all gained an increased awareness of the environment and personal contexts, including health implications when barriers are encountered.

Theme 3: Changed Perceived Role

Research indicated that CBL prompts learners to self-reflect and consciously evaluate how one's perceptions continue to evolve as they ponder a renewed sense of their role in society as engaged citizens (Bazyk et al., 2010; Hullender et al., 2015; Moely & Ilustre, 2014). This study evaluated if students' experienced a change in how they perceive their role as socially responsive citizens after completing the RPP. Following

each weekly learning activity, the students were asked to reflect on their perceived role in the present and in the future and their level of confidence in promoting change in the community. The students' reflections explained how their perceptions of their role in society changed; their changed perceptions were categorized into two focused areas: communal commitment and education.

Communal Commitment. OTSs (Bazyk et al., 2010; Sanders et al., 2016) and other undergraduate students (Mitchell et al., 2015) who completed CBL described how actively engaging in their community resulted in a renewed sense of social responsibility and inspired becoming a part of their communities. Self-identities were transformed as students contemplated roles in society where they can empower others to voice concerns or advocate for policies that promote justice (Mitchell et al., 2015).

In this study, three threads demonstrating a communal commitment were interwoven throughout the students' reflections, including confidence, advocacy, followed by evidence demonstrating their evolving role. Common words as evidenced in the students' reflections were "*confident*", "*advocate*", and "*change*" or "*difference*".

Confidence. The following reflections referenced the students' level of confidence in effecting community change among multiple settings. For example, Participant 10 referenced how they can impact the local community, "I am very *confident* that we as individuals can help *change*...to be more walkable and more friendly to all persons who reside here and who pass through". Participant 18 reflected on promoting change beyond the local community to include their hometown, "Since starting the reflexive photography project, I now feel incredibly *confident* in finding issues and making a *difference* in my community". Participant 16 recognized their role in any

setting, “It’s rewarding to feel as though I am now capable to make *change* and promote occupational justice whether it’s here on campus...or in my hometown”. The student reflections show how they confidently perceive their role in effecting change or making a difference in the local community, their hometown, or any other setting.

Equally, student reflections suggested that they embraced a sense of commitment as an engaged citizen indicating their confidence to actively assess their surroundings for community barriers. For example, Participant 13 expressed how they now have the skill-set required to assess the community for barriers to occupations, “I am *confident* that I will be able to evaluate barriers and come up with effective ways to make the necessary *changes*”. Participant 8 revealed how their actions as a responsive citizen changed from “Now I see myself looking for these obstacles all around even if they do not make my life more difficult” to actively informing others when a barrier is located “I find myself actually looking and I even find myself telling the people around me if something is accessible or not”. These reflections demonstrated confidence, through actions, that represented the students’ commitment to making the community barrier-free for all individuals.

Advocacy. Additional student reflections focused more on committing to their community through advocacy efforts. Participant 12, and others, provided multiple examples of distinct ways they can promote change in the community:

I can use my voice to demand change in our communities. I can participate in our CBL project and take the best pictures I can to promote *change*. I can also *advocate* for change by emailing...officials, and showing them things that need to *change* in our community. I can reach out to people with disabilities and ask them

their take on things that need *changing* and then relay their information to ... officials. I can call ... officials, send letters to them, and have other people I know do the same. I can also support non-profits in our communities and donate to programs that promote community wellness. I can and will always protest social and health disparities that happen within my community, and even outside.

Participant 16 provided another specific example of advocacy, “One example is providing food to local homeless populations”. Whereas other students provided a broader perspective, Participant 11 stated, “I believe that I can make a *difference* in my community by *advocating* for *change* and doing whatever I can to present suggestions to those who have more power”. Comparably, Participant 5 expressed a similar reflection, “I will continue to *advocate* no matter where I am for ways to make the community more engaging for all and make sure everyone gets the occupational justice they have the right to”. Although some students shared more concrete examples of advocacy initiatives, all student reflections represented the same convictions that they can promote change through active advocacy efforts.

Evidence of Evolving Roles. This set of reflections are examples of how the student’s perceptions about their role changed during the RPP. Participant 4 provided detailed descriptions on how they perceived their role changing after Reflection 1 and after Reflection 3.

Participant 4: Self-reflection 1: “I have been following an account run by a gay, non-binary occupational therapist who continues to *advocate* for lgbtqia+ and disability issues...I also follow an account that recruits and mentors indigenous OT students and advocates for minorities”

Self-reflection 3: “I will continue to be an *advocate* on social

media and keep a conversation going about contextual barriers with my peers who aren't OTs”

Notably, this student’s reflections demonstrated how their role evolved to include others in efforts that promote change.

Participant 3 provided general descriptions on how they perceived their role evolving from Reflection 1 through Reflection 3.

Participant 3:	Self-reflection 1:	“I can <i>advocate</i> for improvements in my community”
	Self-reflection 2:	“Since starting the reflexive photography project, I'm sort of <i>confident</i> about the <i>difference</i> I'm making. I really hope a difference is made...Overall, I really hope after the city see[s] everything we have pointed out... <i>changes</i> can be made”
	Self-reflection 3:	“I perceive my role <i>changing</i> in a good way...I feel as if after taking this class, come next year I will be better able to <i>advocate</i> for all and make a real difference in my community...I will be more prepared and better able to <i>advocate</i> for occupational justice”

The students’ reflections consistently presented examples of how they are committed to reducing existing occupational injustices in their communities when determinants of health pose a risk for the community members.

Education. Previous research indicates that CBL enables students to acquire essential knowledge and skills to inform others and raise awareness about health determinants to promote occupational justice in the community (Hansen, 2013; Mitchell et al., 2015). Consistently, students’ reflections indicated a prevailing focus on their role to self-educate and educate others on issues that affect community health and wellness.

Self-education. The students' demonstrated how they directed their learning to identify supplemental information that was essential in becoming a socially responsive, dependable, and informed citizen. The following two reflections shared additional acquired information the students obtained to better understand factors that could be more effective in potentiating change in the community, "I can identify local and federal regulations for public and private spaces to make sure that these standards are followed" (Participant 9), and "This serves as a barrier for the large Hispanic and Latino/a community that makes up just around 15% of the population of Scranton according to the US census" (Participant 2). Differently, Participant 18 explained how they intend to utilize the knowledge and skill-set obtained completing the RPP locally to benefit their hometown, "I plan to do more research within my community of issues people may have and find numbers for local departments and ways to advocate". Differently, Participant 16 described the benefits of new learning to effectively analyze the multitude of contextual factors that are unique to individuals, "Our mindset's as future occupational therapists have definitely grown for the better, we have a better understanding of all the factors that go into evaluating a client's needs". Although not an explicit requirement of the RPP, the students demonstrated a commitment to learning more about the community, state and federal guidelines, and other factors to provide informed ideas, suggestions, and solutions to societal problems.

Community Education. Students recognized that garnering support for shared concerns in the community can increase the power of one person's voice through a collective effort. Participant 4 shared that they are inspired to be a resource for others who are not knowledgeable about or skilled to analyze environments accurately, as

indicated in this reflection, “I will...keep a conversation going about contextual barriers with my peers who aren't OTs...I hope to be the person to ask for a potential solution if one of my friends notices something in the community that doesn't seem right”. As stated, the student hopes that by educating others, individuals will feel empowered to speak up and share concerning issues within their communities. Likewise, Participant 15 provided an example that entailed contacting Disability Rights Advocates and others who encounter community barriers regularly to increase the capacity to make a difference in the community; this example is specifically related to an accessibility barrier for persons who use a wheelchair for mobility, “They may not...listen to me, but if I tell other people [about] the problem who go to the bank, they may [speak up]”. Differently, Participant 12 provided a nice synopsis indicating the value of speaking up and imploring support from others, “All of us must constantly use our voices to promote occupational and social justice within our community. We also must use our voices to engage our friends and family in using their voices as well”.

In addition to educating others to increase the power of one's voice, students' reflections described the importance of educating others about ambiguous community barriers as Participant 17 suggests:

I can report environmental and personal barriers that I see throughout my environment, such as uneven sidewalks and inaccessible entrances. I could also provide information to these places about things they may not even realize pose barriers to certain people in the environment. I could also talk to people whose attitudes may cause a personal barrier to those with different abilities or backgrounds than them...I can call out racism, sexism, ableism, homophobia and

all other discriminatory attitudes so that people can learn to do better...This...would lead to a more diverse and welcoming society, where everyone has the opportunity to share their ideas.

Participant 5 expressed a similar response:

I will be able to make connections throughout my community in order to communicate the issues and barriers that must be addressed and fixed. I also hope to make not only the community leaders but also the business[es] surrounding and in the city aware of the ways that they can be more accessible for all individuals.

Along with reaching out to community members here in [the city].

In essence, the students' reflections represented their strong belief that education is a primary role as OTSs and future health care practitioners.

Students' reflections exemplified how the RPP stimulated a commitment to help others overcome perceived community barriers through action and education. All students experienced a change in their level of confidence in believing they can make a difference in their community and described active roles they are engaging in at present and/or what they plan to do in the future to help communities overcome occupational injustices.

Theme 4: Aspects of Problem Based Learning

Students' perspectives on their learning experiences are fundamental when designing impactful CBL initiatives to help determine the most effective learning approaches. This study implemented the RPP to provide structure to the students' CBL; the RPP was structured to align with the principles of PBL, CBL, and OT education. The principles of high-impact PBL that were intentionally integrated during the development

of the RPP included the following: (a) focus on “real-world” problems, (b) aligned with academic objectives, (c) engaged experience, (d) community involvement, (e) reflective exercises, (f) student-directed, (g) created an artifact, and (h) educator guidance.

This study assessed students’ perceptions of their learning experience after completing the RPP. The students were asked to describe what learning activities attributed the most to their CBL, challenges encountered, and most rewarding experience. The students viewed completing the RPP as a positive experience and identified a variety of learning activities as the most impactful; the most frequently reported learning activities included (a) guest speaker, (b) videos, (c) peer collaboration, (e) class discussions, (f) community collaboration, and (g) taking photographs.

Four categories emerged from the students’ reflections about their learning experience: (a) engaged learning, (b) collaborative learning, (c) experiential learning, and (e) challenges.

Engaged Learning. In this study, engaged learning was defined as the sequential hands-on learning exercises that piqued students’ interests to sustain engagement in the learning experience (Hullender et al., 2015; Jacoby, 2015; Vygotsky, 1978). Within the students’ reflections, it was evident that the students perceived the hands-on exercises as a significant aspect of the RPP that contributed to their transformative learning.

Guest Speaker. In particular, the students’ reflections indicated the value of listening to a guest speaker who shared their life experience as a person living with a disability. The following reflections provided several examples of how impactful the guest speaker was in increasing their awareness about their role as a professional and how they view individuals living with a disability differently. When asked to describe the part

of the RPP that transformed their awareness about contextual factors, Participant 10 stated:

He told [us] about how a young [who] boy came up to him to chat and his mother got mad at him for talking to “someone like [guest speaker].” This all made me realize how big of a responsibility health care workers have to make other people feel comfortable in their societies and work around the personal and environmental barriers they encounter.

Participant 10 then reiterated the same opinion when asked to describe the learning exercises that attributed the most to their learning experience, “[They] really opened my eyes to how creative someone has to [be] in order to live an independent life...It really inspired me how [guest speaker] worked at the Center for Independent Living to help other people...[take] control of their disability and helping them with whatever services they could provide”.

Comparably, the student reflections described similar sentiments after *interacting* with the guest speaker, including changing their perspectives of how they view individuals living with a disability, learning about different home modifications and adaptive equipment that enable occupational performance, and viewing environment and personal contexts differently. For example, Participant 2 expanded their awareness of community barriers and how to overcome adversity, “Getting to see and speak first hand with someone who has faced barriers in the community and getting [their] perspective on certain elements really helped to open my eyes on certain issues but also how they can be overcome”. Participant 18 and Participant 16 shared how interacting with the guest helped to expand their awareness about personal barriers in the home and adaptive

equipment used to enable function and enhance life satisfaction, “[Guest speaker] enabled me to learn through [their] mind [and] eyes of how [they] complete occupations with a physical disability... The home modifications of the entrances, the touch lamp, the lowered light switch...enabled me to think more like an OT” (Participant 16) and

Listening to [guest speaker] really showed us so many [trials] faced daily and solutions [they] came up with...[they] served as [an] inspiration during this project... I was so impressed with his mount sticks, as well as how his chair has the “eye-level” feature, which allows increased confidence in his conversations. (Participant 18)

Participant 5 described a different changed perspective after the guest speaker shared their personal story. The student indicated how their view of environmental and personal contexts changed,

Before...I was aware that [there] are barriers in communities worldwide but I don't think I realize[d] to how big of an extent and how many different kinds of barriers there were... I was aware [of] barriers that physically impacted individuals...I don't think I realized that barriers are not just physical...[t]hey can also be more personal contextual...[that] vary from person to person.

The guest speaker was an effective learning exercise that challenged students to think differently, learn how others’ overcome personal challenges, and view their world through diverse perspectives. The students demonstrated respect for how others encounter and interact in the same contexts, yet have distinct experiences compared to their own.

Videos. Like the guest speaker, the student reflections indicated how the videos of individuals navigating in their communities were viewed by the students as an important

component in their learning about community barriers, societal attitudes, and how individuals with a disability live and overcome barriers daily. Participant 11 experienced an expanded awareness of community barriers, challenges navigating in the community, and how to overcome adversity as indicated in the following reflection,

[It] opened my eyes to how difficult it can be to live in a community that is not accessible for all people...[it] was influential because it made me want to help make my community more inclusive as well as keep a positive attitude like Zach when there are challenge[s].

Whereas, Participant 5 had a different experience. Instead, the student indicated an expanded awareness of the inconspicuous environment and personal contextual barriers, “[Video] made me realize there are much more barriers in place in communities that can stop an individual from fully being able to participate and engage in their community and daily life occupations”. Similarly, Participant 10 expressed the same sentiment as Participant 5, but included evidence of increased awareness of societal attitudes, “[Video] helped me understand how many contexts are impacting us at once and how there are certain contexts that we cannot even see, such as attitude or support”.

Seeing the lived experience of a person with a disability navigate in their community proved to be a valuable learning exercise. The students identified a multitude of environmental and personal contexts that can enable or hinder function when attempting to access community services or resources. In addition, the students recognized frequent negative societal attitudes encountered by persons living with a disability.

Photographs. Taking photographs of perceived community barriers is an additional engaging activity that was apparent in the students' reflections. Participant 4 and Participant 10 described how taking the photographs related to their role in the community, "I found myself enjoying taking pictures because I felt like I was on the field doing my job and possibly making a difference" (Participant 4), and "Seeing how many barriers were in the city truly made me realize how much I do not notice as an able-bodied individual and how I have to do better in the future to get involved and help the communities around me" (Participant 10). Differently, Participant 20 explained how taking photographs enabled them to apply knowledge about the contextual factors acquired during a seminar in the community, "It definitely helped getting out into the city...to see firsthand some of the personal and environmental barriers some individuals may encounter". The students established that taking photographs facilitated an active learning process that resulted in reinforcing learned concepts, recognizing previously unnoticeable community barriers, and envisioning what they can do to generate change in their community.

Presentation. The students valued creating and sharing the presentations with their peers. When asked about their most rewarding experience after completing the RPP, Participant 10 stated, "...being able to present our findings and discuss them with our class, [instructor], and our guests". Another participant attributed the presentation as a motivating factor, "Presenting our projects and just having our suggestions heard and hopefully get in action soon gives a sense of accomplishment" (Participant 5). In addition to these, Participant 4 considered the presentation as the culminating factor that authenticated their learning experience,

[We] worked hard to gather all of our images and information and create an interactive website and pamphlets out of it. I was relieved when the city seemed to take us seriously and wanted to make change with our ideas. After presenting, I realized how rewarding this project actually was. I felt much prepared in these topics and I realized why I was interested in occupational therapy...

Although the descriptions of how the presentations impacted the students' learning process differed, creating the presentations and sharing the findings contributed to their personal learning experience.

Scaffolding. An aspect of engaged learning is maintaining the students' motivation to continuously engage in progressive learning exercises that build knowledge throughout the learning process. Research indicated that motivation is sustained when learning exercises are scaffolded to align with the student's skills, strengths, and comprehension level (Howe et al., 2014; Hullender et al., 2015; Vygotsky, 1978; Yerxa et al., 1990). The following student reflections indicated that the scaffolding of learning exercises, intentionally incorporated in the RPP, contributed to their transformative learning experience, "Walking around the city after meeting [guest speaker] helped to expand my knowledge because I [now] knew of different things to look for, rather than just the very obvious ones that I would have pointed out if we had not met [guest speaker]" (Participant 2). Participant 18 shared how gaining more knowledge to analyze their photographs more accurately, resulted in better outcomes, "By looking at the pictures a second time with more knowledge, I was able to find even more issues and solutions". Participant 13 described two different benefits experienced from the scaffolded learning exercises, " These two activities [guest speaker and videos] were a

great way to introduce the lesson to the class, especially since it was a new topic for us” and “Seeing this before taking the photos, we were able to make comparisons to what we saw in the video to what we saw in our areas”.

As described above, the students found the engaging activities motivating, impactful, and eye-opening, each indicative of transformative learning.

Collaborative Learning. A principle of PBL asserts learning occurs in small groups (Helle et al., 2006). Establishing a supportive group, often consisting of a combination of peers, community representatives, and faculty, provides reassurance to the student as they commit to examining their presumptions at a deeper level despite feelings of vulnerability (Blakey et al., 2015; Naidoo et al., 2018). In this section, the focus is on how students’ perceptions about the process of collaboration were constructive and valuable to their learning experience. The students’ reflections represented different perspectives about how they perceived collaboration promoted learning new concepts and insights through the process of reciprocal interaction and validation.

Peer Collaboration. Peer collaboration has been found as a substantial factor that expands students’ awareness of social injustices (Mitchell & Rost-Banik, 2020). The following examples are student reflections that represent how listening to their peers enabled new learning. Participant 2 and Participate 3 reported increased awareness of the environment and personal contextual barriers, “In talking with my group many more barriers were brought to my attention that I may not of thought of before like different cultures being represented unequally and some establishments only being targeted towards certain age groups” (Participant 2), and “My group continues to help me

recognize more contextual barriers and for that I'm so very grateful" (Participant 3).

Whereas, other students found peer collaboration beneficial in different ways. Participant 6 found comparing varying interpretations about occupational justice helped to facilitate comprehension, "When working together...if any group member had a question or just wanted to be more informed on the topic of occupational justice, we worked on giving each other explanations in order to promote overall understanding". Like the previous reflection, Participant 18 found a deeper understanding of occupational justice through sharing and analyzing their photographs:

After collaborating with my peers I have actually learned a lot; I enjoyed the feedback of my pictures... [helped] me understand even more how occupational justice is never only limited to a certain group, but it applies to everyone in our communities.

The students found collaborating with their peers as a supportive process that resulted in new understandings of concepts learned and increased awareness of community hindrances that perpetuate occupational injustices.

Collaboration with Others. In addition to collaborating with their peers, the students' reflections revealed how they valued collaborating with others; specifically, the students valued gaining an increased awareness of new ideas, different ways of thinking, and motivation that their efforts were productive. For example, Participant 17 gained new insights, "Talking to people who work for the city...opened my eyes to the limited ability the local government has to enact change". Participant 10, and other participants, expressed how meaningful it was to interact with the research setting's CBL office personnel, which they referred to as "guests" in the following reflection:

being able to present our findings and discuss them with our class, [instructor], and our guests. Seeing our guests say that they loved some of our ideas and that they really think they could improve their society and add to the community's health and wellness made me feel absolutely elated (Participant 10), and "The part that felt the most fulfilling was hearing the positive feedback from you as well as the Community Based Learning Team during our presentations" (Participant 2).

The students' reflections also suggested validation being a formidable outcome based on the frequency noted when reviewing the transcripts. Previous research showed receiving guidance, prompts, and constructive feedback (positive and negative) during collaboration validated efforts and inspired continued engagement in the learning process (Bain et al., 2002; Naidoo et al., 2018), which is represented in the following student reflections:

- Participant 10: "I was so scared that I was missing the mark on this project and that our suggestions did not make sense, so when other classmates had similar suggestions and our guests and [instructor] liked our ideas, it really made me feel like we [were] on the right track"
- Participant 2: "I think a very important moment during this project was sharing our findings with the members from the...[CBL] team...it was very encouraging to hear all of their positive feedback on our findings...[t]his...also made me feel like our thoughts mattered...[m]y thoughts from the beginning of the semester changed from not really thinking what I thought or mentioned would have an impact on the community to realizing that many others saw the same things as me and that together we could have an impact"
- Participant 1 "Speaking and then receiving feedback during our live presentation with those who work with the City... During our presentation, [CBL personnel] chimed in during and after giving more suggestions and comments that were in our presentation. We did have questions based off not enough information, which I found extremely helpful when they gave comments. It was

very rewarding for them to actually sit down and listen to us to see how we look and perceive things within the local community of Scranton. Not to mention, some barriers were things the city had been looking into such as the train tracks and graffiti within the city”

Although for different reasons, it is noteworthy to recognize students reflected on the positive impact they felt and the benefits received when they collaborated with their peers and others.

Experiential Learning. Within this study, experiential learning is defined as learning that occurs through doing and reflecting on the experience to examine facts, new understandings, and actions that prompt deeper reflection (Dewey, 1933; Eyler, 2002; Giles & Eyler, 1994; Jacoby, 2015). Reflection is a process of conscious awareness to promote a deeper understanding of realities. The process entails simultaneously examining and analyzing previous knowledge and experiences, gaining new insights or discoveries, and anticipating phenomena that result in educated decisions or actions (Bringle & Hatcher, 1999; Brookfield, 2012). Specific to this study, the focus of experiential learning is on the practice of reflective thinking that contributed to the students’ transformative learning.

There were multiple points throughout the RPP when students engaged in reflective exercises. Beginning week 3, the students completed a self-reflection and then completed a questionnaire after the RPP. In addition, the students were encouraged to contribute to weekly discussions during seminar to share their experiences, explore ambiguities, and contemplate actions with myself, the research assistant, guest speaker, community partners, and each other. I and my research assistant guided the students using

probing questions to trigger new learning, develop new understandings, and authentic their experiences in a responsive and nurturing environment.

Collectively, previous occupational therapy research and literature found learning occurred best when it was actuated by doing (evaluation, analysis, hypothesis generation, intervention, and program planning) in context-specific settings when guided by reflective exercises (Knecht-Sabres, 2013; Parmenter & Thomas, 2015; Schon, 1983, 1987).

The students' reflections illustrated how the individual and group reflexive exercises contributed to their transformative learning. The reflections provided evidence that the students expanded their views on life, transferred knowledge learned in the classroom to the community, and embraced a life-long learner attitude.

Personal Reflection. The following examples of student reflections demonstrate how the reflective exercises helped students to transform their thinking process:

Participant 14: "It helped me to realize that even I might have roadblocks or things that impact the way I see certain things"

Participant 10: "Our lives are very organized into these categories without us even realizing it, which made me truly see that there are different contexts for everything we do and how we live our lives"

Participant 7: "When walking downtown and thinking about these concepts it made me become more aware how things that don't affect me, may be a struggle for someone else"

As indicated above, the students experienced personal growth and new realities by partaking in the practice of reflexive inquiry.

Commitment. Productive reflective exercises that generate deeper contemplation required a commitment to mindful reflection. The following student reflections showed that when students commit to a continuous process of reflection, their understanding and

perceptions evolved. For example, Participant 20 shared how committing to the cyclic nature of self-reflection enabled them to understand how others live life differently, “When I took the time to understand life through a person with a disability, I saw the complications that came along with living a normal life”. Another participant described a different perspective that resulted in deeper contemplation. For example, Participant 5 found exploring and analyzing barriers helped them to contemplate how challenges encountered may differ between individuals, “As we discussed all of the different barriers and then even discussed them with [you and the research assistant] it allowed me to realize the impact of a variety of different barriers to all individuals of communities”. Similarly, Participant 18 experienced deeper contemplation after practicing their presentation and receiving feedback, “When we presented what we had to you and [research assistant] that helped me think of things even deeper than I had before”.

As the reflections suggested, when students engaged in a recursive process of reflection, new insights, understandings, and realities emerged.

Application. CBL enables students to learn by doing; students learn to apply the knowledge acquired in an academic setting to a “real-life” context that addresses a societal problem. In essence, students learn from the experience (Jacoby, 2015). The following student reflection represented a concrete example of the potential that can be achieved after engaging in a process of reflection. The student described the transformed, mindful process their group engaged in when developing an accessible presentation for all individuals. The students applied their new knowledge about personal and environmental contexts that could be a hindrance for some individuals; because the

students anticipated how others would interact with their presentation, they made changes to accommodate varying needs:

We wanted to make sure that our website and infographic was accessible and engaging for all who read it....some changes had to be made but once made we were able to develop an accessible and engaging website with a QR code that [led] to our infographic for all. (Participant 5)

Each student provided multiple examples of how the variety of reflective exercises stimulated changed perceptions, learning, and outcomes experienced throughout the RPP.

The following reflection from Participant 2 demonstrated application of the three previously described categories: (a) engaged learning, (b) collaborative learning, and (c) experiential learning:

In the beginning feeling like what I said didn't have an impact discouraged me from wanting to complete the project to the full potential. Moving through the steps of the project and reflecting about it weekly began to change my views. The part that felt the most fulfilling was hearing the positive feedback from you as well as the Community Based Learning Team during our presentations. As I mentioned in an earlier question hearing them agree with what ideas we were bringing up and mentioning how we had good ideas really completed that feeling of fulfillment.

This student's reflection showed the value and interrelatedness between the implemented PBL strategies of validation, the scaffolding of learning exercises, collaboration, reflection, and presentation of their findings that contributed to their successful transformative learning experience.

Challenges. Students were asked to describe challenges they encountered during the RPP that may have impacted their CBL experience. The students' responses entailed primarily two areas of emphasis: logistical constraints and personal experiences.

Logistical Constraints. Logistically, PBL results in better outcomes when spanned over a considerable length of time (Helle et al., 2006; Krajcik & Blumenfeld, 2006). The RPP requirements were completed within a designated OT course during the first six weeks of the semester. The timing of when to implement the RPP was determined to align with the time students learn about the environment and personal contexts. Previous research found when CBL is a supplemental component within a course, inherent obstacles have a greater impact on the transformative learning experience, including decreased time spent with the community and scheduling conflicts (Darby et al., 2013; Mey et al., 2018; Mitchell, 2008), which the students recognized as some of the challenges.

The research setting is located in the Northeast region of the United States; therefore, it was anticipated that the winter season may impact the implementation of the RPP. The students described difficulties they encountered when taking photographs of barriers in the community. The students' reflections indicated that the residual snow and unfamiliarity with the area was not only a barrier but also may have camouflaged existing barriers which prevented them from analyzing their assigned areas accurately. Participant 2 was assigned to locate barriers within the downtown area of the city and inadvertently presumed there was no curb cut, "Later in class it was mentioned that there most likely is a curb cut but because of the snow it [was] not visible at the moment". Participant 13 was assigned to the city park, "The snow made it harder to fully evaluate my designated area

because not everything was able to be accessed. It was difficult to see more of the area because of the weather”. Participant 18 was also assigned to the park, but included clustered factors that prevented them from envisioning the park without snow, “Not being able to see the full extent of problems in the area due to the weather... and not being very familiar with the area”. Greater than 90% of the students resided outside of the local area, which compounded their ability to analyze their assigned areas to the fullest extent.

The students were given one week to locate and take photographs of perceived barriers in the community. The students reported difficulties coordinating their schedules with the time needed to explore and take the photographs. For example, Participant 9 declared, “I found it challenging to find time during the week to visit my designated spot,” and Participant 3 affirmed the same view, “The only challenge I encountered that I can think of was finding the time to go out and take pictures at all my locations”.

An overarching theme related to the timing that impacted all students was implementing the RPP during the Covid-19 pandemic. The research setting provided a guideline that enabled the students to explore their community while following social distancing. When CBL is a time-limited experiential component within a course, an engaging, transformative experience may be achieved by creating alternative means to engage with the community (Bauer et al., 2015; Howie & Bagnall, 2013). The RPP was designed following the guidelines set forth by the research setting as described in previous sections of this dissertation.

The students’ reflections presented two challenges that they encountered related to the Covid-19 pandemic. Other than one student (Participant 1), all the students resided on campus or were local commuters who had in-person classes other than this course.

Participant 1, who received their instruction remotely for all courses, resided at home and did not have access to the local community surrounding the university to take photographs of community barriers. Instead, the student was instructed to locate community barriers within their hometown to practice the skill of locating environment and personal contexts that limited engagement in health sustaining activities. The group members took additional photographs of local community barriers and shared them with their peers to analyze. The student identified an insightful challenge when analyzing the local photographs as a result of the logistical difficulty:

I wasn't on campus to actually take the photos. This made it hard to know where the exact location was and if there [was] a separate entrance or even signage near it. It made me hesitant because I wouldn't want to make a suggestion, especially if it already exists. (Participant 1)

The second challenge identified in the students' reflections was the limited communication with the city representative. Participant 8 reported,

I do not think I will truly know until we have more interaction with the people in charge. I honestly think a challenge that our entire group faced was with the communication with the city. Unfortunately they were not timely with answering our emails and even joining our presentation.

The students provided insightful observations that hindered their ability to fully engage in the CBL experience.

Personal Experiences. Personal experiences with CBL in unfamiliar environments at first may cause anxiety and uncertainty (Bauer et al., 2015; Bonnycastle & Bonnycastle, 2015; Cooper et al., 2017). Comparably, student-directed learning can

also cause students to feel ambivalence and apprehension when they are guided through the learning process in comparison to receiving detailed instructions that direct the outcome (Blumenfeld et al., 1991; Krajcik & Blumenfeld, 2006). The students were 1st year OTSs, participating in CBL for the first time. The students' reflections provided an indication of anxieties experienced at the onset of the RPP. The following reflections present different experiences and perceptions from multiple students:

- Participant 11: "It was difficult for me to think outside the box and view barriers from a different point of view"
- Participant 2: "I did not truly believe what I would find would matter so I was just going through the motions of the project without thinking fully of different barriers. As the project kept progressing I felt more comfortable with what I was doing..."
- Participant 14: "I encountered...a lack of creativity on my end. Sometimes I failed to look outside the box and only really saw what was presented in front of me. This had limited my ability to see certain obstacles and possibly find better solutions"
- Participant 5: "At first [I] struggled to notice the variety of personal context factors and barriers and focused more on physical barriers" and "We also struggled with deciding how to create and explain the barriers we saw and the suggestions we had for them"

Regardless of the expressed doubt or uncertainties experienced at the onset of the RPP, all of the students mentioned above asserted a positive change after the RPP. For example, all of the students experienced a positive change in transforming doubts into confidence and viewing their surroundings differently after collaborating with others. Specifically, Participants 14 and 5 both expanded their creativity and increased their awareness about the environment and personal contexts that resulted in successful outcomes, including creating an accessible infographic.

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND LIMITATIONS

The purpose of this action research study was to evaluate the effectiveness of implementing reflexive photography as a means for a transformative CBL experience. This chapter presents the findings revealed in this study as they relate to literature on occupational justice attitudes, civic engagement, and contextual barriers to community health and wellness. The discussion, implications, and limitations of this study are examined in the following sections.

Discussion

PBL (Krajcik & Blumenfeld, 2006), CBL (Jacoby, 2015), and OT education (Bazyk et al., 2010; Cohn et al., 2010) share the same fundamental constructs of learning by doing within an authentic contextual framework to analyze, solve, and/or act on societal problems through a recursive reflective practice of inquiry.

To answer the research questions, the students completed a series of self-reflections during the RPP and a quantitative survey and questionnaire after the RPP. The sources of data were triangulated to validate the accuracy and credibility of the findings to determine if the RPP resulted in a transformative learning experience (Creswell, 2017; Mertler, 2017). Similarities that supported the findings and differences among the sources of data were explored and situated with existing literature. To answer each research question, the combined data were evaluated through a PBL lens for evidence of

transformative learning. This discussion section is organized by the three research questions.

Research Question #1: How does a reflexive photography project change how 1st year occupational therapy students view occupational justice?

Occupational justice is “a justice that recognizes occupational rights to inclusive participation in everyday occupations for all persons in society, regardless of age, ability, gender, social class, or other differences” (Nilsson & Townsend, 2010, p. 58).

To answer research question #1, the Social Justice Attitudes subscale scores showed that students’ perceptions about the causes and solutions to occupational injustices increased. Students’ ratings for their perceptions of social justice attitudes after the RPP (*Mdn* = 4.50) were higher than their perception ratings before the RPP (*Mdn* = 4.13). These results were supported by the qualitative data. Analysis of the overall findings revealed three impactful, catalytic learning moments that expanded how students view occupational justice, including (a) lived experiences, (b) community exploration, and (c) communication.

Lived Experiences

The students reported interacting with the guest speaker and watching the videos were the most impactful learning moments that transformed their awareness about occupational justice and injustices. The student reflections indicated they resonated with the guest speaker’s story about the unknowing and unobtrusive barrier a minor curb cut created, saying “It never occurred to me” (Participant 14), whereas another student reported the guest speaker “[Guest speaker] opened my eyes to a new world” (Participant 17). In addition, students learned how others overcome personal barriers to enable

function in their home and community, as indicated in the following reflections, “Listening to [guest speaker] really showed us so many [trials] faced daily and solutions [they] came up with...I was so impressed with his mount sticks, as well as how his chair has the “eye-level” feature (Participant 18) and “[Guest speaker and Videos] enabled me to learn through [their] mind [and] eyes of how [they] complete occupations with a physical disability... The home modifications of the entrances, the touch lamp, the lowered light switch...enabled me to think more like an OT ” (Participant 16). The student reflections provided evidence that this study validates Sanders et al.’s (2016) research which asserts that 3rd year OTSs become more aware of occupational justice and injustices when immersed in the culture and lived experiences of individuals at risk for social and health disparities. Comparably, existing qualitative research indicated that undergraduate OTSs experienced an increased awareness of how physical and social environments impact occupational performance after participating in experiential-based learning (Parmenter & Thomas, 2015). It became apparent that interacting with the guest speaker and learning about their lived experience in multiple contexts cultivated students’ new worldviews. The students expanded their appreciation for the way others encounter life differently than themselves.

In addition to the guest speaker, the students reported watching the videos of individuals living with a disability navigate their local community and New York City as impactful learning moments that changed how they view occupational justice. For example, the following students' reflections indicated they found existing barriers in the community, which prompted them to consider how the barriers impact others' occupational performance. Participant 5 stated, “[Video] made me realize there are much

more barriers in place in communities that can stop an individual from fully being able to participate and engage in their community and daily life occupations”. Similarly, Participant 10’s reflection recognized how societal attitudes can cause injustices, “[Videos] helped me understand...[barriers] that we cannot even see, such as attitude or support”. The students' recognition of existing community barriers confirms Bass-Haugen’s (2009) research which concluded that health disparities still exist nationally. In addition, the student reflections provided evidence that supports scholars of transformative learning who assert increasing the students’ knowledge about occupational injustices at the onset of a project provides a foundation to help them explore communities confidently and discover potential community barriers or obstacles that increase the risk for social and health disparities (Bauer et al., 2015; Howie & Bagnall, 2013; Vygotsky, 1978).

The intentional teaching strategies created to stimulate students’ motivation to explore new perspectives likely contributed to their increased awareness of occupational justice. Examples of the strategies included introducing impactful videos and a guest speaker that captured the 1st year OTSs attention at the onset of the RPP and the recursive reflection exercises that engaged the students in mindful deliberation about their evolving perceptions of occupational justice (Bauer et al., 2015; Pearl & Christensen, 2017). For example, during the guest speaker’s presentation, the guest speaker and I seized students’ emotional reactions by asking them to think about what they were feeling, why they have the feelings, and how their feelings support or change how they viewed occupational justice. The students were then offered the opportunity to share their thoughts with the

class in a supportive environment to explore preconceived assumptions and changed perceptions.

Collectively, the preceding reflections indicated how the students' understandings of occupational justice or how they view contextual barriers that impact occupational justice evolved. Seeing, hearing, and inquiring about the lived experiences of individuals with a disability encounter daily life proved to be motivating "events" (Blumenfeld et al., 1991) that captured the students' interest and sustained their motivation to explore and recognize occupational injustices.

Community Exploration

The next phase of the RPP involved students immersing themselves in the community to capture individual photographs of barriers that limit access to resources, activities, or other services that risk community health and wellness. In this study, students' reflections indicated exploring their community was a catalyst that further broadened their awareness of social issues as evidenced in the following excerpts from Participant 9, "I consciously looked to identify ways in which others may not be able to participate in the same activities and occupations" and "I looked past the obvious physical barriers to see how public spaces could be adapted to accommodate everyone's needs".

In addition, the students' reflections indicated they also experienced changed realities about occupational justice in their daily routines. For instance, the students reported forming new habits of continuously assessing their surroundings (other than their assigned geographic areas) for potential hindrances to occupational performance. Students described how they recognized the poor sidewalk conditions (cracks and uneven

pavement), which prompted them to consider how they pose a safety risk for persons with poor balance, low vision, or other conditions. Whereas other students described new realities, such as decreased access to services that perpetuate prejudiced views and isolate minority groups, engrained stereotypes that reduce employment or education opportunities, and decreased funding which equates to fewer community resources. Exploring the community shaped new habits and new ways of thinking which supports the following two research studies. Sanders et al.'s (2016) research contends that OTSs who engage with and in the community acquire changed perceptions about realities that were once unnoticed or taken for granted. Furthermore, Mey et al.'s (2018) research found that undergraduate students reported an increased awareness of social issues that resulted in changed perceptions after being immersed in community settings that served children, individuals with disabilities, and adults who attend day programs.

The students in this study valued the experience of applying their evolving perceptions of occupational justice by becoming immersed in the local community. The students demonstrated the initiative to contemplate different perspectives and views of occupational justice and injustice to cultivate their own renewed understandings.

Effective Communication

The next phase in the RPP involved students collaborating with their small groups to discuss the barriers evident in their photographs, share different interpretations, and offer feedback. In this study, the students acclaimed how instrumental collaboration was in changing how they viewed occupational justice differently.

The most prevalent changed perspective that occurred after collaborating with others was an increased awareness that occupational justice encompasses all individuals

and populations at risk for social and health disparities, rather than only individuals with a visible disability. The majority of students reflected on how their perceptions of occupational justice changed from focusing only on individuals with a disability, to also recognize other personal factors such as age, culture, gender, or SES that can impact attaining health and wellness. Frequent comments from the students after collaborating with their peers mirrored the following statement, “I learned a lot...[I] understand even more how occupational justice is never only limited to a certain group, but it applies to everyone in our communities” (Participant 18). Common words that were interspersed throughout the students’ reflections were “everyone” and “all” indicating an inclusive mindset, and “meaningful” which signified the importance of choosing equitable services that individuals want and need to do daily to maintain health. The findings from this study confirm Hullender et al.’s (2015) research which contends that students awareness of personal characteristics, such as understanding how age or economic status impacts an individual’s ability to access goods and services were transformed after interacting with the community residents. Different, yet similar in comparison to this study, undergraduate students in Hullender et al.’s (2015) research reported how impactful hearing the life stories and rich history of elderly individuals were in revealing aspects that put them at risk for occupational injustices. This provided further evidence that new knowledge and understandings of meanings about occupational justice can impact all individuals. When experiences or observations are openly discussed, reciprocal learning can occur.

To facilitate communication, recursive reflection exercises were threaded throughout the RPP. In addition to whole class discussions, each group was required to share their photographs and reflect on what they perceived as barriers to occupational

justice. I circulated from group to group to guide brainstorming that focused the group's attention on the driving question and desired outcomes. Common thoughts and concepts emerged among the group members, which included: discovering different barriers within their assigned geographic area and taking similar photographs but interpreting them differently. The shared course of dialogue exposed and created new perspectives and meanings to grow personally and intellectually. The importance of the collaborative process supports Mitchell and Rost-Banik's (2020) research that reported almost 80% of 397 college graduates who participated in CBL programs, attributed collaboration with their peers as a substantial factor that expanded their awareness about social justice and civic engagement. Intentional reflection stimulates a more in-depth analysis of a learning experience that precipitates contemplation of personal awareness and exploration of the causes for occupational justice inequalities and other societal concerns (Bettencourt, 2015; Brookfield, 2012; Hullender et al., 2015).

As the RPP progressed, the students engaged with others, including myself, the research assistant, and community stakeholders to share ideas, confirm interpretations, and validate their understandings. As facilitators in the learning process, we validated observations and insightful findings, asked probing questions to deepen inquiries, and fostered supportive dissonance that cultivated new worldviews or recognition of inconspicuous barriers or situations. An example of this process included students sharing their presentations to gain feedback before presenting formally. One group presentation included photographs of weathered signage and other signs with poor contrasting colors. In response, I shared online resources that provided information on state and local regulations that businesses and other entities must address to ensure equitable services are

provided to people of all abilities, including descriptions of walkable city initiatives and other resources. The students learned how signage throughout the city and park posed safety risks for individuals with low vision and non-English speaking residents. Learning about these concepts provided the students a more in-depth understanding of how the current signage (poor color contrast and language barriers) impacts a person's functional ability to access community services safely, versus being only a cosmetic blemish.

Learning through collaboration nurtured the students' new awareness about environmental injustices which were then shared with peers and other individuals to increase everyone's awareness. Throughout the RPP students were provided a supportive platform to share observations, receive and give feedback, and contemplate new understandings and realities. Previous research studies corroborate the effectiveness of supportive collaboration in reducing apprehension and enhancing confidence in sharing and learning with others (Parmenter & Thomas, 2015).

Summary

A final student reflection resonated with other student reflections by describing how their perceptions of occupational justice transformed, stating "I started this project not knowing much about occupational injustices and it was really interesting to see my growth, as well as the growth of my peers" (Participant 18). The students' collective representation of the reflections suggested evidence of their willingness to acknowledge a multitude of perspectives, different than their own (Hullender et al., 2015; Sanders et al., 2016); discern personal assumptions; and explore new realities; thereby, resulting in evidence of a changed view of occupational justice for the betterment of society (Carnicelli & Boluk, 2017).

Research Question #2: How does a reflexive photography project change how 1st year occupational therapy students perceive their role as a socially responsive citizen for occupational justice within their local community?

To answer this research question, all sources of data were triangulated to validate the accuracy and credibility of the findings (Creswell, 2017; Mertler, 2017). The Civic Action subscale gauged how students' perceptions of their desire to become engaged and socially responsive citizens changed after completing the RPP. Students' ratings for their perceptions of civic engagement after the RPP ($Mdn = 4.75$) were higher than their ratings for their perceptions of civic engagement before beginning the RPP ($Mdn = 4.13$). A detailed analysis of the qualitative data supported the quantitative findings and revealed the students' role as socially responsive citizens transformed throughout the RPP. Four central areas of foci emerged: (a) advocate, (b) educator, (c) life-long commitment, and (d) significance of community engagement.

Advocate

At the onset of the RPP, the students' reflections projected the uncertainty related to their role as engaged citizens. The students' reflections described feelings of doubt, decreased confidence, or other challenges they experienced during the learning process. One student captured a general sentiment, which was interspersed among other student reflections,

I did not truly believe what I would find would matter so I was just going through the motions of the project without thinking fully of different barriers. As the project kept progressing I felt more comfortable with what I was doing
(Participant 2)

Other students reported challenges when attempting to view barriers from a different perspective or did not feel confident that their contributions would matter as indicated in the following excerpts, “It was difficult for me ...[to] view barriers from a different point of view” (Participant 11), “[I] struggled with deciding how to create and explain the barriers we saw and the suggestions we had for them” (Participant 5), and “I always felt like my ideas were wrong” (Participant 10). The evidence from these findings substantiates Mey et al.’s (2018) research which analyzed 60 portfolios that represented approximately 500 undergraduate students’ CBL experiences. The data revealed some students experienced a period of anxiety at the onset of the project (Mey et al., 2018). In addition, this study confirmed other research that found experiencing a period of anxiety at the onset of a community-based project is expected; documented sources of anxiety include unfamiliar environments, the uncertainty of expectations, or perceived value of the project (Bonnycastle & Bonnycastle, 2015; Mey et al., 2018; Wurdinger & Allison, 2017).

It should be emphasized that this was the first time the OTSs were doing CBL and for many of the students the project-based design was a new experience that likely accounted for their ambivalence. First-year OTSs are experiencing their own transition in self-identity which has been shown to impact the affective dimensions of transformative learning (Hullender et al., 2015). Additionally, when initiating PBL a period of anxiety is expected on account of the student-directed nature of the learning process and guided instruction (Blumenfeld et al., 1991; Krajcik & Blumenfeld, 2006). Therefore, the descriptions of ambivalence from the students in this study were expected.

To account for the expected anxiety students would likely experience, I intentionally designed the RPP to include the evidence-based strategies developed by experienced designers and researchers of transformative and PBL. For example, in contrast to traditional instruction, I provided supportive guidance, through verbal or written feedback, throughout the RPP as each reflective learning exercise was completed. This allowed the students to further reflect on their understandings and interpretations as they contemplated transformed roles as an advocate and agent of change. Similarly, I engaged the students in periods of supportive reflective inquiry. For example, I asked targeted questions such as, “What can you do about this now?”, “Why does this barrier exist?”, and additional questions specific to the students’ responses, observations, or perceptions. This strategy intended to provide different perspectives to help the OTSs focus on what they can do, and facilitate contemplating how they perceived their responsibility in improving society. The aforementioned PBL strategies aligned with theories and principles declared by scholars of transformative learning (Brookfield, 2012), PBL (Coulson & Harvey, 2013), and experiential learning (Wurdinger & Allison, 2017) who assert that scaffolding the amount of support offered during instruction or the meaningfulness of an assignment to match the student’s skill level enhances the development of new knowledge and changes perceptions now and in the future.

As the RPP progressed, the students’ reflections attributed confidence as a contributing factor when they contemplated their role in promoting societal change. The students’ initial reflections portrayed a decreased sense of confidence in their ability to make a worthy difference in the local community. On the contrary, after the RPP student reflections provided evidence of their increased confidence as an advocate for others. In

this study, the following excerpts demonstrated the value of the RPP in developing the students' sense of worth as community citizens locally, “I am very confident that we as individuals can help change” (Participant 10) and “Since starting the reflexive photography project, I now feel incredibly confident in finding issues and making a difference in my community” (Participant 18). Comparably, other students expressed how the RPP increased their confidence in being able to enact change in any setting, “It’s rewarding to feel as though I am now capable to make change and promote occupational justice whether it’s here on campus...or in my hometown”. The students embraced their evolving confidence in believing they do have a voice in advocating for change. This study confirmed Mey et al.’s (2015) research that states students’ sense of civic responsibility and ability to advocate for change progressed to believing in the value of the project and developing self-confidence with lasting outcomes. OT educators have an opportunity to provide OTSs with authentic learning experiences in their community to address societal issues, which results in students developing a life-long commitment to civic engagement and social responsibility (Hansen, 2013; Hansen et al., 2007). The students’ reflections demonstrated how they perceived their role as an advocate by providing explicit examples, such as emailing key stakeholders, reaching out to disability rights activists, contacting legislators to support legislation that promotes inclusion, donating to programs that promote community wellness, or devising plans of action. The OTSs experiences demonstrated an understanding that OT practitioners and students have a role in providing quality healthcare to populations at risk for social and health disparities, which included advocating for healthy communities to prevent unwarranted burdens on individuals and society.

Educator

In addition to being an advocate, the 1st year OTSs demonstrated an emerging awareness of promoting advocacy through education, which resulted in an increased sense of social responsibility. The students were required to identify community needs, contemplate solutions to societal problems, and share the results with interested stakeholders. The subsequent reflections provided evidence that the students correlated self-education and community education as essential factors to promote occupational justice.

Self-education. The following excerpts from the student reflections demonstrated how previous impactful teaching moments (guest speaker, videos, community exploration, and dialogue) increased their knowledge about occupational justice, which inspired them to visualize their capacity to effect community change. For example, Participant 2 began to view the city through the eyes of an individual who lives with a disability, “Walking around the city after meeting [guest speaker] helped to expand my knowledge because I [now] knew of different things to look for”. Participant 18 provided a different perspective on how they viewed barriers differently, “By looking at the pictures a second time with more knowledge, I was able to find even more issues”.

From a different perspective, other student reflections provided evidence that learning more about different cultures, demographics of the city, and the ADA enhanced their background knowledge and awareness of specific needs within the community that should be addressed. The following examples provided evidence of the students’ self-directed research, which was required when deciding targeted advocacy outcomes, “Hispanic and Latino/a community...makes up just around 15% of the population of [city

name] according to the US census” (Participant 2) and Participant 16 shared what they learned after referencing the ADA guidelines, “These guidelines connect to [the] heights of stairs, what's needed to build a ramp, the height of the bus stop sign, etc. I am now more aware that state guidelines impact environmental barriers and architecture”. Collectively, the students’ reflections provided evidence of crucial information that they acquired or independently researched to support the rights of all people; thus, contemplating solutions to societal problems. These findings confirm the findings of Knecht-Sabres (2013) that asserts OTSs improve their critical reasoning skills when they engage in authentic learning experiences that facilitate new learning. In addition, this study confirms Hansen’s (2013) research that proclaims engaging in the community allowed students to acquire essential knowledge and skills about social and health determinants in their local community and instill a desire to advocate for others.

The students in this study demonstrated that they researched additional information to reinforce concepts learned or explore different perspectives and understandings. This indicated that the students embraced the opportunity to learn more about determinants of health and wellness as they connected prior knowledge with new experiences throughout the different phases of the RPP. Occupational therapy’s scope of practice states OT practitioners are obligated to promote occupational justice and empower others to alleviate barriers that deny health, wellness, and occupational participation (AOTA, 2020), which begins with self-education.

Community Education. Students who adopt a socially just mindset are empowered to take action that supports impartial societies for the betterment of all individuals and populations (Beacham & Shambaugh, 2007; Bowen, 2014). Students

identified community education as a primary responsibility to help eradicate injustices in the world. An in-depth analysis of the data revealed diverse perspectives of how the students perceived their role in educating the community. To organize the presentation of the student reflections, the following excerpts or quotations are structured to share each perspective separately; including the individual role of an educator and empowering the community.

Individual Role. Several of the students' reflections identified how they perceive their role in educating community members,

I now know how to contact the city and I also know that my voice matters. I have realized that I didn't see these things as a problem before this, and most likely the majority of our community doesn't either. So if I am always on the lookout for contextual barriers I can use what I have been taught to educate others.

(Participant 12)

The following student reflection resonates with the previous reflection, "I understand the potential barriers an individual may encounter and realize the specific solutions and suggestions that...need to be addressed to the town and/or the community" (Participant 20). This study reinforces Moely and Ilustre's (2014) research which found students demonstrated improved problem-solving skills and new perspectives when CBL was designed to support contemplation. Provoking new ideas enhances a student's ability to think deeper and consider alternatives. The students in this study demonstrated that self-education about the social determinants of health and wellness inspired thoughts about how they can advocate for the rights of all individuals.

Community Role. In addition to recognizing their role as an educator in the community, numerous student reflections embodied the value of supporting a collective community effort to generate a shared commitment addressing societal injustices. The following student's reflection provided a suggestion to increase community engagement,

In my opinion, I think it is important to spread awareness about the potential barriers within the town [to] inform other individuals about it as well as the community. In order to do this there could be a social media page to post on. Instead of just posting negative barriers within the community, there could also be important updates and positive alerts about the community to inform everyone about. This would be an effective way to engage the community and the town about current events. This could also bring the community together. (Participant 20)

In addition to recognizing the importance of educating others, the following student's reflection indicated how they understand their professional responsibility,

I plan to use my knowledge in class and throughout this experience to create occupational justice for my community. I plan to do more research within my community of issues people may have and find numbers for local departments and ways to advocate. ...I plan to find more ways to make significant changes in someone else's life. I feel this project is essential. More people should be given the opportunity to experience it, and it does not only have to be for [o]ccupational [t]herapists. Everyone has a voice, and I feel it is our duty as [o]ccupational [t]herapists to encourage others to use their voice to make our communities and eventually our world a much better place for all. (Participant 18)

These findings support Mitchell et al.'s (2015) research that found students' self-identities are transformed when they anticipate poignant roles in society where they can empower others to voice concerns or impact policy changes that promote justice. The students' reflections described how they perceived the importance of empowering others to change attitudes, behaviors, or actions that perpetuate injustices. The aforementioned changes will instead ensure all individuals feel respected and welcomed in the community where they live.

Life-long Commitment

The aforementioned student reflections not only represented the value of educating others to expand efforts that support occupational justice, but they also indicated a personal, life-long commitment to alleviating existing injustices. Many other student reflections shared the same sentiments of their peers in their vision to ensure individuals have a choice of opportunities and available resources to fully participate in life. The following student reflections provided additional evidence of how the RPP helped nurture a desire to support others in the community where they live, work, and play. One student declared, "I want to continue to fight for occupational justice in the community that surrounds me!" (Participant 16). A different student shared how they plan to continue current advocacy efforts to educate others,

I will continue to be an advocate on social media and keep a conversation going about contextual barriers with my peers who aren't OTs. I hope to be the person to ask for a potential solution if one of my friends notices something in the community that doesn't seem right. (Participant 4)

Other students demonstrated how they embraced the outcomes of the learning experience and provided examples of initiating advocacy in other areas of their personal lives,

I also work in a child-care center, so if I ever see things that are not fair or overlooked [language barrier] I can make my voice heard and talk to whoever I need to make sure that all kids get the same chance at learning. (Participant 12)

The students' reflections indicated they transferred their desire to advocate for others beyond the scope of the RPP. This confirms Mitchell et al.'s (2015) research that revealed alumni who took CBL courses, embraced the value of their learning experience and instilled a life-long commitment to promoting occupational justice. Developing a habit of sustained reflection about occupational injustices was the critical factor that transformed the alumni's professional lives and sense of civic responsibility (Mitchell et al., 2015). Similarly, this study supported Ash et al. (2005) and McNaughton's (2016) research that asserts participating in thoughtful reflections throughout CBL nurtures a desire to question and understand the meaning of societal issues and sustains continued engagement beyond the context of CBL.

It became evident that the RPP resulted in the students feeling re-energized to support occupational justice or created new aspirations of committing to a life that promotes inclusion. It should be noted that one student's insightful reflection indicated some residual ambivalence related to how they perceive their role to enact change at present. In response to the second reflection question that asked to describe how their confidence level changed since starting the RPP, Participant 3 replied, "I'm sort of confident about the difference I'm making. I really hope a difference is made...Overall, I really hope after the city see[s] everything we have pointed out...changes can be made".

The student was then asked on the questionnaire to share how they perceived their role of being able to make a significant difference in their community's health and wellness. The student stated,

I perceive my role changing in a good way...I feel as if after taking this class, come next year I will be better able to advocate for all and make a real difference in my community...I will be more prepared and better able to advocate for occupational justice.

Although this reflection indicated ambivalent feelings about their confidence to enact social change in comparison to the other student reflections, it became apparent that the student began to contemplate and question their role in enacting social change. Bauer et al. (2015) assert that introducing occupational justice when education commences, aligns with undergraduate students' developmental readiness. This provides a foundation to continue learning that results in actively partaking in real-world advocacy efforts.

Responsive Community Engagement

The fourth aspect that influenced how the students viewed their role as a change agent in the community was the responsiveness from interested stakeholders who valued the principles of occupational justice. In this research study, the students were asked the following question after presenting their findings to myself, the research assistant, their peers, and representatives from the campus Office of CBL, "In 150 words or more, describe your most rewarding experience as a result of completing CBL." Greater than 75% of the students explicitly expressed feelings of validation, motivation, and self-actualization of their worth, which emphasized their perceived value of sharing meaningful information and interacting with others. The following sampling of student

reflections illustrates the diversity among the student responses. The student responses described how influential and powerful engaging with community members, who can make a difference in the local community, had impacted how they view their role to support occupational justice:

Participant 18: “Being able to present the injustices and our solutions. It was just such an overwhelming feeling to have voices heard. It felt like not only us, but so many voices of the community were presenting the issues we found. By presenting, it gave me a huge sense of accomplishment. I started this project not knowing much about occupational injustices and it was really interesting to see my growth, as well as the growth of my peers. We all were able to dissect our areas and come up with so many solutions to improve this town. It was...rewarding to take what we learned in class and directly apply it to this project and show the town as well. I enjoyed looking at the world like an Occupational Therapist being a part of making a change; I plan to do it more often.”

Participant 10: “Being able to present our findings and discuss them with our class, [instructor], and our guests. Seeing our guests say that they loved some of our ideas and that they really think they could improve...society and add to the community’s health and wellness made me feel absolutely elated. I was so scared that I was missing the mark on this project and that our suggestions did not make sense, so when other classmates had similar suggestions and our guests and [instructor] liked our ideas, it really made me feel like we [were] on the right track to becoming occupational therapists and that we [were] learning more and more about our field every single day. Getting a hands on experience to show us what kind of responsibilities we will be contributing too was very exciting.”

The findings verify Moely and Ilustre’s (2011) research which found 290 1st year students’ and 257 2nd through 4th- year students reported their overall CBL experiences were positive when opportunities for community engagement were offered. Comparably, Bauer et al. (2015) assert that educators must be mindful when designing CBL for 1st year students. CBL that is scaffolded to progressively challenge students’ level of engagement

and civic responsibility helps shape their commitment to occupational justice while in school and in the future (Bauer et al., 2015; Coulson & Harvey, 2013). The preceding student reflections and reflections from the remaining students symbolized definitive actions or expressive descriptions that embodied confidence in their capacity to create a difference that ensures social inclusion and health parity.

Researchers and scholars of PBL found effective teaching strategies that engage undergraduate health education and social work students in mindful contemplation as a means to examine their role in actuating a social change in the community (Bringle & Hatcher, 1999; Massengale et al., 2016; Peabody, 2013). To engage the OTSs in examining their role in society, the following evidence-based strategies were implemented throughout the RPP: shared positive feedback when the students expressed ideas or desires to make a difference in the community, asked targeted questions to generate problem-solving, and required student-created artifacts that were shared with peers and community stakeholders (Bringle & Hatcher, 1999; Massengale et al., 2016; Peabody, 2013).

It became apparent that the supporting qualitative data from this study verifies Moely and Ilustre's (2011) research, which found undergraduate students attributed their positive CBL experience as the catalyst to engage in their community as a socially responsive community citizen after satisfying the academic requirements.

Summary

These findings indicated that the students' sense of civic responsibility increased and that they valued the RPP in transforming how they view themselves as a change agent in the community. Regardless of any expressed doubt or uncertainties experienced

at the onset of the RPP, all of the students asserted a positive change in how they perceived their role as socially responsive citizens at the end of the project. The students' reflections provided evidence of a plan of action to implement change, are advocating for change presently, and/or expressed a desire to sustain activism, which supported their perceptions that an occupationally just society is an educated society.

Research Question #3: How does a reflexive photography project influence 1st year occupational therapy students' awareness about contextual barriers that may impact community residents' health and wellness?

The Rehabilitation Act of 1973 (2006) prohibits discrimination based on a disability from accessing and benefiting from services, resources, and other programs afforded to others. This law empowers OT practitioners to educate themselves and others to design accessible spaces that foster equal access to opportunities and resources for all populations at risk for health and social disparities.

To answer research question #3, the CBS scores showed students' awareness transformed how they perceived the level of impact contextual factors have on achieving health, wellness, and participation in life through engagement in occupations. All student responses increased from before the RPP to after the RPP. Students' ratings of their awareness of personal context areas increased by one value point (*Mdn* = 3.00 to 4.00 or 4.00 to 5.00), except for "education", which remained unchanged (*Mdn* = 5.00). Equally, students' ratings of their awareness of environment context areas increased by one value point (*Mdn* 4.00-5.00), other than "products and technology", which increased 1.5 value points after the RPP (*Mdn* = 5.00), compared to before the RPP (*Mdn* = 3.50). These results were supported by the students' self-reflections. Analysis of the overall findings

revealed two primary areas of focus, including (a) physical contextual factors and (b) other contextual factors, excluding natural or manmade environments.

Physical Contextual Factors

Physical contextual barriers in the environment create obstacles that prevent access to services that can cause negative social and health outcomes. The most prevalent barriers students recognized were physical barriers, which included natural or manmade environments. The students' reflections provided evidence of existing physical contextual barriers in the local community that can impact the quality of life, including topographical features (hilly terrain, uneven surfaces, gravel), weather-related issues (snow, ice, temperature), and human-made elements (cracked sidewalks, buildings with no wheelchair accessibility, English only signage, out of reach light switches, etc.). Comparably, the students also recognized physical contextual factors that enable function, such as ramps, instead of steps, auditory cues at crosswalks, and textured curb cuts. The findings verify Parmenter & Thomas's (2015) research which found 2nd year OTSs increased their awareness of how physical aspects of an environment impact an individual's ability or inability to participate in meaningful occupations.

In addition to recognizing physical community barriers to health and wellness, numerous students provided detailed descriptions of health implications as a result of the barriers, including social isolation, limited access to health care, physical deconditioning, and psychological issues. These findings support previous assertions that architectural features of buildings, terrains that restrict mobility, air quality, and seasonal weather result in determinants of health (Hammel et al., 2015). Hammel et al.'s (2015) research informs the occupational therapy community about environmental factors that threaten

occupational rights, which are afforded to all individuals. OT practitioners must consider all aspects of an individual's life, including how the environment restricts occupations that can decrease quality of life. A study conducted by Parmenter and Thomas (2015) found that 96% of 1st and 2nd year OTSs who engaged with community members in helping them complete projects reported an increased awareness of the role of occupation on health and well-being. The student reflections in this study provided evidence that recognizing the physical features of an environment affords OT practitioners the ability to accurately assess factors that cause barriers to participation in health sustaining occupations.

Other Contextual Factors

Other contextual features that are not as readily visible as tangible physical aspects of an environment cause comparable injustices to community health and wellness. These features include but are not limited to the following barriers: stereotypes, programmatic issues, policies, attitudinal, and other unnoticeable barriers (CDC, 2021).

After collaborating with others, the students' reflections indicated an increased awareness of various existing contextual barriers that prevent access to equitable services, opportunities, and other resources. The students' reflections revealed race, SES, societal attitudes, community policies, personal relationships, and personality as contextual features that support or negatively influence community health and wellness. Correspondingly, the students' reflections recognized similar health implications when encountering physical barriers, which included social isolation, physical deconditioning, poor healthcare quality, and psychological issues. Bass-Haugen's (2009) research found matching disparities when evaluating factors that impact occupational performance or

required occupational therapy services for secondary conditions caused by barriers. This study confirms Bass-Haugen's (2009) assertion that disparities exist among non-White children and adults based on race and income levels. For example, in this study, the students' perceived that higher income levels provided more options for access to programs, health care, and other resources. Differently, some students perceived a direct correlation between communities predominantly comprised of families with low incomes with a lack of affordable, culturally diverse healthy food choices. The students detected the prevalence of fast-food restaurants in the city as the affordable food option, in contrast to fresh foods and vegetables, which the students did not recognize before the RPP. Other student reflections recognized multiple compounding factors that perpetuate exclusion, such as disregard for the growing minority populations in the city, societal ignorance, and financial limitations to address and prevent adverse consequences. These sentiments further validate Bass-Haugen's (2009) findings that assert non-White citizens and lower SES were factors that contributed to more health disparities, deficient health care services, and feeling unsafe in public, schools, and other spaces.

In contrast to the intangible contextual factors described earlier that limit participation in meaningful occupations, students recognized how personality characteristics can be an asset to occupational performance. For example, the students attributed the guest speaker and YouTuber's optimism and wit as contributing personal characteristics that enabled them to overcome life challenges. Wilcock and Townsend (2019) proclaim OT practitioners acquire the capacity to understand how personal attributes enable or hinder participation in health sustaining occupations. The OTSs reflections indicated how they recognized the importance of someone's resiliency to

overcome stressors or barriers daily, which empowers individuals to engage in meaningful occupations that otherwise may be insurmountable challenges to others.

Students in this study are predominantly White, 18 year-old females from middle to upper-class families. After exploring the local community, students' pre-existing understandings of macrosystems from a community and healthcare point of view changed. The students recognized existing obstacles created by societal regulations and attitudinal barriers that do not directly impact their daily participation or simply were not aware of before beginning the RPP. The students became more aware of systemic influences, such as the economy, which can limit options or accessibility to needed resources for marginalized populations (Bailliard et al., 2020; Bass-Haugen, 2009; CDC, 2021). Sanders et al. (2016) reported OTSs who engaged in service opportunities gained knowledge of how rigid systemic standards or policies can limit access to healthcare resources which directly impacts the type and quality of care others receive.

Differently, other students' photographs and reflections generated discourse that emphasized how attitudinal barriers perpetuate stereotypes that result in social isolation, fear, and feelings of inadequacy. For example, student photographs and reflections of graffiti provided evidence that they connected graffiti to gang violence, however not all graffiti is gang related. This evidence supports Heffron et al.'s (2018) research which asserted that societal attitudes were precipitating factors that influenced community members' concern for their personal safety. This new awareness changed how the students' perceptions of a safe community, may be viewed as unsafe by others. Equally, the students changed perceptions support Bonnycastle and Bonnycastle's (2015) research that declares reflexive photography elicits transformative changes in students in the areas

of understanding about occupational injustices, such as homelessness, the elderly, and persons experiencing poverty.

Although the students' reflections about the "inconspicuous" contextual features of the environment were not as detailed or varied as the reflections regarding the physical features, this was not a surprising finding. Before beginning the RPP, the students' limited awareness of the less obvious "other contextual barriers", which can include internal attributes of individuals or other unknown aspects of the environment likely contributed to the variance. Additionally, the students had limited opportunities to interact directly with the public to discover additional barriers such as societal attitudes. Nevertheless, after collaborating with their peers and others, all of the students reported an expanded awareness of previously unrecognized contextual features. The RPP challenged the 1st year OTSs to view life through different perspectives and immersed them in an unfamiliar eclectic society. As a result of the RPP, personal dissonance evolved into respect for the capabilities, strengths, and lived experiences of individuals living in the community.

Summary

The scaffolded nature of the multiple real-world learning opportunities during the RPP were essential teaching and learning strategies that contributed to the students' successful transformative learning experience. The results and supporting evidence from the student reflections indicated an enhanced awareness of their community, existing contextual factors that risk community health and wellness, and personal attributes that support or hinder participation in health-promoting occupations.

Implications

This study has implications for me as a new action researcher, my OT colleagues, and scholarly practitioners and researchers. Three implications are discussed, including (a) personal implications, (b) implications for OT education, and (c) implications for future research.

Personal Implications

As a result of this study, I have gained an appreciation for understanding the commitment that is required to create engaging and evidence-based teaching pedagogies that align with the principles of OT education. Reflecting on my role was the impetus for me to personally and professionally grow as an OT educator and resource for others interested in CBL. The most significant personal implications discussed in this section are (a) implications for PBL in higher education and (b) implications for scholarly research.

Implications for PBL in Higher Education

PBL in higher education is becoming more recognized as a high-impact approach for transformative learning (Boss et al., 2018; Krajcik & Blumenfeld, 2006; Larmer et al., 2015). I have the responsibility to ensure 1st year OTSs experience transformative learning at the onset of their education through engaging experiences that nurture a life-long commitment of reflective practice. A PBL approach was used as the guiding framework for designing the RPP to instigate personal and social commitment (Bailliard et al., 2020), acquire knowledge beyond the context of the classroom (Jacoby, 2015), and develop OTSs 21st century skills (Helle et al., 2006; Massengale et al., 2016).

As a result of reflecting on the RPP, I gained a deeper appreciation for PBL during the design and implementation phases of the project that attributed to the OTSs transformative learning experience.

Design Phase. Time, commitment, and sustained effort are required when designing an impactful PBL experience (Buck Institute for Education, n.d.; Lee et al., 2014). This was my first time designing a project utilizing PBL as the guiding framework. Researching and learning about effective PBL strategies in higher education proved to be instrumental to the success of the RPP. The components of PBL incorporated when designing the RPP that proved to be the most beneficial in the successful outcome of the study included (a) creating a driving question, (b) designing a motivating “event”, (c) allowing student-centered choice and voice, (d) and planning reflective exercises.

Driving Question. According to respected scholars, students value a learning experience more when the purpose has practical implications for their future academic and professional roles (Blumenfeld et al., 1991; Lee et al., 2014). I designed the RPP to develop the students’ emerging ability to understand and analyze how social injustices and contextual factors risk achieving health and wellness in individuals and populations. Throughout the RPP, students were repeatedly prompted to reflect on the driving question, “How can we use the principles of occupational therapy to help communities promote engagement in occupations that support health and wellness for individuals and populations?”. The results of this study confirmed that the 1st year OTSs demonstrated developing essential skills that provided a foundation for future learning, recognition of their present and future roles, and application of OT principles. I learned that aligning the

driving question to the student learning outcomes gave the students a meaningful purpose that guided the students' learning process (Bettencourt, 2015; Harvey et al., 2010; Lee et al., 2014). The significance became even more evident as I read the student reflections. Many students attributed the RPP as a catalyst that re-energized their desire to be an occupational therapist who is passionate about helping individuals engage in a purposeful and meaningful life. The driving question instigated and sustained the students' passion for learning how to make the world a better place for all individuals.

Motivating Event. Choosing a motivating “event” was the next step that proved to be an impactful learning component that sustained the students attention throughout the RPP. The motivating “event” should be engaging and capture the students interest (Blumenfeld et al., 1991). Therefore, a designer of PBL must account for the time required to consider multiple options when determining how to capture the students interest and drive the learning process. Specific to this research study, inviting a guest speaker who has multiple physical impairments and watching videos of real people with disabilities navigate in their home and community were chosen to stimulate and sustain learning. It was anticipated that students interacting with someone and seeing others live a life different from their own would make an impressionable impact on how 1st year OTSs view others and the environment from a changed perspective. As a result, it took time to contact potentially interested guest speakers, collaborate on how to structure the presentation, and confirm dates.

The students confirmed that the authenticity of interacting with a person who lives life with a disability and watching videos of individuals engaging in real community-based occupations were significant aspects that contributed to their learning experience.

The students were able to reflect on what they learned to sustain their motivation to locate community barriers and contemplate ways to overcome obstacles to health and wellness. This result inspired a sense of fulfillment in me that will sustain my commitment to dedicating the time and effort required when designing impactful PBL experiences.

Student-centered choice and voice. Student-centered choice and voice were planned to keep the students engaged, highlight strengths in identifying inconspicuous community barriers, and self-monitor progression of self-learning throughout the RPP. The students were allowed the latitude to choose what community barriers to photograph, create an informative artifact, and determine recommendations to address real-world issues or problems that prevent community health and wellness. When students can choose aspects that would be meaningful to their learning, they engage more and embrace the opportunity to direct their learning (Larmer et al., 2015). I realized the importance of student-directed choice and voice when students personalized the experience, shared their photographs and creative artifacts with enthusiasm, or received validation from others recognizing their contributions.

Another approach that proved effective in allowing students to direct their learning was providing supplemental resources. My 1st year OTSs had limited learning experiences and knowledge about community barriers, which caused anxiety when exploring their community for barriers or problem-solving how to address community issues or concerns. To ease the students' angst, I provided a variety of educational readings and additional resources to improve their understanding of unclear concepts or observations and validate interpretations. I found the pre-planning effort to find

meaningful resources proved to be beneficial because the students initiated their learning and felt empowered to share new knowledge they acquired through the process.

Similarly, the scaffolded learning exercises validated the importance of the student's voice (Hullender et al., 2015; Vygotsky, 1978). The culminating event of the RPP was presenting their observations and recommendations. The students shared their artifacts with interested stakeholders who listened and validated their findings. I learned by conducting this study the importance of student engagement with community partners (Lee et al., 2014). Many of the students expressed feeling a sense of fulfillment and self-actualization about their contributions in promoting an inclusive society that respects all individuals after presenting their findings. In the future, I will establish multiple community partners to ensure the students' efforts are shared among all community stakeholders who have a genuine interest in hearing and learning about the students' outcomes.

Reflective exercises. Reflective exercises are critical in transforming a student's capacity to self-reflect, contemplate assumptions, debate discourse with others, create a plan of action, and integrate changed perceptions in one's life (Brookfield, 2012; Mezirow, 2000, 2012). Designing the researcher-created self-reflections, questionnaire, and retrospective CBS was advantageous in helping me gain a deeper appreciation of the students' lived experiences. I learned that creating tailored assessments that generate meaningful results required reading previous scholars' literature, consulting with SMEs, and collaborating with experts who have experience in qualitative research for ideas on how to word questions (Bringle et al., 2004; Hatcher et al., 2004). In addition, I learned how powerful mindful reflective exercises support students' learning through experience

(Harvey et al., 2016), which became apparent when evidence of transformative learning was expressed in the student reflections or shared during engaging class discussions. I found taking time during the design phase to learn how to develop impactful reflective exercises throughout the RPP was a significant contributor to the success of the study.

The results of this study confirmed that the time, commitment, and effort during the design process created an impactful PBL experience that was educational and valuable. As an instructor, I gained an appreciation for PBL in higher education that will sustain my commitment to implement future PBL projects in different undergraduate and graduate courses I teach.

Implementation Phase. Designing impactful learning exercises before implementing the RPP afforded time and the opportunity to focus my actions and behaviors on facilitating a transformative learning experience during the RPP. A continuous process of reflective inquiry is a critical element of PBL (Krajcik & Blumenfeld, 2006) and transformative learning (Mezirow, 2000). The quality and nature of the reflective exercises have proven to transform assumptions and opinions that resulted in producing a transformative learning experience (Bringle & Hatcher, 1999; Clayton & Ash, 2004; Hatcher et al., 2004).

Incorporating intentional processes to foster students' engagement in reflection required attention during seminars and outside of the classroom setting. During the seminar, time was allocated for the students to collaborate with their peers, myself, the research assistant, and other interested guests to reflect on their learning experiences by sharing information and learning from others. Periods of uncertainty and dissonance were expected; in response, I guided the students by asking probing questions in a supportive

manner (Hullender et al., 2015). I found the weekly observations and interactions with the students during class discussions were instrumental for me to gain a more in-depth understanding of their changed perceptions, view of societal attitudes, and commitment to civic engagement (Harkins et al., 2020; LaDuca et al., 2020). The degree and form of engagement between the students and others signified raw emotions, new understandings, confidence, and excitement to continue learning, which was not always represented in the students' reflections or questionnaires. Although the conditions that allowed me to conduct this action research with my students prevented me from documenting student responses and reactions during class discussions, being part of the reflective process proved to be an invaluable experience that increased my confidence that the RPP was transforming, for both the students and me. Comparably, the class discussions and student interactions eased my anxiety to allow the learning process to evolve, which prevented any temptation to direct the student learning process (Cooper et al., 2017).

Outside of the classroom setting, reviewing the reflections promptly allowed for timely feedback, intermittent benchmarks to provoke sustained questioning, stimulate new learning, and cultivate changed perceptions. Additionally, this approach to providing feedback helped the students to guide the progression of their learning. I learned that scheduling dedicated time to review the reflections collectively was a better approach, than reviewing each one separately. This enabled me to provide thorough feedback and manage my time more effectively.

In addition to the time dedicated to ensuring the students engage in productive reflective exercises, an action researcher should engage in a continuous process of reflective practice (Mertler, 2017). A continuous process of personal self-reflection was

essential for me to determine if the intervention was transformative. I learned what worked well and what needed to be modified or changed during the RPP and for later reiterations of the project. This information will be used to inform and further improve my teaching pedagogy.

I have a newfound understanding and belief in the value of PBL. This reflection helped me to appreciate the value of dedicating the time, commitment, and effort required to develop a transformative learning experience. The 1st year OTSs demonstrated confidence in both personal and professional civic responsibility, self-actualization, motivation to continue learning, and anticipation of future educational opportunities in the community. The PBL process of learning built a foundation for the students, and myself, to grow intellectually, personally, and professionally.

Implications for Scholarly Research

In planning this research study, it became evident that existing literature and research on PBL in OT education was limited. Expanding the literature search to include CBL in OT education, action research in OT education, and other merged pedagogies resulted in research studies that had limited elements associated with the purpose and structure of this study. For example, the variability of CBL is dependent on the place of implementation, purpose, academic program, and structure (Jacoby, 2015). It has been hypothesized that the variability of CBL is a contributing factor to the limited research, quality of research, and relevancy to other CBL studies (Eyler & Giles, 1999). Additional faults that were discovered included anecdotal reports (Sanders et al., 2016), poor research design (Harvey et al., 2010), ambiguous definitions of constructs (Howie & Bagnall, 2013; Taylor & Laros, 2014), or other contributing factors that weakened

reliability of the studies. As a scholarly practitioner, I learned how to analyze and critique the literature as a foundation to designing a rigorous study. I combined evidence-based elements from existing PBL research in higher education, OT education, CBL, and action research. Some examples included (1) applying concepts from previous literature and research on PBL that enabled me to design an engaging educational experience, that resulted in the students developing skills and knowledge throughout the learning process (Boss et al., 2018; Krajcik & Blumenfeld, 2006), (2) adapting the CASQ to increase the credibility and reliability of the quantitative findings (Moely et al., 2002), (3) incorporating the use of photographs to capture injustices in the community (Massengale et al., 2016).

Partaking in scholarly research has increased my confidence in implementing non-traditional practices of instruction that are evidence-based and align with the core constructs of OT education and practice. This trifecta of assets resulted in positive student outcomes, in addition to changing how I create lesson plans. Reflecting on this process of action research inspired me to modify the intervention for future reiterations and implement PBL in the courses I currently teach. I feel compelled to conduct a longitudinal study of this research annually to improve the research design and educate others about action research and PBL in OT education. To improve the research design, I will continue to read current literature, consult with PBL and CBL experts, and participate in other educational opportunities to increase my knowledge. Disseminating the results of this study and subsequent studies will add to the body of research and help inform others interested in similar approaches to teaching. OT educators interested in PBL will learn about best-practice strategies and potential limitations.

Implications for Community-based OT Education

The Universal Declaration of Human Rights (1948, as cited in Wilcock & Townsend, 2019) asserts that all individuals, regardless of race, age, SES, functional ability, and other personal attributes, are entitled to equal rights to participate in life, including but not limited to: health and well-being, respect for diversity, education, sustainable employment, and active community engagement. The profession of OT emphasizes promoting an occupationally just society in an occupationally just world (Hammell, 2017; Wilcock & Townsend, 2019). The outcomes of this study established the value of immersing 1st year OTSs in their community to learn how the interconnectedness of contextual factors can restrict participation in meaningful occupations.

Students who engage in community-based education to address a societal issue or concern through experience, reflection, and action experience transformative changes (Mezirow, 2000; Streetman, 2015). The students in this study changed how they view the world. They gained new perspectives by envisioning how others, different themselves, encounter the world daily. Equally, the students recognized how structural, cultural, attitudinal, and other barriers impact individual and community health and wellness. This study provided evidence that indicated when 1st year OTSs engaged in CBL, they valued the authenticity of the experiential learning process and learning from others, which inspired a desire to become agents of change (Beacham & Shambaugh, 2007; Darby et al., 2013; Hansen, 2013). Although the intervention for this study was implemented as CBL, the results and design of the intervention provided an impetus for OT educators to create other community-based education at the onset of OTSs' education. OT educators

can introduce community-based education at the onset to increase the students' awareness of community needs and societal issues. Increased awareness can be a catalyst to inspire future discussions and learning as the students progressively become more aware of the obstacles future clients face (Bauer et al., 2015; Bazyk et al., 2010; Hansen, 2013).

At times educators can be resistive to changing or modifying existing teaching pedagogies because they are not knowledgeable about successful community-based teaching approaches. A variety of resources, such as scholarly research, websites, or expert consultants are available for educators to improve their teaching practices and dispel perceived myths (Helle et al., 2006; Krajcik & Blumenfeld, 2006; Lee et al., 2014; Massengale et al., 2014). OT educators have a responsibility to cultivate students who become life-long learners able to think critically, communicate with others, analyze problems, and adapt to societal changes (Bazyk et al., 2010; Cohn et al., 2010, 2015). OT is rooted in occupational justice and by engaging the students in a community-based educational experience at the onset of their education they become energized to build knowledge, explore the unknown, and anticipate future learning opportunities with the community (Bonnycastle & Bonnycastle, 2015; Wilcock & Townsend, 2019). In essence, educators become students and students become educators (Carnicelli & Boluk, 2017).

Future Research Implications

The findings of this study suggest three implications for other scholarly researchers or OT practitioners who are interested in community-based education as a pedagogy for students' transformative learning: (a) evaluation of PBL strategies, (b) community-based pedagogies in healthcare education, and (c) longitudinal study.

Evaluation of PBL Strategies

This study was designed using the principles of PBL that required the students to engage in real-life situations to address a societal problem. The RPP guided students to experience periods of dissonance that changed how they view or interpret their worlds differently. Mezirow (2000) labeled these periods as “disorientating dilemmas” that instigate students’ transformative change (Kiely, 2002, 2005). A literature review on PBL indicated a need for quantitative and qualitative measures that demonstrate the impact of project-based pedagogy on student learning in higher education (Helle et al., 2006). The majority of published articles consisted of course descriptions, void of any evidence demonstrating developing or improving 21st century skills that are central to PBL, CBL, and OT education (Helle et al., 2006; Lee et al., 2014). This study suggested that future OT research focus on quantitative and qualitative measures that confirm the transformative impact of project-based pedagogy on student learning in higher education (Helle et al., 2006).

Community-based Pedagogies in Healthcare Education

Higher education institutions are becoming more engaged in their local communities to address societal needs and fulfill education initiatives through collaborative relationships with the community (Byrne, 2006). Limited literature exists in OT (Hansen et al., 2007), nursing (Garner, 2014), and social work education (Peabody, 2013) that describes, versus studied, successful experiential learning approaches to enhance learning in the classroom. This study suggested designing, implementing, and conducting empirical research that contributes to existing literature, in addition to expanding research among other healthcare disciplines. An increase in empirical research

can demonstrate the value of community-based teaching and learning that results in civic-minded students ready to address complex health and societal issues today and in the future.

Longitudinal Study

CBL pedagogy is contributing to an increase in PBL and, albeit limited, OT research in higher education that measures project-based instruction over a period of time (Bazyk et al., 2010; Hansen et al., 2007; Hansen, 2013; Sanders et al., 2016). More specifically, there is even less evidence of measuring transformative change (Moely & Ilustre, 2016). OTSs learn about occupational justice principles set forth by the profession, whereby students, the community, and the world experience transformative changes. This study suggested focusing future research on measuring transformative change at the onset of the education process through graduation to demonstrate a continued process of transformative learning. A longer study could provide evidence of how student perceptions about occupational justice evolve and demonstrate their transformed commitments as agents of change.

Limitations

As with any action research, this study had limitations, including the lack of being able to generalize the findings to a larger population. Action research intends to improve pedagogy by evaluating teaching practices that are specific to a contextual purpose, its participants, and setting (Mertler, 2017). Therefore, the applicability of the findings is dependent on the reader's discretion. Additional limitations included the methods of data collection, sample size, the timing of the study, and the Covid-19 pandemic. These limitations are explained below.

Means of Data Collection

There is limited research that studied transformative learning (Harvey et al., 2010; Howie & Bagnall, 2013) and no OT research that studied the context-specific variables evaluated in this study (Naidoo et al., 2018; Sanders et al., 2016). This limited the capacity to replicate previous research using the same methods of data collection to further support the reliability of this study's findings.

Absent Means of Data Collection

The most significant limitation was the permission to conduct this study in the research setting precluded documenting class observations or conducting focus group interviews. The purpose of a focus group interview is to gain a better understanding of the students' lived experiences through a supportive social context. Expressing ideas, thoughts, or observations would have afforded the students opportunities to share similar or different perspectives, including asking questions (Glaser-Ziduka, 2012; Mezirow, 2003). The natural dialogue between the students would corroborate, expand, or dispute perceptions and worldviews, which may lend to more deep-rooted meanings and understandings (Mezirow, 2003). Similarly, this limitation prevented documenting the students' emotional reactions. The ability to document the students' behaviors, body language, voice intonations, and other characteristics could have been correlated with their reflections to add richness and meaningfulness to the reports. In addition, the focus groups could have allowed latitude in developing the initial questions before the interview and interject probing questions during the interview (Glaser-Ziduka, 2012; Morgan, 1997). Examples of probing questions may have included: (a) "Can you describe when during the project you recognized...?", (b) "Has anyone else shared the same...?",

and (c) “Did anyone have a different experience or interpretation?”. This intentional process would have enabled me to gather richer data in understanding the students’ experiences more in-depth (Hullender et al., 2015).

An alternative to not being able to implement structured focus group interviews, yet add to the richness of data collected, can be including general observations (Mertler, 2017). To maintain the integrity of this study, a research assistant could have been trained to take field notes. This would enable the researcher flexibility to respond naturally to occurring dynamics during group discussions or engage in other simultaneous activities during seminar (Mertler, 2017).

Implemented Means of Data Collection

The evaluation methods selected for this study were chosen to align with the specific variables being measured, which included previously developed subscales and researcher-developed tools. A limitation of this study included the researcher-developed evaluation tools, including the CBS, self-reflections, and questionnaire. A compounding factor included the inability to pilot the measures to assess the wording of the questions and improve the questions if warranted (Creswell, 2014). For example, the self-reflections and questionnaire intended to explore judgments, perceptions, or opinions about the students’ learning experiences (Giles & Eyler, 1994). A limitation may have been the wording of the questions, which may not have produced evidence of deeper contemplation. For example, the brevity of some student responses may not have been an accurate representation that encompassed the extent of their learning experience.

To minimize the impact of these limitations, the quantitative and qualitative data were triangulated to report stronger credibility of the data (Miles et al., 2020; Rothbauer,

2008). Similarly to increase the richness of the qualitative data collected, the wording of targeted questions on the questionnaire were modified to include phrases such as, “ In 150 words or more” or “Provide an example”.

Sample Size

Typical of action research, the population for this study was selected using a purposeful sampling (Suri, 2011), that included one section of 19 1st year OTSs, who were predominantly, White, 18-19 year-old females. This limited sample size and lack of diversity among the students may not be considered representative of other populations (Creswell, 2017; Creswell & Plano, 2018). The generalization of this study to other populations is at the discretion of the reader.

Timing

Timing is another limitation evident in this study. Timing related to the season and length of the RPP is explained.

Season

The RPP was implemented at the onset of the spring semester. The research setting was located in the northeast region of the United States, which typically experiences winter weather conditions (freezing temperatures, snow, and ice) at the onset of the spring semester. All of the students encountered weather-related challenges when taking photographs of community barriers. In addition, greater than 75% of the OTSs live outside of the local area. The unfamiliarity with the natural geographic areas of the city and comfort in exploring a new city at night time compounded this limitation. As a result, the student photographs of community barriers displayed barriers evident during the daytime and disregarded potential nighttime barriers. The student reflections,

questionnaire, and photographs provided no evidence of community barriers related to nighttime lighting, traffic patterns, or activity level.

Length of the RPP

The length of the RPP spanned over six weeks. This required the students to organize and structure weekly learning exercises to be completed on time. For example, the students had to explore their assigned geographic areas, take original photographs, take supplemental photographs, or re-take photographs within one week. Also, students collaborated in small groups which required managing individual schedules. This limitation was minimized by meeting via ZOOM and group text messages. Correspondingly, interspersing a project-based project in an established OT course is another limitation. Research indicates that more time spent contemplating societal problems, degree of interaction with community partners, and frequency of quality reflections directly correlates to improved outcomes (Dahan, 2016). Spanning the project throughout the course, versus a time-limited capacity, can minimize this limitation and reinforce a sustained level of reflective inquiry (Mitchell et al., 2015).

At the onset of the RPP, communication involved collaborating with a city representative and students, via ZOOM, to explain the city's needs and desired outcomes. Shortly thereafter, the original city representative changed roles and a new designated representative was assigned. Despite making initial contact via email to meet the new city representative and confirm the city's needs, correspondence thereafter was intermittent or not reciprocated (Mitchell, 2008). In response to the city's representative's changed role after the RPP started, correspondence with the research setting's Office of Community-based Learning was established. The Office of Community-based Learning is partners

with a variety of local organizations that advocate for community inclusion. This supplemental approach helped to facilitate communication with the students' inquiries and improve communication with community partners (Bauer et al., 2015; Howie & Bagnall, 2013).

Covid-19 Pandemic

A final limitation was the restriction that students had to abide by The Royals Safe Together plan. The Royals Safe Together plan is a framework designed in response to the Covid-19 pandemic to address student and public safety. The students may have experienced trepidation exploring the community that prevented them from freely exploring community settings indoors or interacting intimately with others. Equally, one student chose remote education. This limitation was minimized by allowing the student's group members to take additional photographs of local community barriers and sharing them with their peers.

Closing Thoughts

A standard operationalized by the OT profession, states that entry-level OT practitioners must demonstrate the ability to: reflect on one's practice to make unbiased and informed decisions; recognize social determinants of health; interpret, analyze, and advocate for equality among populations at risk for health disparities; and develop solutions that address societal needs (ACOTE, 2018). Understanding the importance of occupational justice, recognizing the impact of contexts (environment and personal) on occupational performance, and helping individuals and populations engage in meaningful occupations are essential skills that entry-level OT practitioners need to demonstrate. The results of this study confirmed the OTSs transformed their worldviews about existing

societal issues that prevent individuals and populations from achieving health and wellness. The RPP provided actionable insights for the community partners and gave the students a new perspective on what navigating spaces may be like for community members with diverse needs. The OTSs learned about the importance of resolving health and social disparities in the community and embraced their moral civic and professional responsibility to promote occupational justice by advocating for occupational rights that respect individuals' and populations' dignity, humanity, and inclusion.

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APPENDIX A

Appendix A: PCPS Community Based Learning Capstone Assignment

	3	2	1
Understanding of Jesuit Mission of Social Justice	Understands most aspects of the Jesuit Mission of Social Justice (deep versus surface)	Understands several key components of the Jesuit Mission of Social Justice	There is minimal reference to the Jesuit Mission of Social Justice or there is only an inaccurate understanding.
Reflections on four years of community based learning experiences	Describes the community based learning experiences and provides thoughtful insights about how the experience was transformative, what was learned, etc., linking the experiences where relevant to the Jesuit mission.	Describes the community based learning experiences and provides insights about what was learned.	Lists the community based learning experiences, but without reflective insights beyond the most vague comments; no insight into what was learned.
Plan for implementing Jesuit Mission of Social Justice as a professional	Describes in clear and detailed ways how the mission can be lived as a significant part of his/her future professional role, at the interpersonal, institutional, or societal levels.	Describes how the mission can be lived as a part of his/her future professional role, occasionally lacking detail and/or lacking a clear sense of its significance.	Does not describe or only vaguely describes how the mission can be lived as a part of his/her future professional role.
Sentence structure	The essay contains no errors of sentence structure and clearly conveys what the author is trying to communicate.	The essay contains some errors of sentence structure but conveys what the author is trying to communicate.	The essay contains some errors of sentence structure that distract from what the author is trying to communicate.
Punctuation	The essay contains no errors of punctuation and clearly conveys what the author is trying to communicate.	The essay contains some errors of punctuation but conveys what the author is trying to communicate.	The essay contains some errors of punctuation that distract from what the author is trying to communicate.

APPENDIX B

Appendix B: Transformational Service-learning Process Model

Theme	Meaning and Characteristics
Contextual border crossing	There are personal (i.e., biography, personality, learning style, expectations, prior travel experience, and sense of efficacy), structural (i.e., race, class, gender, culture, ethnicity, nationality, sexual orientation, and physical ability), historical (i.e., the socioeconomic and political history of Nicaragua and US- Nicaragua relations with larger socioeconomic and political systems), and programmatic factors (i.e., intercultural immersion, direct service- work and opportunities for critical reflection and dialogue with diverse perspectives and curriculum that focuses on social justice issues such as poverty, economic disparities, unequal relations of power) which intersect to influence and frame the way students experience the process of transformational learning in service learning.
Dissonance	Dissonance constitutes incongruence between participants' prior frame of reference and aspects of the contextual factors that shape the service-learning experience. There is a relationship between dissonance type, intensity, and duration and nature of learning processes that result. Low to high intensity dissonance acts as triggers for learning. High intensity dissonance catalyzes ongoing learning. Dissonance types are historical, environmental, social physical, economic, political, cultural, spiritual, communicative, and technological.

Personalizing	Personalizing represents how participants individually respond to and learn from different types of dissonance. It is visceral and emotional, and compels students to assess internal strengths and weaknesses. Emotions and feelings include anger, happiness, sadness, helplessness, fear, anxiety, confusion, joy, nervousness, romanticizing, cynicism, sarcasm, selfishness, and embarrassment.
Processing	Processing is both an individual reflective learning process and a social, dialogical learning process. Processing is problematizing, questioning, analyzing, and searching for causes and solutions to problems and issues. It occurs through various reflective and discursive processes such as journaling, reflection groups, community dialogues, walking, research, and observation.
Connecting	Connecting is learning to affectively understand and empathize through relationships with community members, peers, and faculty. It is learning through nonreflective modes such as sensing, sharing, feeling, caring, participating, relating, listening, comforting, empathizing, intuiting, and doing. Examples include performing skits, singing, dancing, swimming, attending church, completing chores, playing games, home stays, sharing food, treating wounds, and sharing stories.

Kiely's five themes that describe how students experienced transformational learning in service-learning. Reprinted with permission from *A Transformative Learning Model for Service-Learning: A Longitudinal Case* (p.8), by R. Kiely, 2005. Reprinted with permission from Dr. Richard Kiely, Ph.D. (see Appendix I)

APPENDIX C

UNIVERSITY OF SOUTH CAROLINA

CONSENT TO BE A RESEARCH SUBJECT

**Aligning Project-based and Community-based Learning: Action Research to
Explore Transformative Change in 1st year Occupational Therapy Students
Awareness about Personal and Environment Context, Occupational Justice, and
Advocating for Community Health and Wellness**

KEY INFORMATION ABOUT THIS RESEARCH STUDY:

You are invited to volunteer for a research study conducted by Patricia A. Wisniewski, MS, OTR/L. I am a doctoral candidate in the Department of Education- Learning Design and Technologies, at the University of South Carolina. The purpose of this study is to evaluate the effectiveness of implementing reflexive photography as a means for a transformative community-based learning (CBL) experience. You are being asked to participate in this study because you are a student enrolled in OT121: Occupational Performance. This study is being done at the University of Scranton and will involve approximately 20 volunteers.

The following is a short summary of the study to help you decide whether to be a part of this study. You completed a 5-week community-based project as a course requirement for OT 121: Occupational Performance. To help me understand your learning experience, you completed a survey, self-reflections, and a questionnaire. I will use the results to support and improve CBL for my students. There are no known anticipated risks.

PROCEDURES:

If you agree to participate in this study, you will allow me to use anonymous information collected from your:

- survey, three individual self-reflections, and questionnaire about how you view occupational justice, contextual barriers that may impact community residents' health and wellness, and your role as a socially responsive citizen for occupational justice.

DURATION:

Participation in the study requires no additional time.

BENEFITS:

You may benefit from participating in this study by contributing to the body of literature available for occupational therapy educators and the CBL community. In addition, this research may help researchers understand how to design effective CBL for 1st year occupational therapy students.

PAYMENT TO PARTICIPANTS:

You will not be paid for participating in this study.

UNIVERSITY OF SCRANTON STUDENT PARTICIPATION:

Participation in this research study is voluntary. You are free not to participate, or to stop participating at any time, for any reason without negative consequences. Your participation, non-participation, and/or withdrawal will not affect your grades or your relationship with myself, the Department of Occupational Therapy, or the University of Scranton. In the event that you do withdraw from this study, the information you have already provided will be kept in a confidential manner. If you wish to withdraw from the study, please email Julia Higgins (student researcher).

CONFIDENTIALITY OF RECORDS:

No personal identifiers will be connected with any research data to ensure confidentiality. Instead, you received a participant number from the student researcher to use when completing the survey, self-reflections, and questionnaire to ensure confidentiality of the data collected. Comparably, you will use the same participant number to sign this consent form as your signature. Information obtained during this research study will remain confidential and will be securely stored in locked files and on password-protected computers. Results of this research study may be published or presented at seminars; however, the report(s) or presentation(s) will not include your name or other identifying information about you. All data will be destroyed 3 years after completion of the research study.

VOLUNTARY PARTICIPATION:

I have been given a chance to ask questions about this research study. These questions have been answered to my satisfaction. If I have any more questions about my participation in this study, I am to contact Patricia A. Wisniewski, MS, OTR/L at 570-941-4086 or email patricia.wisniewski@scranton.edu.

Concerns about your rights as a research subject are to be directed to Dr. Tabbi Miller-Scandle, University of Scranton IRB Administrator, at tabbi.miller-scandle@scranton.edu

Please indicate if you AGREE to participate or DECLINE to participate in this research study.

- ☐ If you AGREE to participate, please choose this option
- ☐ If you DECLINE to participate, please choose this option

Please provide your participant number (signature):

APPENDIX D

SELF-REFLECTIONS

Self-reflection #1

Please respond to the following questions or statements honestly and to the best of your ability. Each reflective response should be at least 150+ words:

Participant # (3-digits):	
RQ#1: How do you describe occupational justice?	
RQ#2: Tell me how your perception of the impact personal or environmental contextual factors has on individual and community health and wellness changed since starting this project.	
RQ#3: What can you do now to prevent social and health disparities in the community?	

RQ#1- research question #1; RQ#2- research question #2; RQ#3- research question #3

Self-reflection #2

Please respond to the following questions or statements honestly and to the best of your ability. Each reflective response should be at least 150+ words:

Participant # (3-digits):	
RQ#1: How do you define occupational justice and its relationship to inclusive communities for all persons?	
RQ#2: Can you tell me how environmental or personal contextual factors impact on how individuals and/or populations engage in your local community?	

RQ#3: Since starting this reflexive photography project, tell me how confident you feel that you can make a difference in your community.	
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RQ#1- research question #1; RQ#2- research question #2; RQ#3- research question #3

Self-reflection #3

Please respond to the following questions or statements honestly and to the best of your ability. Each reflective response should be at least 150+ words:

Participant # (3-digits):	
RQ#1: After collaborating with your group members, tell me how your peers views about occupational justice may have supported, contradicted, or changed how you perceive occupational justice. Provide examples.	
RQ#2: What were the most intriguing aspects others shared that have helped change how you perceive contextual barriers differently? Provide examples.	
RQ#3: How do you perceive your role changing, within the next year, in being able to make a significant and real impact on your community's health and wellness for all individuals and populations? Give an example.	

RQ#1- research question #1; RQ#2- research question #2; RQ#3- research question #3

APPENDIX E

REFLEXIVE PHOTOGRAPHY PROJECT QUESTIONNAIRE

Please respond to the following questions or statements honestly and to the best of your ability as they relate to your overall learning experience completing the RPP.

Participant # (3-digits):	
RQ#1: In 150 or more words , how does occupational injustice and occupational deprivation impact the local community's health and wellness?	
RQ#1: How did the reflexive photography project help you understand disparities better or differently?	
Describe the personal and environment contexts that have the most significant impact on the local community's health & wellness.	
RQ# 2: Describe what parts or learning exercises of the reflexive photography project transformed your awareness of how personal and environmental contextual factors can impact on how others engage in healthy occupations. Provide at least 3 examples of how it transformed your awareness?	
RQ#3: Describe a moment or moments during the reflexive photography project when you realized how your understanding about CBL and engaging in service for and with others changed since the beginning of the semester?	
RQ#3: Describe how you feel about your role in assisting the City of Scranton gather data for their Walkability Study.	
General Question: In 150 words or more , describe your most rewarding experience as a result of completing CBL.	

<p>General Question: In 150 words or more, describe what learning activities (guest speaker, videos of persons with disabilities, taking photographs, class discussions, collaborating with peers, interacting with the community, presenting your project) attributed the most to your CBL experience. Provide example(s) of how _____ was the most influential.</p>	
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RQ#1- research question #1; RQ#2- research question #2; RQ#3- research question #3

APPENDIX F

COMMUNITY PHOTOGRAPH ASSIGNMENT

In the United States, it is legal to take photographs in public places unless it constitutes an expectation of privacy, such as in a public restroom (Krages, 2017). No laws exist that prohibit you from taking pictures in public spaces (Krages, 2017). You should limit taking photographs of people's faces or other identifying information such as a license plate number. If this occurs, you must filter out the area before sharing with others. The photographs are for educational purposes only, therefore you are not allowed to post them on social media or any other public forum. As a representative of the University of Scranton and an occupational therapy student, you have an ethical responsibility to adhere to professional behaviors that respect others' privacy (AOTA, 2015).

Complete the following tasks in preparation for seminar:

- Choose at least 3 out of the following public places, events, or happenings:
 - Downtown
 - Public park
 - Cultural event
 - Food pantry
 - Nature or hiking trails
 - Transportation (car, public transit, plane, etc.)

- or any other setting that presents a noticeable barrier or barriers that prevent access to public places such as a museum, church or other spiritual places of worship, doctor's office or hospital, grocery store or other food sources, drugstore, schools, movies, eatery, etc.

Note: Please do not take pictures inside a public place unless you receive permission from the owner.

- For each choice, take at least 2 photographs of barriers that represent a multitude of contextual factors (personal and environment) that impact on actively engaging in community-based occupations. Examples may include physical obstacles, displays of occupational injustice, derogatory forms of art, cultural biases, or any other representations that impact on community health and wellness.
- Describe the multitude of explicit and implicit contextual barriers evident in each photograph.
- Describe how the barriers can impact on the health and wellness of community individuals and populations.

READ- Important Information: *Read the University of Scranton [ROYALS SAFE TOGETHER](#) plan and adhere to the specifications. Your safety is paramount. If you have concerns, contact me prior to taking any community photographs.*

Post your photographs on the Google Doc.

APPENDIX G
RETROSPECTIVE PRETEST-POSTTEST SURVEY

Demographics:

Participant #: Insert participant number here

What is your age?

- ☐ 17 years old or younger
- ☐ 18-19 years old
- ☐ 20-29 years old
- ☐ 30 years old or older
- ☐ I prefer not to respond

What is your race/ethnicity? (check all that apply):

- ☐ White
- ☐ Hispanic, Latins, or Spanish Origin
- ☐ Black or African America ☐ Native American or Alaskan Native
- ☐ Hawaiian Native or other Pacific Islander
- ☐ Some other race or origin

What is your gender identity?

- ☐ Man
- ☐ Woman
- ☐ Another gender identity
- ☐ I prefer not to respond

How many years of volunteer experience do you have?

☐ I do not volunteer

☐ 1 year

☐ 2 years ☐ 3 years

☐ 4 years or more

Civic Attitudes and Skills Questionnaire

Civic Action Subscale

Based on your **current** level of understanding and thinking back **before** completing the reflexive photography project (RPP), click on the answer that best shows how much you agree and disagree with each statement.

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree Somewhat	Strongly Agree
1. I plan to do some volunteer work.					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I plan to become involved in my community					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I plan to participate in a community action program					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I plan to become an active member of my community					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. In the future, I plan to participate in a community service organization					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I plan to help others who are in difficulty					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I am committed to making a positive difference					

Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I plan to become involved in programs to help clean up the environment					
Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Social Justice Attitudes Subscale

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree Somewhat	Strongly Agree
1. I don't understand why some people are poor when there are boundless opportunities available to them					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. People are poor because they choose to be poor					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Individuals are responsible for their own misfortune					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. We need to look no further than the individual and assessing his or her problems					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. In order for problems to be solved, we need to change public policy					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. We need to institute reforms within the current system to change our community					
Current level of understanding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. We need to change people's attitudes in order to solve social problems					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. It is important that equal opportunity be available to all people					
Current level of understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before completing the RPP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Contextual Barriers Survey

Based on your **current** level of understanding and thinking back **before** completing the reflexive photography project (RPP), please rate the level, on a scale from 1 no impact to 5 significant impact, you think each individual contextual factor (*chronological age, gender identity, etc.*) impacts individuals or populations health and wellness by limiting engagement and participation in occupations (AOTA, 2020b).

Please answer each question honestly and to the best of your ability.

Personal Context

Chronological age							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Gender identity							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Sexual orientation							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact

Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Cultural identity							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Race and ethnicity							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Social and socioeconomic status							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Life history							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Habits and past or current behavioral patterns							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Personality traits							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Education							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Professional identity							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Lifestyle							
Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact
Health conditions and fitness							

Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact

Based on your **current** level of understanding and thinking back **before** completing the reflexive photography project (RPP), please rate the level, on a scale from 1 no impact to 5 significant impact, you think each individual contextual factor (*products and technology, support and relationships, etc.*) impacts individuals or populations health and wellness by limiting engagement and participation in occupations (AOTA, 2020b).

Please answer each question honestly and to the best of your ability.

Environment Context

Natural and human-made changes to the environment

Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact

Products and technology

Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact

Support and relationships

Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact

Attitudes and perceptions

Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact

Services, systems, and policies

Current level of understanding	No Impact	①	②	③	④	⑤	Significant Impact
Before completing the RPP	No Impact	①	②	③	④	⑤	Significant Impact

APPENDIX H

SOCIAL JUSTICE ATTITUDES SUBSCALE REVERSE CODED ITEMS

1. “I don’t understand why some people are poor when there are boundless opportunities available to them”
2. “People are poor because they choose to be poor”
3. “Individuals are responsible for their own misfortunes”
4. “We need to look no further than the individual in assessing his/her problems”

(Moely et al., 2002, p. 19-20).

APPENDIX I

Appendix J: Permission to Use the CASQ Scales

Firefox

<https://outlook.office.com/mail/inbox/id/AAQkADQzYTZlMzU4LTlkYzMtNGNlOS04MWFJ>

RE: CASQ Permission

Moely, Barbara E <moely@tulane.edu>

Mon 9/21/2020 10:02 PM

To: Ms. Patricia A. Wisniewski <patricia.wisniewski@scranton.edu>

Hi Patricia – Yes, of course, it is fine with me if you want to use those scales from the CASQ. I could send along some files showing how we presented the CASQ in the original research, background info, etc. if that would be helpful. Though it sounds as though you know exactly what you want to do with the two scales, so that may not be relevant. Let me know if you want them. - Barbara Moely

From: Ms. Patricia A. Wisniewski [<mailto:patricia.wisniewski@scranton.edu>]

Sent: Monday, September 21, 2020 4:30 PM

To: %20moely@tulane.edu; Moely, Barbara E

Subject: CASQ Permission

External Sender. Be aware of links, attachments and requests.

Good Evening Dr. Moely,

I hope this email finds you and your family healthy and safe during this precarious time.

I am a doctoral student preparing to defend my research proposal. I am completing an action research study to study the effectiveness of implementing reflexive photography as a means for a transformative community-based learning experience. My participants are 1st year occupational therapy students. I would like permission to use the CASQ scales (Social Justice Scale and Civic Action Scale) as a component for my quantitative data as they align with two of the variables I am studying. May I have permission?

I appreciate you considering this request. Please do not hesitate to contact me if you need additional information. I look forward to your response.

I hope you have a lovely evening.

Sincerely,

Patricia A. Wisniewski, MS, OTR/L, CPRP

She/Her ([Look here to see why I add these](#))

Faculty Specialist

University of Scranton

Department of Occupational Therapy

patricia.wisniewski@scranton.edu

APPENDIX J

Appendix J: Permission to Use the Transformational Service-learning Process Model

Firefox

<https://outlook.office.com/mail/search/id/AAQk-ADQzYTYZIMzU4LTlkYzMiNGNiOS04MW...>

Re: Permission to use research

Richard Kiely <kiely.richard@gmail.com>

Mon 4/6/2020 2:44 PM

To: Patricia Wisniewski <outlook_34277651487F9559@outlook.com>

Cc: Ms. Patricia A. Wisniewski <patricia.wisniewski@scranton.edu>

H Patricia,

Thanks for reaching out to me regarding the use of the transformational learning process model.

By all means, you are welcome to use the process model.

I look forward to learning more about your study once you are further along.

And, please don't hesitate to reach out with questions and or feedback.

I hope you, family and community are safe and healthy as well!

Take care,

-Richard

Richard Kiely, PhD

Senior Fellow

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Ithaca, NY 14853

607-379-1101

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Book: [*Community-based global learning: The theory and practice of ethical engagement at home and abroad*](#)