Evaluating Asynchronous Discussion as Social Constructivist Pedagogy in an Online Undergraduate Gerontological Social Work Course

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Abstract. Our design-based research project used constructivist grounded theory methodology to determine if specific pedagogies used in an online gerontological social work course stimulated learners' critical reflection and reflexivity. The purpose of our study was to describe the learning that occurred in response to an instructional design based on social constructivism and to identify strategies for improving the instructional design in future iterations of the course. Our analysis focused on two specific pedagogies that are grounded in social constructivism; the asynchronous discussion and the use of problem-based learning to better understand how learners construct meaning and to determine whether these pedagogies are effective means of stimulating critical reflection and reflexivity. Social work education scholars have suggested that critical reflection and reflexivity are higher-level cognitive operations that are conducive to learners' developing capacity for anti-oppressive social work practice with older adults.

Keywords: online instruction; constructivism; critical reflection; reflexivity; gerontology

Introduction

This article outlines how an instructional team co-created, co-taught and evaluated an online undergraduate gerontological social work course. Our design-based research project involved examining learners' responses to two social constructivist pedagogies. The focus of our evaluation was to examine the effect of asynchronous discussion and case-based learning on learners' articulation of critical thinking and reflexivity. Critical thinking is a key objective of social work education identified by social work scholars (Bay & MacFarlane, 2011; D'Cruz, Gillingham, & Melendez, 2007; Lay & McGuire, 2010), who have promoted critical thinking and reflexivity as valued outcomes of constructivist instructional designs. Our findings support the

assertions of social work scholars who have suggested that asynchronous discussion and case-based learning as effective catalysts for the development of higher order cognitive skills (Bellefuille, 2006; Domakin, 2013, Majeski & Stover, 2007). Excerpts from the asynchronous discussion threads on the online discussion board illustrate how learners demonstrated varying degrees of critical reflection and reflexivity. As social work educators, our own critical reflections on learners' responses prompted us to discuss how we could more effectively encourage learners to engage more deeply and critically with the course content and how we could better support their progress towards more complex cognitive activities in future iterations of the course. Based on the recommendations of researchers who have developed focused approaches to teaching critical reflection and reflexivity (Ash & Clayton, 2004; Lay & McGuire, 2010, Ryan & Ryan, 2013), we anticipate that future iterations of our instructional design will adopt more structured pedagogical approaches and provide scaffolding that will more closely attune learners to the value of critical reflection and reflexivity in their social work practice and support their development of these complex cognitive skills.

Instructional Design

The course, an elective BSW course in gerontology, was the only gerontology course offered in the faculty of social work in one Canadian province. Therefore, for many students, it would be sole course in their program of studies that focused exclusively on gerontology. Thus, with a goal of introducing social work students to gerontological social work, we identified five key sub-topics as most relevant to social work practice in order to promote further engagement in gerontology education and facilitate linkages between students' personal experiences and social work practice.

We began our instructional design process by formulating the following course objectives: (1) sensitize learners to the needs and characteristics of older adults; (2) develop learners' capacity for critical reflection and reflexivity; (3) introduce theories about aging; (4) identify specific practice issues that gerontological social workers encounter; (5) identify structural factors to consider when working with older adults in practice contexts; and (6) prepare learners for anti-oppressive practice with older adults. One significant challenge was to select topics that would provide an adequate foundation of knowledge for social work practice with older adults, given the considerable breadth of possible course material. Consistent with the recommendations outlined by Damon-Rodriguez et al. (2006), we began with a comprehensive definition of gerontological social work:

1) A professionally responsible intervention to enhance the developmental, problem solving and coping capacities of older adults and their families 2) promote the effective and humane operating of systems that provide services for older adults and their families 3) to link older adults with systems that provide them with services, resources and opportunities 4) contribute to the development and

improvement of social policies that support persons throughout the life-span. (Berkman, Dorbrof, Harry, & Damon-Rodriguez, 1997, p. 143)

We also identified contemporary issues related to aging in Canada including: diversity, Aboriginal seniors, healthcare services and victimization/elder abuse (Statistics Canada, 2006). From the selection of possible topics, we created five modules that aligned with our areas of expertise as individual scholars.

Course Overview

The course was delivered via an electronic learning management system, Desire2Learn (D2L), which provided the architecture for the course and contained the content, readings, discussion boards and assessment tools. Specific learning objectives were provided in the course syllabus, which was posted online in D2L. The course comprised a brief introductory module, which introduced the instructors and outlined the course expectations and objectives in detail, followed by five standardized content specific modules, each of which was taught by one of the instructors. Modules lasted for two week and covered the following topics: a) Physiological correlates of aging and gerontology theories; b) Diversity and aging; c) Abuse of older adults; d) Chronic health conditions and the Continuing Care System; and e) End of life-care and death and dying.

Each module featured a pre-recorded lecture presentation, created using a combination of Microsoft PowerPoint and Adobe Presenter software, several required and supplementary readings and a choice of one of three case-based asynchronous discussions. Persistent links to the readings and cases were provided within D2L, allowing seamless access to the course materials from the university library or other Internet databases, such as youtube.com.

The course contained two asynchronous discussion elements with questions related to case studies that were primarily based on online videos sourced from youtube.com and discussions related to the module content. These were formulated to engage learners in a process of grappling with various issues and complexities that gerontological social workers encounter in real-life practice, as well as encouraging the application and synthesis of new theoretical knowledge while stimulating critical reflection and reflexivity. Other course assignments consisted of a group project on one of the module topics and a written paper, which involved a case study analysis.

Instructors conveyed expectations that learners would engage in critical thinking and reflexivity for each course assignment via evaluative rubrics, which were posted within the online environment. Criteria were outlined in concrete terms-- articulating specific actions, cognitive skills, or capacities that learners should be developing or engaging in. The evaluation purposefully aligned with the aims of social constructivist learning and higher order cognitive skills required for exemplary performance.

Literature Review

Social Constructivist Pedagogy

According to Jonassen (1994), social constructivism proposes fundamental epistemological assumptions about the nature of learning; this theoretical framework emphasizes multiple interpretations of reality, construction of knowledge, interaction, authentic tasks and reflection. Social constructivist pedagogy, founded by Vygotsky (1978), emphasizes that meaning construction in the learning process occurs through and is inseparable from social interaction within a specific sociocultural context (Paily, 2013; Woo & Reeves, 2007). Vygotsky's (1978) theoretical framework for social constructivism, with its emphasis on social interaction, metacognition, analysis, problem solving, authentic learning tasks that reflect the complexity of real world problems, is complementary to online learning environments where learners assume an active role in their learning and in constructing and co-constructing new knowledge (Pailey, 2013). Social constructivists propose that learning and thinking are situated in social contexts, which is compatible with our instructional design that incorporates authentic and applied learning activities and opportunities for interaction which challenge learners to develop beyond their cognitive abilities and support them to achieve higher levels of skill and depth of knowledge (Woo & Reeves, 2007).

Cornerstones of Social Constructivism: Critical Reflection and Reflexivity

Critical reflection and reflexivity are essential aspects of anti-oppressive social work practice, conducive to challenging neoliberalism, capitalism, inequality and oppressive structural conditions, and serving as a catalyst for social change (Brookfield, 2009; Fook & Askeland, 2007; Morley & Dunstan, 2013). Instructional design scholars and educators have advanced pedagogical strategies grounded in social constructivist epistemologies, with connections between reflexivity and critical reflection (Bellefeuille, Bellefeuille Martin, & Buck, 2005; Bye, Smith, & Rallis, 2009; Paily, 2013; Ruey, 2010; Thormann, Gable, Fidalgo, & Blakeslee, 2013). Additionally, the Canadian Social Work Education Policy and Accreditation Standards (CSWE, 2008) core competency of critical thinking aligns with the social constructivist demand for critical reflection in educational processes (Colby, 2014).

The subtle distinctions that differentiate critical reflection and reflexivity have implications for instruction, yet are often used interchangeably in academic literature (Brookfield, 2009; Fook & Askelund, 2007). Distinctions between critical reflection and reflexivity arise in relation to differences in focus. Brookfield (2009) noted that critical reflection differs in its "foregrounding of power dynamics and relationships and its determination to uncover hegemonic dimensions to practice" (p. 294). According to Bay and Macfarlane (2011):

Critical reflection provides one way of stepping back from practice. By locating ourselves directly within the incident or event, we subject our practice to a critical gaze, unraveling the meanings and discourses embedded in our sense making and narratives, scrutinizing knowledge claims – our own and others. (p. 748)

They further suggested that critical reflection focuses on juxtaposing theoretical perspectives with lived experience and deriving meaning from lived experience, including the lived experience of practicing social work. Learning environments should provide ample opportunities for critical reflection, which then can become a catalyst for constructing meaning from personal and practice experience (Bay & Macfarlane, 2011). Critical reflection is a contested concept whereby, "how the term is understood reflects the ideology of the user" (Brookfield, 2009, p. 275), underscoring the importance of making explicit what exactly what is meant by critical reflection in any given context. Morley and Dunstan (2013) proposed that critical reflection can be a mechanism for resistance to the forces of neoliberalism that contribute to the oppression that constrains social workers in their practice and in their efforts to create social change.

Critical reflection, DeCruz et al. (2007) argued, occurs in response to an action or an incident, whereas reflexivity is concerned with action and interaction as it transpires and within the processes of challenging and analyzing knowledge claims. They conceived of three variations of reflexivity: (a) individual directions and making choices about courses of action; (b) a critical stance that involves examining the process of constructing knowledge; and (c) exploring the role of emotions. They also described a dimension of reflexivity that is concerned with bridging gaps between theoretical and practice knowledge. Although Dean (2007) acknowledged the challenges involved in teaching to supporting reflexivity, she suggested that the pursuit of reflexivity is worthwhile as it emphasizes praxis; forging a link between learning and personal action towards social change, consistent with the broad aims of social work education. Brookfield (2009) differentiated critical reflection and reflexivity, acknowledging that reflexivity considers one's own social location and the implications of that social location in analysis.

Although the significance of critical reflection and reflexivity have been promoted, few suggestions for incorporating these practices into instructional design of online gerontological social work courses are available. Instructional design scholars have, however, identified that social constructivist pedagogies are compatible with online learning environments (Bye, Smith, & Rallis 2009; Thormann, Gable, Fidalgo, & Blakeslee 2013) and can facilitate depth of learning in gerontology, specifically (Cotter, Welleford, & Drain, 2008; Hill & Edwards, 2004).

Discussion Boards and Co-Constructing Knowledge

 Social constructivist pedagogy emphasizes meaningful interaction that is based on the principle of "intersubjectivity" defined as "mutual understanding that is

achieved between people through effective communication" (Woo & Reeves, 2007, p. 19). In an online learning environment, asynchronous discussion that takes place via discussion boards can support a constructivist framework as it provides a context for peer and instructor communication (Levine, 2007). Asynchronous discussion promotes higher-level thinking, collaboration, problem solving, reflection, shared knowledge and social and cognitive knowledge construction (Domakin, 2013; Majeski & Stover, 2007; Penny & Murphy, 2011; Wyss, Freedman, & Siebert, 2014).

We implemented an online discussion board to align with constructivist theory's stance that, "knowledge is socially situated and is constructed through reflection on one's own thoughts and experiences as well as other learners' ideas" (Ruey, 2010, p. 707). However, despite the numerous advantages of online discussion boards, their potential is not always actualized and therefore learners do not always progress beyond information sharing to a point of deep learning that occurs through debate, reflection and application of critical thinking skills (Domakin, 2013). In order for discussion boards to deliver the desired learning outcomes, the interaction that occurs among discussion board participants must be "meaningful" such that learners are engaged in negotiating, arguing points, responding, and offering alternative perspectives (Woo & Reeves. 2007).

Authentic Learning

Authentic learning tasks, based in the real world and representative of the complexity of social work practice (Bellefuille, 2006; Bellefuille, Martin, & Buck, 2005; Fire & Casstevans, 2013) are central to social constructivist pedagogy (Woo & Reeves, 2007). Characteristics of authentic learning tasks in online learning environments include real-world relevance, complexity, inclusion of multiple perspectives and conducive to reflection (Reeves, Herrington, & Oliver, 2002).

Although an online course in gerontological social work cannot typically provide direct interaction with older adults, case-based learning through case studies can approximate authentic learning, thereby providing learners with opportunities to engage in critical analysis, draw on personal and practice experience, and learn from collaboration, dialogue and the perspectives of other learners (Bellefuille, 2006). Case-based learning can provide learners with exposure to clinical or real life client situations they wouldn't otherwise have access to (Popil, 2011). Case-based instruction promotes, "problem solving transfer by providing learners with contextualized situations in which they can deliberately work with and apply theoretical knowledge to teaching scenarios" (Abercrombie, 2013, p. 149). Case discussion enhances depth of learning and the development of problem-solving skills in a learning situation where they can discuss issues and experiences with other learners (Forsegren Christensen, & Hedemalm, 2014; Loghmani, Bayliss, Strunk, & Altenburger, 2011). In the context of an online asynchronous discussion board, Harrison, Mulloy, Harris, and Flinton (2012) asserted that the potential of

case-based learning is enhanced because learners can take the time to reflect on the case scenario and engage in additional research to apply to their analysis and understanding.

Social Constructivism and Assessment

Instructional design that is informed by social constructivist pedagogy is ideally paralleled by complementary assessment practices that evaluate the extent to which the potential of social constructivist pedagogy is being realized. As an example, Wyss, Freedman, and Siebert (2014) recommended explicitly informing learners about what constitutes scholarly contributions to an online discussion board. In turn these explicit expectations can serve as a basis for assessment tools, such as rubrics, which are helpful in informing learners' understandings of instructor's expectations regarding quality performance, level of participation, and standards for written work. Social work educators suggest that assessment criteria need to be related to specific skills and competencies including reflection, reflexivity and problem solving, which aligns with social constructivist pedagogy (Majeski & Stover, 2007; Woo & Reeves, 2007).

Methods

Approach

Barab and Squire (2004) conceived of design-based research as a selection of methodologies chosen according to their relevance for the research design depending on the characteristics of the specific learning context. They outlined the following defining characteristics of design-based research: (1) situated in real life settings where learning occurs; (2) concerned with multiple dependent variables; (3) focused on characterizing the complexity of learning situations; (4) involving cycles of flexible designs and successive improvements to learning designs; and (5) involving complex social interactions and participants who share ideas (Barab & Squire, 2004, p. 4). A design-based research approach is suitable for our course as we intend to apply study findings to improve future iterations of the course and to inform scholarship on teaching and learning in social work education.

Prior to engaging in the study, ethics approval was obtained from the university ethics board. At the beginning of the course, students were informed of the opportunity to participate in the research project. Students who were interested in participating in the study provided written informed consent to access discussion board content once final grades were submitted. Of the 30 students enrolled in the course, 27 consented to participate in the study and the data for analysis was drawn from the discussion board responses for these students.

Data Analysis

The computerized data analysis software program NVivo was used to manage the qualitative data. Data analysis proceeded according to constructivist grounded theory methodology (Charmaz, 2006). Initially, the data was analyzed line by line to identifying text-based codes. Distinct units of meaning were then assigned with conceptual labels, with attached theoretical memos to capture researchers' reflexivity during the coding process. The constructivist grounded theory coding process involves two main phases; initial coding; the coding of words, lines, or segments of data, followed by focused coding, which involves categorizing the codes identified in the initial phase (Charmaz, 2006). Discussion board responses were analyzed with critical reflection and reflexivity as possible sensitizing concepts, which for researchers are, "tentative tools for developing their ideas about processes that they define in their data" (Charmaz, 2006, p. 17). Themes and sub-themes are represented by illustrative anonymous quotes drawn from the discussion board. The illustrative quotes provide "thick description" which Bowen (2010) described as fundamental to validity in constructivist grounded theory analysis.

Results

Learners' discussion board posts represented their efforts to express their critical reflection and reflexivity. Critical reflection was evident when learners'   analyzed personal or practice experiences or reflected on case study examples. In contrast, reflexivity was evidenced by responses where learners reflected on their learning as it occurred.

Sub-themes related to critical reflection illustrate: (a) how learners reflected on significant incidents in their personal or practice experiences; (b) how learners reflected on critical incidents featured in case examples; (c) how learners identified significant factors related to identity differences and oppression that shape the experiences of older adults; and d) how learners identified structural factors that shape the experiences of older adults.

Sub-themes related to reflexivity illustrate: (a) learners' appraisals of their own knowledge about and experience with older adults; (b) learners' references to future social work practice with older adults; (c) learners' expressions of emotionality in response to learning about aging; and (d) learners' consciousness of the need for action towards improving the circumstances of older adults.

Critical Reflection

Critical reflection on practice or personal experiences. The questions and prompts provided by instructors in each module encouraged learners to construct and reconcile meaning related to their personal and professional experiences with older adults. As an example, one learner initiated a discussion thread by reflecting on her practicum experiences. This learner described how reading course material about older adults' experiences with poverty prompted her to reflect on her practicum experience working in a health care setting with older adults:

While reading the vignettes, it occurred to me that they were the similar to the profiles of the senior hospital patients that my practicum supervisor and I are trying to find appropriate monetary and physical assistance for. It appears that finances influence how low income seniors view their lives. Financial strain at any age is difficult and at a later age it can increase, as there are fewer resources available to increase income.

Another learner described how their critical reflection involved recognizing and challenging their own assumptions about older adults:

I, too had some preconceived notions about seniors before I started working at a legal not for profit organization, which were proved very wrong when I started to see the financial and legal troubles that many older adults find themselves in. I think I had the idea in my head that once you reach a certain age it's time to relax and live comfortably. The reality is so different from that idea.

The author of the post concluded by posing a question to stimulate further reflection, " Seeing it in my work and now again in these vignettes, I am struggling with how to effectively advocate for these clients when the need is so great – where do we start?"

An instructor responded to the learner's question by critically reflecting on how difficult it can be for social workers to encounter older adults who are struggling with a myriad of complex issues and to determine how to advocate for social change:

I can relate to your comment about struggling to find the best means of advocacy. It is indeed overwhelming when there are so many interrelated issues that impact older adults. It can be particularly overwhelming if you are an individual who has a desire to confront systemic issues. Individual frequently discover they are isolated in their advocacy efforts. Further, participation in advocacy can be a contentious in some organizations.

Critical reflection on case examples. One learner reflected on how a video case study about a palliative care program encouraged her to reflect on the value of healthcare alternatives for clients who are dying. She described how the case

example helped her to understand the significance of dying with dignity, which was introduced in a module lecture.

I find it comforting to know that hospice-palliative programs take a more individualized approach to dying by helping to ease the process for the person rather than solely treating the disease. I also like that the family is seen as crucial in end-of-life care in hospice-palliative care services, especially when it comes to decision-making and helping a client to have a "good death", as discussed in the lecture.

Another learner explained how the same case study prompted her to reflect on what "person-centered palliative care" means:

So what would I like to see…. compassion, of course. Doctors, nurses, volunteers, social workers and anyone who works near a palliative care unit or in a hospice to understand that dying is normal and nothing to be afraid of. Respect for the family and for the person dying or in need of palliative care, especially since being palliative can be for years! Person-centered means letting the person retain their self-determination or letting the family have input. Like the hospice, let any age or any number of family members and pets stay for as long as they want or need to without judgment.

Critical reflection on identity factors and oppression. Drawing from her family's experiences and her own practice experiences working with First Nations older adults, one respondent began a discussion thread about how ethnicity and culture influence the experiences of First Nations older adults. This learner's post encouraged her peers to consider the influences of colonization and residential schooling experiences on First Nations older adults:

Now, as I live on the reserve, I see elders who struggle with so many health-related problems; deteriorated housing, not enough social programs and limited education. Most elders need an advocate to help them navigate in today's world. The biggest challenge or disadvantage is their teachings are not utilized. Elders are forgotten and not accessed enough for their historical language/customs. Health problems and low economic status contributes to low quality living. Others have sub standard housing that needs repair. I find that my kokum (grandmother) who is 88 can still speak her language and lives independently. She is not religious and has re-taught herself the traditions once lost to her.

To encourage peers to reflect more deeply on and engage in further dialogue about the resilience and circumstances of First Nations older adults, the author of the post concluded by directing a question to their peers, "When working with aging First Nations peoples who struggle with addictions, grief and loss or other traumas, do you take into account the historical shift that residential school had on ones cultural experience?"

Another learner responded by expressing their appreciation for the personal experiences shared by the author of the post about First Nations older adults.

Thank you for sharing your personal story. I appreciate the opportunity to continue to learn about the impact of residential schools that was never acknowledged or taught in public schools. As an adult, I am still learning about all of the horrific atrocities experienced by Indigenous individuals.

Critical reflection on structural factors. Consistent with generalist social work education practices, learners used micro, mezzo and macro factors to understand aging related issues. Learners demonstrated their consideration of structural factors in their critical analyses of issues related to residential health care settings for older adults. A video case study featuring an existing care setting prompted one respondent to share their critical reflection on the case study with their peers.

The video really demonstrated person-centered care as it applies to seniors living in care facilities and I believe it provided hope and evidence that this approach can be effective in nursing homes. It was very clear that the staff featured in the video not only know the residents who live there, but also care for them and their well-being. One sentiment expressed by a staff member that resonated with me was the importance of recognizing the person for who they are, and not for what their diagnosis is.

This learner concluded her post with a question to encourage her peers to consider other structural factors and the complex issues that arise:

It can be (for myself, at least) overwhelming to think about how more care facilities can transition to person-centered approaches that promote the mental, physical, social, emotional well-being of residents and staff alike. What do you think is the first step needed for nursing homes to begin to transition to this approach?

Another learner responded to the question by suggesting that structural change involves fundamental changes to relationships between staff that care for older adults in facilities and the older adults they are caring for:

I think the first step needed for transition to person-centered care is a change in the attitudes towards people in care. Specifically, the staff should perceive the person as a person, rather than a diagnosis, thus acknowledging diversity of people and their needs and wants.

Reflexivity

Self-evaluation. Reflecting on the course content prompted learners to assess their skills, experience and knowledge and to identify opportunities for more in-depth learning in key areas. As an example, one student reflected on death and dying and how cultural factors influence how the topic of death and dying is approached:

 I consider death and dying a very important component of my social work practice because death is inevitable and it does not discriminate on the basis of class, gender age, culture, sexual orientation or disability. Once it strikes, it hurts almost everyone

involved no matter how prepared we think we are. Therefore, learning how to intervene and what to say to someone or a family that is experiencing grief or anticipating a loss will help equip me with any population. Areas I would like to more about include how issues of death and dying are communicated among families in the various cultures and whether there are responses that are not allowed or discouraged. For instance, coming from an African culture, death is not something that is dealt with just by the family; it usually involves the whole community.

Another learner contributed to the discussion thread about how death and dying fits in their social work practice by commenting on their lack of knowledge or experience with talking to clients about death and dying.

I have not had any conversations regarding end of life plans and care with clients so far. I find the topic uncomfortable, since this class is the only class I have been able to receive any education on this topic. I find it to be sort of a grey area because I am a little unsure as to what to expect or how I would approach a situation like this. I feel like I should know how to approach clients experiencing situations like these because death is inevitable.

Application to practice. Participants identified ways in which their new knowledge and awareness of gerontological social work could be applied to future practice with older adults. As one respondent shared:

I need to do some critical thinking about how I can bring these [elder abuse] issues to the forefront in my own work. I suppose a first step would be to learn to read the signs of elder abuse so that I can recognize it in my clients' lives. A small first step, I know. From there, I could do something to educate my colleagues so that they are also able to see if there is a problem with their own clients and abuse.

Another learner responded to the author's post by identifying further considerations for social workers to address by advocating for improved living conditions and care for older adults.

I agree with you, the first step would be to become educated on the signs so that you can notice them when they are presented. The more the public and those who work with older adults are aware, hopefully the better the chance that they will be able to address the issues. I also think that there needs to be a lot of change at the institutional level, meaning better care options for older adults and improving long-term care facilities by ensuring that staff is valued, properly trained and not overworked.

Emotionality. Learners engaged in reflection on their emotional reactions to the course material. One respondent shared her personal reaction to a local community qualitative research report that highlighted the lived experiences of older adults who struggle with issues related to poverty:

After reading vignettes about poverty and issues in relations to low incomes, I was shocked and almost ashamed of myself, as I guess I have always had a pre-conceived notion that elderly people have enough money but were somehow cheap or hoarding what they had because of their experiences in the past with the Depression, but I was amazed at how wrong I am. I was deeply troubled by the fact that being able to afford one avocado was a monthly luxury for someone.

An instructor reinforced the learner's effort to engage in reflexivity by examining their assumptions about older adults.

Engaging in reflexivity and recognizing our own assumptions is an ideal place to start, particularly with respect to learning about a practice area or about a population you are not familiar with. I agree that the older adults' stories that were included in the report are very powerful! It occurred to me how many of their experiences are relatively hidden from the outside world. You could meet an older adult who is struggling with poverty, and not be able to tell how dire their circumstances are.

Identifying possibilities for social change. Students described their increasing awareness of various oppressions experienced by older adults and their need for advocacy and social justice. As one learner elaborated on how circumstances could be changed for older adults in the city she lives in:

According to the World Health Organization's Guide for Global Age-Friendly Cities (2007), I would grade my city's age friendliness at a moderate level. For instance, the treacherous winter conditions can make it intimidating for older citizens. Sidewalks can be a grave issue; walking on the city's sidewalks feels intimidating due to icy conditions, so I can only imagine the fear and hesitation of an older person may experience. There are many things that the city is doing well, yet there are considerable areas for growth, especially in regards to housing to be improved upon. One such way would be advocating for better housing options for seniors in accessible and affordable neighborhoods where they would feel safe and involved.

Several learners formulated recommendations for improving the circumstances of the older adults in their community and readily responded to peers' posts on the topic of age friendly cities. Another learner shared her recommendations for making the smaller centre she lived in more "age friendly".

As a social worker interested in structural change, I envision myself working to improve intergenerational connections by advocating for seniors to become more involved in the elementary school system. Perhaps, children could read with seniors and seniors can tell stories about their lived experiences. This relationship could increase understanding between generations, and reduce social isolation in seniors.

Discussion

The excerpts from the asynchronous discussion represent learners' engagement in critical reflection and reflexivity. Thus, our findings support researchers who have suggested that constructivist online instructional designs are suitable contexts for learners to apply and advance their higher order cognitive skills (Levine, 2007; Majeski & Stover, 2007). Fulfilling requirements for contributing to the asynchronous discussion in each module presented learners with frequent opportunities to engage in and articulate their critical reflection and reflexivity. The frequency of responses that are representative of critical reflection and reflexivity is promising. However, we also observed that overall, discussion posts varied in depth, clarity and coherence. Although many students contributed to asynchronous discussion with responses that represented critical reflection and reflexivity, responses representing this depth of analysis were not consistent throughout the asynchronous discussions. As Domakin (2013) proposed, adopting asynchronous discussion as a pedagogical strategy does not guarantee that learners will surpass information sharing. We acknowledge that several discussion board posts lacked significant levels of depth and took the form of summaries of course content and representations of knowledge acquisition rather than critical reflection or reflexivity. The inconsistency of the quality and depth of reflexivity and critical reflection among learners prompted us to examine how future iterations of the course could more explicitly teach students about critical reflection and reflexivity and challenge and support learners to advance to higher cognitive levels.

Ash and Clayton (2004) suggested that students often need guidance, "connecting their experiences to course material, with challenging their beliefs and assumptions, and with deepening their learning" (p. 138). Similarly, Lay and McGuire (2010) cautioned that social work learners might have yet to develop a critical approach to practice. Ash and Clayton (2004) and Lay and McGuire (2010) recommended adopting a structured approach to explicitly teaching critical reflection and reflexivity that identifies the specific activities involved in these cognitive processes.

Scholars have begun to develop pedagogical strategies to support social work learners in developing higher order cognitive skills (Dean, 2007; Morley & Dunstan, 2013). Bay and Macfarlane (2011), for example, advocated for explicitly teaching critical reflection as an essential skill for social work practice and suggested that educators provide a balance of challenge and support within their specific teaching and learning contexts. Ryan and Ryan (2013) recommended that educators use specific prompts to coach learners towards more reflective responses and direct learners to engage in critical reflection. Examples of their prompts for eliciting critically reflective responses include, "Highlight in detail the significant factors underlying the incident or issue and explain and show why they are important to understanding the issue. Refer to relevant theory or literature to support your reasoning. Consider different perspectives" (Ryan & Ryan, 2013, p. 254). Similarly, Lay and McGuire (2010) described how they incorporated social work related questions as prompts to structure the process of critical reflection and to guide

graduate students in articulating their learning. Examples of these questions include, "Why is this important to you as a social worker?" and, "How will you use this learning in your practice?" (Lay & McGuire, 2010, p. 544). Ash and Clayton (2004) proposed a pedagogical model that can be used to provide coaching and support for learners. They created an acronym, "DEAL" to identify and describe the specific cognitive activities they associate with critical reflection; describing, explaining and articulating learning.

Lay and McGuire (2010) recommended engaging learners in continuous reflective writing and providing consistent instructor feedback that asks questions to prompt further reflection. We suggest that the asynchronous discussion is ideally suited for implementing their recommendation. However, we acknowledge that responding to learners' discussion posts consistently and in a manner that encourages learners to engage in deeper critical reflection requires intensive instructor involvement in the asynchronous discussion and frequent responses to individual learners.

Our study required us, as educators to engage in critical reflection and reflexivity as we examined the effectiveness of the asynchronous discussion component of our instructional design in stimulating learners' critical thinking and reflexivity. The findings of our study establish a rationale for evaluating and selecting pedagogical strategies that will focus our future instruction more intentionally on teaching critical reflection and reflexivity. Based on the recommendations of Lay and McGuire (2010) and Ryan and Ryan (2013), our next cycle of design-based research will involve reconstructing our asynchronous discussion questions and prompts so that we can more effectively and explicitly guide learners towards engaging in higher order levels of thinking and identifying pedagogical strategies that involve modeling critical reflection and reflexivity and providing feedback that encourages learners to advance these cognitive skills. We anticipate that our own critical reflection and reflexivity as educators will continue to be an enduring aspect of our design-based research as we implement pedagogical strategies that explicitly teach students to engage in higher order thinking and to envision the role of critical reflection and reflexivity in their future social work practice with older adults.

Acknowledgement

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