Relationships in teaching for critical thinking dispositions and skills

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Abstract

As follow up to research that identified critical thinking evident in an undergraduate course on Technology in the Family (Walker & Brown, 2020), this study explored the role of the social context in critical thinking acquisition (e.g., Brookfield, 2020). Qualitative analysis of student responses to an end of semester survey in fall 2021 (n=46) identified the roles of learner relationships (who, how) as learning influences. A focus group of representative class students validated and deepened insights from the analysis. Results indicate how the instructor and teaching assistant created the classroom dynamic of comfort and trust, small groups encouraged gaining new perspectives, and personal relationships beyond the class facilitated application and sharing for deeper understanding. Relationship building offers important dimensions for student mental health and critical thinking skills in higher education.

Keywords: Critical thinking; relationships; classroom dynamics.

1. Introduction

The acquisition of critical thinking skills that transfer to learners' personal and professional lives and that apply to their roles as global citizens is a key value of higher education (Casigrahi, 2017; Niu, Behar-Horentstein, & Garvan, 2013). Available models guide higher education instructional designers and educators to provide learning experiences that challenge existing cognitions and develop competencies for decision-making and social action (e.g., Davies, 2015).

The use and presence of technology in our 21st century society demands attention to critical thinking experiences in higher education, including use of personal computing, social media, access to the Internet and digital devices, learning technologies and digital disparities. The topic is relevant for critical thinking in higher education – particularly given the near dependence on distance learning during COVID- through its impact on personal, professional, and societal application for learners. The use of ICT is ubiquitous in emerging adults' lives, in their relationships and family connectivity, across fields of practice, and impacts society (Bialek & Fry, 2019). Critical thinking and action skills are required to make intentional decisions about the use of devices amidst a sea of incomplete and changing data, and contexts that are inconsistent in their technology practices and supports.

Previous research as explored the design and testing of an undergraduate course on families and technology for building learner critical thinking skills, dispositions, and social actions (Walker & Brown, 2020). This study investigates the role of socio-contextual dimensions in student learning. It teases out if and how relationships within and outside of the classroom influence the development of critical thinking skills.

2. About the Course

Families and Technology (FSOS 3105) is a 3-credit undergraduate classroom-based course delivered at a public institution in the United States. It is offered in the fall and spring semesters (15 weeks each) and heavily integrates technology for communication, instruction, and assessment. On average 45 students are enrolled, representing learners across all undergraduate years. The course is required for majors and fulfills an elective university-wide; approximately one fourth of the students are non- majors. Topics represent personal and family structure and process interests (e.g., from use in contemporary society and individual differences to couple formation and the use of dating apps, through parent-child relationships and work-family balance), and theoretical foundations framing the study of family and technology use and impacts (Table 1). The course helps to fulfill higher education's role in building pre-professional competencies and experiences by focusing on field standards on digital skills and practice ethics inclusive of technology (e.g., American Association of Marriage and Family Therapists, 2015).

2.1. Opportunities for Building Critical Thinking Skills, Dispositions and Actions

The course aligns with Davies' (2015) model of critical thinking in higher education by placing cognitive skills and arguments as the central features. Competencies represent Bloom's taxonomy (knowledge, comprehension, application, analysis, synthesis, evaluation) and those represented in problem-solving and decision-making models (Brookfield, 2020). Critical 'propensities' further represent the 'critical thinking movement:' affective, dispositions, emotions, attitudes and states of readiness. These relate to the self (e.g., tolerance of ambiguity, perseverance, desire to be well-informed) to others (e.g., respect for alternative viewpoints, understanding of individual differences) and in relation to the world (e.g., interest, inquisitiveness, Halpern, 1998; p. 58) Critical consideration of social conditions and actions represent what Davies describes as the 'criticality' movement and the more familiar critical pedagogy movement. Table 1 lists the activities that foster critical thinking, critical propensities, and critical action.

2.2. Student Identification of Salient Critical Thinking Perspectives

In previous course research (Walker & Brown, 2020), analysis of end of course input identified the topics students would continue to think critically about. While nearly all topics were noted, personal technology use, recognizing the impact of technology on relationships, work-family balance and technology use by family professionals were key topics mentioned (noted with an *). This validated Ryan & Deci's (2000) assertion that critical thinking and action is goal directed. Students in higher education experience a range of motivations for their learning, from personal (e.g., better understanding of oneself and direction in life); to practical (e.g., completing a degree), professional (e.g., gaining necessary competencies for a vocation), to global and societal (e.g., identifying steps toward wider change).

3. Exploring Socio-contextual Factors that Influence Critical Thinking Acquisition

3.1. Method

At the end of the semester in fall 2021 students (n= 46) were given three open-ended questions in which they were asked to 1) identify topics that were most meaningful in their critical thinking and 2) course activities or conditions that inspired their learning. A third question asked students how if at all, relationships influenced their learning in the course. Students answered anonymously and responses were transcribed to text for analysis. Thematic analysis was applied to all responses to identify dominant themes. Three students from the course acted as a focus group to help validate interpretation of the analysis. The

Table 1. Course Topics and Learning Activities for Critical Thinking in FSOS 3105.

Course Topic	Activities for Learning (course frequency)
Critical perspectives on our technology use as self, social self and member of society*	In class small group discussion and collaborative decision making (e.g., debate, comparative action) – weekly
Theoretical foundations for understanding the family and technology	Evidence-based blog posts in response to prompts on course topics (1000 words each; 4 times/semester)
Differences in Technology Use Within and Across Families*	
Technology use in Intimate and Couple Relationships*	Personal technology tracking (12 hours) and written analysis applying course concepts (1/semester)
Use and Impact of Technology on Children and Young Adult Development	
Technology Use by Parents	Exams (including demonstration of independent decision making, affective perspectives and actions for equity; 3/semester)
Technology Use and Parent-Child Relationships	
Work -family balance and technology*	
Health and financial interests and safety with technology	Topic Reading/ Short quizzes (10/semester; approximately 1/week)
Family professional technology applications and skills*	
Integrating research, practice and policy	

students represented class gender, age, race, sexual orientation and major. The videoconference transcript was converted to text and qualitative analysis applied by two coders.

3.2. Results

3.2.1. Topics

Students in the fall of 2021 identified technology use in personal relationships (17), relationships with family (15), professional applications (15) and work and family balance (11) as most salient to their learning experience. Those identifying children and teen use (8) and parent-child relationships (8) were parents or had significant childcare responsibilities. On reflection of the key topics identified, the focus group agreed that they were those most relevant to college students. Other topics were interesting yet more aspirational (i.e., later life realities).

3.2.2. Course and Classroom Influences on Critical Thinking

Student responses reflected all types of activities in the course (e.g., blog writing, debates,

though group discussion and applications to real life experiences were mentioned by most. Students appreciated that the course foci included raising their awareness, a critical lens and technology use that was intentional.

Student comments on groups indicated a diminished sense of competition and allowed for discussion of different perspectives on topics. One student observed *"[My group] has influenced my learning in this course. I believe that not only did our ideas for group discussion come from what we learned in class but also how we related to the topic. As a result, it was really fun to hear about all of our ideas and how it related to our personal lives which made the course even more meaningful."* For some students this also meant the development of relationships for studying and getting missed course materials or assignments. The focus group expanded on the value of small groups. The observed that class groups offered others with similar mindsets and experiences and made activities more enjoyable; they helped learners understand the content, apply it, and hear different perspectives.

Regarding the classroom climate, the tone set by and enthusiasm of the instructor for the topic and for teaching was cited by several students. As one student remarked *"[The instructor] made everyone always feel included and that made me personally want to be there in class."* In written observations about the teaching assistant (TA) and instructor, students used words like "feeling seen", "safe", "valued", and "belonging to a community." Focus group students conveyed the importance of a safe classroom space. When they felt safe in the classroom, they were more likely to participate in class and it made them want to do well in the course. When treated as individuals (the instructor/TA learning their names, checking in with them, caring about their interests and days, providing opportunities for them to share their expertise and experiences) students felt they had a voice in the class and wanted to be there to share and learn.

3.2.3. Relationship Influences

Students cited their own families or partners as influential in their learning in FSOS 3105. Over half (25) cited these relationships. Family may represent a parent (mother, father), or grandparent or partner. Some mentioned their friends (4) or others in general (2). Some students responded by recognizing class groups and/or the instructor and TA (10). Relationships outside of the class helped students apply the content. Content application was the dominant role relationships played, as noted by 26 students. As one student said, *"I think having someone or multiple people to think about how technology affects families is*

important, because applying theories and technology to my life is how I learned better if I can apply something to my life then I think I will be able to apply it to other families."

The second dominant theme of relationship influence was 'to understand" (by 10). Having these relationships in mind helped students make the topics relevant. Speaking about their mother, one student wrote: "*We both use technology in very different ways, but our differences were great reference point for conceptualizing how variations in use influence family dynamics and cohesion. Walking away from this course I definitely have more patience for our differences and feel far more willing to accommodate her differences in use, which has had a positive influence on our relationship*." Another student's experience suggested that their relationship with their father allowed for observing differences in perspectives on use, leading to a shift in behavior*: "This course has made me more self-aware of my personal use. Awareness/ behaviors strengthens my relationships and has helped me avoid conflict. I realized I crossed boundaries with my dad when he was at work by calling slash texting him."*

The third relational dimension was sharing. Some students indicated that they shared the topics with family, friends, or a partner in discussion (8). Observing others or discussing the content also allowed for learning new perspectives outside their own viewpoint or experience, "*I enjoyed interviewing my parents and my sister and her husband. I think it helped me to understand the reasons behind things they do in their parenting, and I also think it improved our relationships."*

The focus group validated the immediate family and personal relationships as most vivid to extending their class learning. They also validated these relationships as informing critical skills through application, perspective taking, and sharing the content with valued others. They added the phenomenon of learning about technology use along with their parents. Unlike other aspects of their growing up which they look to their parents for guidance and support (i.e., driving, getting a job) and around which application and sharing content may have different values, with technology they felt they were learning alongside and in many cases are the ones to teach their parents. This unique topic perspective in a traditional relationship offered room for perspective and sharing.

4. Discussion and implications

The insights from students in an undergraduate course on technology and the family provide valuable direction for supporting the process of learning in higher education. First, they validate the importance of topics that hold relevance. Although immersed in a wide range of topics on current technology in family life including parenting, child development, and public policy on technology and equity, students reported those most impactful as those most relevant to their personal experience. This includes technology use and personal relationships, being mindful of time and space boundary erosion with technology use for

work (school) and personal life, and their future use as professionals. To encourage learning across *all* course topics, as discussed below, given the meaningful role that others play, encouraging discussions with others might be a good way to boost learning, application, and critical perspectives.

A second insight is the value of classroom conditions and course elements that students find valuable. Course assignments, exams, and activities indeed promote cognition and content learning. Yet working in the structure of small groups yielded meaningful connections that became consistent and familiar, allowing students to share perspectives and voice differences and find common ground. Brookfield (2020) encourages the value of peer interaction through instructional design to explore assumptions through both shared and diverse lens'. Design contributes through the structuring of groups (in this case random assignment) and activities with questions that invite constructive comparison, collaboration, experience, and opinion sharing and creativity.

Classroom culture that promotes community holds tremendous value, particularly as students face myriad mental health issues and classrooms diversify. Students in FSOS 3105 spoke of the welcoming, trusted, and safe atmosphere created by the instructor and teaching assistant. This helped them feel that their voices, opinions, and experiences were welcomed. The climate wasn't competitive, and they felt that the instructor was learning along with them. These conditions enable vulnerability for perspectives to be challenged and being open to view other ways of understanding. In turn this fosters transformative, cognitive growth (Mezirow, 1991).

Finally, students ' personal relationships may be an untapped resource for student critical thinking acquisition. The students in FSOS 3105 overwhelmingly cited their relationships with family and partners as key to their learning. Holding relationships in mind, observing relationships or overt discussions enabled the application of concepts, a deeper understanding, and conversation that allowed for different perspectives. Most interesting is that none of the activities or prompts from the class invited students to hold conversations or make observations of their family members or partners. The roles these relationships played in their lives word natural and familiar context two more deeply understand and apply what technology meant in their lives.

Brookfield (2020) speaks of the power neutrality value of peer relationships in critical thinking. However, because college students in 2022 are learning how to use technology and how technology impacts their lives and their relationships simultaneously with their own parents presents a fascinating phenomenon. Whereas other topics might produce the generational and role power dynamic that might not be conducive to critical thought when applied to young adults and their parents, the parallel learning experience of using technology today presents a more leveled power dynamic. Under the condition that parents are not

bothered by this power shift (and some technology use research suggests they might, e.g., Mesch, 2006) family members and parents might be constructive collaborators for the development of student critical thinking. Such power leveling dynamics might be explored and applied to student critical thinking acquisition in other fields and domains. Relationships convey significant value to students' learning course content and developing critical thinking skills and dispositions. As this study reveals these relationships are embodied within a social context that begins with instructor presence and construction of a meaningful context, peer groups as a component of learning, and students own personal relationships as a consistent and enduring presence in their lives.

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