Responding to Worldview Threats in the Classroom: An Exploratory Study of Preservice Teachers

Cathryn van Kessel[1] (iD), Nicholas Jacobs[1] (iD),
Francesca Catena[1], and Kimberly Edmondson[1] (iD)

Abstract

This study used two training sessions and two focus groups with 17 preservice teachers (aged 20–36) completing their first teaching practicum placement during their Bachelor of Education program at an urban research university in western Canada. The aim was to implement ideas from terror management theory (TMT) during their teaching practicum. Participants explored how to facilitate contentious issues so as to prevent defensive reactions when worldviews clash in the classroom. A dramaturgical analysis identified participant objectives, conflicts, tactics, attitudes, emotions, and subtexts as they explored how to anticipate and avoid worldview and self-esteem threat, navigate tense pedagogical spaces, build capacity for expressing uncomfortable emotions, and diffuse threat with humor. Because difficult emotions are central to teaching potentially polarizing content, participating preservice teachers explored when compensatory reactions might emerge and, as a result, developed their own emotional awareness—TMT became both an experience and a teachable theory.

Keywords

conceptual change, preservice teacher education, qualitative research, secondary teacher education, teacher education preparation, terror management theory

This article reports on a theoretically driven project to equip preservice teachers with conceptual tools and specific strategies for facilitating difficult and potentially polarizing content and conversations. The questions considered were as follows: *How might we prevent ourselves, as teachers, from treating a student harshly (or with dismissiveness) when their worldview clashes with ours? What might we need to do with our classes before worldview-threatening lessons begin to mitigate defensive compensatory reactions?* Given that "research ought to . . . empower researchers and research participants to . . . do something to improve circumstances" (Milner, 2006, pp. 367–368), the goal of this exploratory study was to familiarize participants with some of the root causes of worldview defensiveness so that they might respond to, or perhaps even mitigate, harmful reactions in their classrooms.

This project adds to research about psychoanalytic difficulties in teaching (e.g., Segall & Garrett, 2013), focusing on how teachers might translate insights from *terror management theory* (TMT; Solomon et al., 2015) from the theoretical realm (van Kessel et al., 2020) into a classroom setting. TMT is a prominent subfield of existential, experimental social psychology. The "terror" in TMT is the existential anxiety humans feel about their mortality; that is, because humans can imagine their eventual death in the absence of an imminent threat, they can overcompensate and trigger unhelpful or destructive tendencies. This study was an exploration regarding how TMT might be helpful (or not) in the context of teacher education.

During group training sessions before their practicum placements and in focus groups afterwards, participants explored how to apply TMT when worldview and self-esteem threat can create tense pedagogical spaces. Some teachers might avoid controversial or contested content (Ho et al., 2017) or difficult knowledge (Britzman, 2013) because of such tensions, but avoiding discomfort can delay educational experiences, especially those that might counter structural violence (e.g., ableism, misogyny, racism, transphobia). Alternatively, educators might leap into highly emotional content without the necessary preparation (Wagner, 2005). Even if teachers strive to engage students in appropriate ways, both teachers and students can struggle to critically self-reflect about topics that can provoke defensiveness, such as racism (Shim, 2020). This project seeks to provide some insights into

[1]University of Alberta, Edmonton, Canada

Corresponding Author:
Cathryn van Kessel, University of Alberta, 551 Education South, Edmonton, Alberta, Canada T6G 2G5.
Email: vankesse@ualberta.ca

how both teachers and students might enter into difficult conversations with more emotional and cognitive tools.

Part of the research team's worldview calls for all those involved in the educational endeavor to disrupt the norms of inequality that plague not only our classrooms but also broader society, which is why we were drawn to TMT as a largely untapped tool in education for such a disruption. Although many of the classroom applications arising from this study relate to a variety of situations, the authors are particularly interested in anti-oppressive education. Because all four researchers identify as White, heterosexual, able-bodied, and middle-class, throughout this study we sought to be cautious not to overlook intersecting forms of structural violence that do not affect us as they would others. This ethical thrust informed the study design as well as how we thought about the implications. Author 1 (Cathryn) identifies as a first-generation Canadian woman of Western European descent and is an associate professor at a major research university with roughly 10 years of secondary teaching experience. Author 2 (Nicholas) identifies as a first-generation Canadian man of European descent who is a doctoral student and a psychotherapist with experience in depth psychology theory and clinical practice. Author 3 (Francesca) identifies as a first-generation Italian-Canadian woman with a Master's degree and is in the early stages of a teaching career and, as such, helped the research team amplify the voices of the participants. Author 4 (Kimberly) identifies as a multigeneration Canadian woman of Western European descent who has a Master's degree as well as extensive experience teaching social studies education, and thus connects us to the experience of more seasoned teachers. All authors have a shared worldview and personal commitment to less harmful social relations within and beyond the classroom. Accordingly, we paid attention to the assumptions we made about participants' knowledge and experience. As an example, when a participant mentioned that TMT informed a pedagogical choice, we asked for clarification instead of us reading into their statements based on our biases and commitments. All four authors have knowledge of TMT and its foundation upon the work of Ernest Becker, which was the theoretical framework for the study.

Avoiding Death

Ernest Becker (1973, 1975) claimed that, as humans, we are affected by conscious and unconscious anxiety about our mortality. It is important here to delineate between *death* and *mortality*. In this article, mortality is the state of being subject to eventual death instead of its more clinical use to describe things like mortality/death rates on a large scale. Thus, we focus on the area of TMT attuned to death-related thoughts at the fringes of consciousness (Pyszczynski et al., 2000), rather than an overt encounter with death (e.g., the loss of loved one or community members, as in Stylianou & Zembylas, 2021).

When faced with the implicit or explicit notion of eventual death, humans tend to cling to what provides a sense of immortality (Becker, 1975). Becker's work was theoretical, and so TMT was developed to test his assumptions (Greenberg et al., 1986). A frequent (and understandable) reaction to Becker's claims is to dismiss them (e.g., "I don't think about death!") and thus over the last 30+ years there have been over 500 experiments in countries with divergent cultural belief systems that verify that conscious or unconscious reminders of death have an impact on our behavior.

The mortality salience hypothesis derived from Becker posits that a stimulus regarding death ("mortality salience") affects our actions and opinions (e.g., Greenberg et al., 1995; McGregor et al., 1998), whether that be an overt reminder (e.g., writing about death), something more subtle (e.g., being interviewed in front of a funeral parlor), or even a subliminal message (Pyszczynski et al., 2015). One fascinating effect is an increase in people's motivation to defend and uphold their existentially protective worldviews as well as seek anxiety-buffering self-esteem through culturally endorsed pursuits (B. L. Burke et al., 2010; Greenberg et al., 1990). TMT researchers have contrasted the effects of mortality salience with "failure, uncertainty, worries about the future, general anxieties, meaninglessness, giving a speech in front of a large audience, social exclusion, paralysis, and physical pain" (Pyszczynski et al., 2015, p. 43). A full presentation of TMT is beyond our scope in this article: Please see Schimel et al. (2018) for a more detailed articulation of the literature.

Quests for permanence and meaning can take a variety of forms (e.g., romantic relationships, see Mikulincer et al., 2003). The main source, however, are cultural worldviews (i.e., constructed symbolic conceptions of reality shared by a group) and the self-esteem derived from being a valued member among others who share the same worldview (Schimel et al., 2018). Our worldview can provide humans with immortality literally and symbolically. In a literal sense, it explains how one might endure past the death of their physical bodies, such as an afterlife, reincarnation, or the recycling of the atoms in of body per the First Law of Thermodynamics. It is important to note that the argument is not whether any of these views are correct; rather, it is simply that these views function to create sense of immortality. Worldviews can also help us achieve symbolic immortality. When we are part of a culture, we are part of something larger than ourselves— something immortal. In this sense, our worldview helps explain where we have come from, what will endure after us, and what our place is in the world. When we embody or adhere to cultural values, we feel that we are significant (i.e., gain self-esteem). Individuals keep thoughts of death out of awareness by adopting and adhering to cultural worldviews, but when these worldviews are threatened, they are unable to prevent death-related thoughts from creeping back toward consciousness (i.e., death-thought accessibility), and can become defensive (Schimel et al., 2007).

There are theories other than TMT that have explained human defensive behavior, such as cognitive dissonance (Festinger, 1957), empathy walls, feeling rules (Hochschild, 2016), and the backfire effect (e.g., Nyhan & Reifler, 2010). TMT does not contradict such findings but instead explains why there is a difference in defensive behavior (i.e., behaviors linked to existential factors relative to other aversive conditions). Studies have illustrated the specificity regarding the role of mortality salience and death-thought accessibility, such as: how mortality salience prompted aggression toward those with opposing political views, but not against someone who gave participants an unpleasant juice to drink (McGregor et al., 1998); how uncertainty about life after college increased negative affect in participants but failed to increase worldview defense (Greenberg et al., 1995); and how threats to worldviews, self-esteem, and attachments increased death-thought accessibility, but not other aversive thoughts (Hayes et al., 2010). Interestingly, there are even differences in neural activation between mortality threat and other threats (e.g., dental pain; Quirin et al., 2012). Those who are exposed to the idea of death are "more hostile and punitive to moral transgressors and more benevolent and prone to reward people who do the right thing" (PsychAlive & Solomon, 2012). Non-TMT explanations of defensive behavior, albeit helpful to a degree, do not account for why people who are reminded of death behave differently than those who are not.

Limitations and Context of TMT

The work of Ernest Becker is the foundation of TMT, and although he employed questionable language and phrasing (e.g., gender exclusive language such as "man," and troubling, value-laden vocabulary like "primitive"), his work can be helpful in contemporary society (e.g., Roberts et al., 2002). Like Butler's (2004) concept of precarity, it is important to avoid over-universalizing human experience. Although humans all experience the precarious situation of eventual death, this universal situation is nonetheless experienced "in highly singular ways" (Ruti, 2017, p. 94). Some individuals and groups have more access to coping mechanisms (e.g., symbolic immortality) than others, and some have not only distal but also frequent proximal reminders of death (e.g., Black Lives Matter has illuminated very real fears about death directly resulting from racism, as opposed to a more abstract anxiety about mortality).

It should be noted that worldview threat does not preclude other reasons for defensiveness, nor does it discount other uses of a worldview. The assumption made for this study is that some (but not all) of the defensive behavior participants might witness in classrooms is linked to worldview threat, and thus the researchers and participants co-created tactics with TMT in mind. The existential framing in this article is to be considered as one tool in a toolkit, not a universal solution for all circumstances.

Defensive Moves

Although worldviews can provide humans with beautiful relations, a conflicting worldview reminds us that our own worldview might be arbitrary, and consequently we lose our shield against our fears of impermanence. Negative behaviors can arise from mortality salience (e.g., studying genocide in a history class) but especially from worldview threat (e.g., encountering a peer with a different culture), resulting in a variety of defenses. Some of these defenses are subtle (e.g., decreased reading comprehension of worldview-threatening material, see Williams et al., 2012) or sitting closer to those we assume share our culture and farther away from those who do not (Ochsmann & Mathy, 1994; for example, students self-segregating in diverse classrooms). Another subtle defensive move is more favorably responding to those with whom one shares a worldview (even if they are part of wrongdoing) as well as responding less favorably to those who hold an opposing worldview, including prejudicial behavior (Greenberg et al., 1990, 2001; Hayes et al., 2008).

Other defenses can be more extreme. TMT theorists have identified four general categories of these reactions (Solomon et al., 2015): *derogation*, dismissing other views as inferior (e.g., insulting those with different worldviews); *assimilation*, validating our view by absorbing others (e.g., attempting to "convert" the other to your own view); *accommodation*, appropriating aspects to diffuse the perceived threat (e.g., a surface-level inclusion of another worldview, instead of engaging with the deeper differences); and, *annihilation*, violence, war, genocide, and so on, as well as the expression of support for such annihilation.

Derogation

Humans can lash out with harsh words while in a state of worldview threat, and so students (or teachers) might insult the beliefs of those with a divergent worldview. Boler (2014) identified the angry responses to discussions of structural oppression as indicators of "someone who is struggling to maintain his or her identity" (p. 27). In the context of antiracist teaching, the voices of privileged students can drown out the lesson because of their defensiveness (e.g., DiAngelo & Sensoy, 2014). To avoid such reactions, administrators might discourage or even reprimand educators who teach about racism (Cottom, 2013), but this situation is unacceptable because it upholds structural violence. Our research team proposes that teachers consider the deep psychological roots of these emotional reactions. A TMT approach allows us to see the roots of strong defensive emotions (e.g., anger, fear), which is important given the need for "re-evaluat[ing] the appropriate object of [one's] anger" (Boler, 2014, p. 35) in the context of learning about the nexus of privileges and oppressions.

Assimilation

There can be a compulsion to "save" students built into teaching (K. J. Burke & Segall, 2017), and, as a result,

teaching can become an immortality project (van Kessel & Burke, 2018). This situation does not have to be negative, but can be—for example, when a critical pedagogue pushes their students toward socialism while neglecting white supremacy (Allen, 2004) or takes a damage-centered approach that "singularly defines a community" (Tuck, 2009, p. 413). According to TMT, the teacher's actions have become more about their desire for self-esteem and symbolic immortality through quasi-missionary work than about helping students, although couched in good intentions. Instead, educators need to consider their relation to power authentically (Magill & Salinas, 2019), acknowledging the inextricable link between context, social power structures, and systems of belief (Bacon, 2020).

Accommodation

Consciously or not, teachers, curriculum designers, and others can all-too-easily employ the defensive compensatory move of accommodation. From a TMT perspective, the problem Dwayne Donald (2013) noted regarding "infusing" and "incorporating" Indigenous perspectives functions in this way. Surface-level engagements (i.e., those that occupy the tip of the cultural iceberg; see Hall, 1976) occur when "a smaller component of something is put into a larger body or component" (p. 29), and thus a cultural practice or belief is infused and the concentrated element is diluted—in Donald's (2013) case, Indigenous worldviews. Eve Tuck and E. Wayne Yang (2012) have aptly noted the deflection of responsibility in the context of settler "moves to innocence," which they define as the "strategies or positionings that attempt to relieve the settler of feelings of guilt or responsibility without giving up land or power or privilege, without having to change much at all" (p. 10), such as *settler adoption fantasies* (e.g., being "transformed" by the Indigenous group with them serving glibly as the mechanism). Similar moves to innocence can be identified in other ethnoracist contexts, such as claiming innocence based on accommodation:

> exasperated defenses such as "I've never owned slaves" to "I voted for Obama," the emotionality of Whiteness is nuanced and complex, because its expression assumes a self-enlisted liberal agenda, yet nonetheless masks the same racial implications inside statements like "My best friend is Black." (Matias et al., 2016, p. 6; see also Bonilla-Silva, 2010; Thompson, 2003)

The defensive reaction of accommodation reifies White settler colonialism instead of actually serving the process of decolonization and antiracism.

Annihilation

Self-esteem and worldview threat can also lead us to support the annihilation of others. In a study with Palestinian and Jewish citizens of Israel, as well as South Koreans, Hirschberger et al. (2016) examined how existential threat increased people's preferences for violence over negotiation and compromise, even when that violence is less practical. For example, Israeli-Jewish participants were primed with a reminder of death (vs. pain), followed by a particular scenario that invited contemplation about whether retribution on the Hamas organization in Gaza would be justified or useful. In the mortality salience condition, "there was higher support for an attack when it was deemed justified than when it was not deemed justified, even if the expected utility was low in both cases" (p. 71). This experimental condition tells teachers something about what might happen when discussing real-world scenarios about terrorism, war, and retaliation: Reminders of death evoke responses with high stakes, and students might articulate such opinions in class, and thus teachers need to be prepared.

Affective and Emotional Defensiveness

In addition to behavioral and cognitive manifestations described above, worldview threat also influences the affective and emotional domains. Sometimes described as "emotions on the move" (Boler & Davis, 2018), affect describes an "intensity with which something is experienced" (Papacharissi, 2015, p. 135). Even though affective responses to worldview threat may not always be visible, "affective economies" (Ahmed, 2015, p. 44) describe how responses such as hate may swirl and circulate between bodies rather than simply reside within bodies. Such intensities elicited by worldview threat can therefore be felt by those other than the individual under threat. One might respond affectively when worldviews are threatened, but not always behaviorally. Therefore, it is not always readily apparent that someone is experiencing a worldview threat.

Emotions and affect can be conceptualized as *individual*, *sociocultural*, or *interactional* experiences (Zembylas, 2007). Our study primarily focused on the individual experiences of emotions; hence, we will expand upon it here. When conceptualized as individual experiences, emotions are expressed and interpreted by the individual based on affective or sensory responses to stimuli (Parkinson, 1995) and rely on self-reporting. However, this conceptualization does not account for the ways in which sociocultural milieu or power relations (such as socialization practices) in a given context may influence the presence or absence of emotional expression (Leavitt, 1996), limiting meaningful interpretations of emotional expressions simply by observing others. Consequently, an individual may experience worldview threat through intense affective sensations, but may be socialized to perceive their context (such as a classroom) as an inappropriate place to express their emotions. As a result, conceptualizing emotions as individual experiences reduces the certainty of inferring through observing behaviors that others are experiencing worldview threat.

Research Method

This project's focus was how preservice teachers (aged 20–36) might operationalize insights from TMT in a classroom setting. A pilot study was undertaken to determine the content for the main study. For both studies, participation was voluntary and approval from the university's research ethics board was required, whose process assessed the research objectives, methods, and procedures; potential conflicts of interest; the risks and benefits to participants; determining consent; data confidentiality and privacy; as well as data storage, retention, and disposal.

Pilot Study

For the pilot study, there were eight participants who were social studies majors in a Bachelor of Education program in Secondary Education at a research university in Western Canada. These students were in their advanced professional term. Participants' positionalities were White, with one self-identified as Canadian with both a White (Russian) and Chinese background. Six participants identified as female, two identified as male, and they all had their placements in a large city at publicly funded schools.

The participants had engaged with TMT during their social studies curriculum and instruction class before their final teaching practicum: a 1-hr lesson and then references throughout the course (e.g., linked to discussion about teaching difficult knowledge and contested issues). Using a deductive approach with consistent initial questions and variable follow-up questions (Brenner, 2006), the lead researcher conducted individual, semi-structured interviews, posing such questions as: *To what extent were you able to identify students in a state of worldview threat? In what contexts did you consider using TMT with your students? Did you use TMT while teaching during your placement? If yes, what do you think was the relative success of this attempt? If no, what supports (if any) might you need to engage with TMT in your classroom?*

The transcripts were analyzed and an open coding system was developed by the research team (Strauss & Corbin, 1998). Eventually words and phrases were sorted into the following categories: how participants found TMT useful (or not), when it was difficult to employ TMT, what grade levels had relevant curricular content, if/how participants could identify students in worldview threat, how their students and mentor teachers responded to TMT, and what resources might make teaching with TMT easier. The pilot then informed the group training sessions for the main study. The researchers revisited the pilot study data set and added relevant utterances into the main study.

Main Study

Participants were in a Bachelor of Education program in Secondary Education at a major research university in an urban context in western Canada and the 17 who completed the study were from a variety of major and minor subject areas and were recruited to participate during their introductory professional term, during which they undertake their first teaching practicum. The research team ran the study (group training and focus groups) twice over two terms (Fall 2018 and Winter 2019). Participants chose pseudonyms for themselves.

Fourteen participants self-identified as "female" or "woman," and two as "male" or "cis-male," and one left that response field blank. Participants were also asked if they wished to self-identify any ethnic, religious, linguistic, and/or geographic identities. Three left this section blank, while the others identified themselves in a variety of ways; for example, Albertan, Agnostic, Atheist, Canadian, Catholic, Caucasian, Chinese, Christian, English, English-speaking, First Nations, French, French-Canadian, Gujarati, Hindi, Hindu, Indo-Canadian, Irish/Celtic, Japanese, Latter Day Saint (Mormon), Mandarin, Polish/Canadian, somewhat Christian, somewhat rural, White, and White/Anglo-Saxon. This collection of participants, despite their variance in identity markers, is still not representative of the diverse population of the urban location of this study, although they do reflect the more limited context of the Bachelor of Education program. Interestingly, some of the more religious preservice teachers (e.g., the Mormon participant) as well agnostics and atheists showed comparable enthusiasm about TMT, which ran contrary to the first author's experience talking about TMT in classrooms (i.e., in class, some religious students had felt judged by discussions of literal immortality). The researchers made efforts to carefully frame beliefs about literal immortality in terms of how they function instead of whether they are considered "correct" by one group or another because of the first author's teaching experience and believe that teachers engaging with TMT should take similar care to not denigrate anyone's religious beliefs.

This main study focused on the research questions: *How might we prevent ourselves, as teachers, from treating a student harshly (or with dismissiveness) when their worldview clashes with ours? What might we need to do with our classes before worldview-threatening lessons begin to mitigate defensive compensatory reactions?* During group training sessions in the latter part of their coursework prior to their teaching practicum, participants engaged in a 2-hr lecture on TMT with a Q&A during and after, which included one video on the basics of TMT (Braincraft, 2015). Together, participants explored the nature of worldview threat, the forms that defensive compensatory reactions can take in the classroom (e.g., derogation), possible mitigation of those reactions, and how worldview threat can be an interpretive lens to understand historical events and processes (e.g., genocide, intercultural conflict). During their practicum placements, participants had the option of emailing the lead investigator with questions and/or comments, which several did.

At the end of their teaching terms, the participants met once again in a semi-structured focus group setting for 1½ hr

involving the participants discussing how and why (or not) they were able to engage with TMT in their classrooms as well as the perceived effects. We began by reminding them that we were just as interested in when TMT was not useful as we were when TMT was useful. Next, we asked: *In what contexts did you consider using TMT with your students?* The follow-up questions were as follows: *Did you end up choosing to use TMT in those contexts, why or why not? If yes, what do you think was the relative success of this attempt? Did you use TMT as you planned your lessons, or on the fly, or both? Why or why not?* We then asked, *Can you see TMT as useful in any additional contexts?* We also asked them about their observations of their students: *To what extent were you able to identify students in a state of world-view threat?* Finally, we asked participants what supports they might want to help them engage with TMT in the future, should they choose to do so. Because of the focus group format, participants at times built off each other's comments instead of each question being asked of each participant. No one was obligated to speak, and we encouraged a casual, collegial atmosphere.

Coding and Analysis

Audio was transcribed from both the training sessions and the focus groups before being coded. Through reading and re-reading the transcripts, significant details became more nuanced, and new insights emerged. Dramaturgical coding was then utilized, which aims to perceive "life as performance and its participants as characters in a social drama" (Saldaña, 2014, p. 28). Given the exploratory nature of the project paired with the emotional component of engaging with existentialist ideas, we chose a coding strategy that would analyze the project as a social drama. Coding was accomplished by hand through examining and reflecting upon each line of transcript and identifying whether the statement belonged to one, several, or none of the below six categories. Utterances were assigned into one or more of the following categories to examine participant responses to the project as we interacted with each other: objectives, conflicts, tactics, attitudes, emotions, and subtexts. *Objectives* include the wants, needs, and motives of the participants (e.g., understanding/challenging/reconciling other worldviews, implementing TMT effectively, exploring feelings). *Conflicts* entail the obstacles participants faced as they try to achieve their objectives (e.g., difficult emotions, intolerance, bridging theory and practice), while *tactics* are the strategies participants employed to reach their objectives (e.g., providing students with: information about multiple and/or challenging worldviews, emotionally correct language, space and time to process difficult emotions). *Attitudes* reflect the positions of the participants toward others and their circumstances (e.g., acceptance of mortality, openness to emergent educational opportunities), as delineated from the *emotions* experienced by participants and their students (e.g., concern

for students' well-being, empathy for others, interest in classroom diversity, uncertainty about teaching contentious issues). *Subtexts* are interpreted by the researchers and seek to illuminate the underlying and unspoken thoughts by the participants (e.g., the role of teacher confidence, limitations of being a new teacher, potential limits of tolerance). The researchers used a *Junto Emotion Wheel* (The Junto Institute, 2021) to increase the specificity of identified emotions the participants and their students may have been experiencing.

After coding each of the transcripts, the highlighted sections of each of the transcripts were then copied to a separate document related to the coding category. The result was one document for each coding category, with all of the highlighted data related to that code along with several additional lines for context. Each of these documents was then reflected upon in its entirety, and themes began to emerge from each code category.

Author 2 (Nicholas) enacted the first layer of analysis and summarized their findings into a separate document before sharing with the rest of the research team. The other authors also engaged in their own reflection upon the coded categories, carefully attending to what was evoked within them throughout. Then, through correspondence via email and face-to-face meetings, the summarized findings were analyzed, strengthened, and challenged by each member of the research team. Such correspondence occurred until all members of the research team felt that there was a high degree of saturation with the data, from which the findings from the data then emerged. Each of these steps increased the level of credibility and trustworthiness of the research (Saldaña, 2014).

Limitations of the Methodology and Coding

Due to personal scheduling conflicts, three participants opted to watch a training video instead of the group training. For similar reasons, in the second phase post-practicum placement (focus groups), three participants met for an individual interview (two of which were different participants than those who had missed the in-person training). Although the individual interviews were meaningful in terms of hearing more in-depth accounts of practicum experiences, those who chose the interview were not able to be put in conversation with other participants. Given that this was an exploratory descriptive study, such a situation does not render their data unusable, but it does limit the findings. The video replacement for the group training, however, does seem to have affected participants' abilities to understand and implement principles of TMT in their classrooms, and thus the researchers would not recommend making that option available for future TMT research with preservice teachers.

As the data was then separated into each of the code categories and reflected upon in its own right, it became clear that an aspect of the fidelity of the data in its entirety was lost. The researchers acknowledge the need to parse data in order for important findings to emerge, while also recognize

meaning can be lost without an ability to reflect upon the "big picture."

Because coding was done by human hands, uncontrollable factors may have influenced how it was done. As example of this challenge, Author 2 (Nicholas) noticed that on a particular day he was finding largely one particular code category (e.g., attitudes) whereas on another day he noticed himself coding largely another category (e.g., emotions).

The researchers also acknowledge that the identified themes emerged from the data as well as the researchers' prior theoretical understanding of the research topic and therefore involve both inductive and a priori approaches to the data (Ryan & Bernard, 2003).

Findings

> This theory explained a lot of behavior I have witnessed within my family—quite polarizing views . . . Going into my practicum . . . literally any support, anything I can learn, that can equip me to deal with hard conversations is extremely helpful.—Nika

The focus of this study was: *How might we prevent ourselves, as teachers, from treating a student harshly (or with dismissiveness) when their worldview clashes with ours? What might we need to do with our classes before worldview-threatening lessons begin to mitigate defensive compensatory reactions?* Boler (2014) noted three types of students in her anti-oppressive classes that challenge the myth of meritocracy (and thus can put students in a state of worldview and concomitant self-esteem threat): those willing to engage despite a shattering of their worldviews, those who angrily resist, and those who appear "numb" (p. 26). Students who derogate the teacher or classmates and/or those who articulate support for annihilation of certain groups, as well as those who withdraw emotionally or physically, need help working through an experience of worldview threat (their own as well as that of others), and this objective requires both awareness and capacity. It became apparent that oftentimes attitudes were in themselves the conflicts impeding progress toward the overall objective; that is, the experience of worldview threat thwarted the objectives, and thus emotional work and specific tactics were needed in order for the preservice teachers to meet their goals: anticipating defensiveness, preventing avoidance, preventing defensiveness, and diffusing defensiveness.

Although the researchers acknowledge that the dramaturgical coding stays true to the spirit of viewing "life as performance and its participants as characters in a social drama" (Saldaña, 2014, p. 28), the findings of this research are presented as themes that emerged primarily from two of the coded categories: objectives (i.e., participant motivations) and tactics (i.e., strategies to meet objectives). This decision was made for the sake of clarity for teacher educators, and the researchers recognize that this decision comes at the expense of maintaining the spirit of dramaturgy throughout

the findings. As such, the codes are woven throughout each category, particularly how the conflict/obstacle prompted an objective, and thus a tactic to meet that objective. The codes for attitudes, emotions, and subtexts played into some categories more overtly than others, particularly subtexts (an idea that will be revisited in the "Discussion" section).

Objective and Tactic 1: Anticipating Defensiveness

When threatening content and conversations arise, talking with students about TMT principles (e.g., worldview and self-esteem threat) can be used to anticipate the intensity and promote more meaningful dialogue. Ashley illustrated this potential brilliantly with her Grade 11 students as she saw the potential for serious defensive behavior growing:

> we were talking about experiences of adversity . . . and one of the students wrote that one of the adversities he faces is when one of his friends says something racist as a joke and doesn't realize it's racist . . . and then after a little bit, some of their friends were like "that doesn't make us racist, it was a joke, it doesn't, you knew it didn't." So, we did talk about TMT stuff then [I said] "Yeah, you think you're not racist, you thought that was a joke, you're a little upset right now because he said that you're a racist because of this, that's because you think you're a good person, and you can be a good person, but this is still something that you're still contributing to his adverse experiences [with racism]."

For Ashley, TMT gave her tactics to help prevent what could have escalated into emotionally fraught territory (a perceived conflict/obstacle). In essence, she had a language to express what self-esteem threat is to students and thus explain troubling emotions that were arising and thus prevent potential derogation and other forms of angry outbursts.

Objective and Tactic 2: Preventing Avoidance

Leia commented a particular conflict/obstacle: How Canadians might have a tendency to avoid content (i.e., outright avoidance and/or the defense of accommodation) that can create worldview threat by challenging dominant discourses of national identity. Yet, such content is needed:

> We like to think "Oh, Canadians are so nice, we never did anything bad, we're great people." But we have those horrible things in our pasts. Like, we have murdered entire nations of Indigenous people and other terrible things, so if we can bring in that a little bit [that would be helpful].

The attitudes people hold comprise our worldviews and therefore help to keep us safe from the awareness of our mortality. So long as Canadians believe in the stereotype of polite, scarf-wearing, hockey-playing Canadians—and live in a way to reinforce and perpetuate this attitude in

relationships—they can stifle the opportunity to wrestle with the atrocities of Canada's history.

Through their emerging understanding of TMT, participants noted their awareness of difficult moments in the classroom. Participants often noticed their mentor teachers either avoided potentially worldview-threatening moments entirely or were unsure of how to debrief students after they had their worldviews threatened. Leia noted an incident while she was teaching the Grade 7 social studies topic of European contact with Indigenous peoples in North America:

> I had supplemented our textbook with a painting . . . Jacques Cartier was standing there, arms open, "Hello, I'm here to save you people!" and all the Indigenous people are crouched in fear. [My students and I] were talking about why the painter would have did it that way: Why were the Indigenous people crouched down, why was Jacques Cartier looking welcoming? When we read Jacques' journals, we knew that's not quite how it went. And, like, we had talked about that for quite a while, and then I noticed [the students] kind of feeling bad, so I asked them: "How are you feeling? Are you feeling kind of yucky? I don't feel great right now." And then my mentor teacher cut me off and was like, "No! Don't feel guilty, just be a good person." That's not quite where I was going. I would have talked about TMT right then.

Difficult moments threaten to upset the planned procedure of the class because it takes time to emotionally process worldview threat and class time feels limiting. As a response, teachers are called to use tactics to prepare themselves, their curriculum, their class time, and their students for upcoming worldview-threatening situations while relying on a high level of emotional awareness and sensitivity to adequately debrief students upon their worldviews being threatened. The proper implementation of such tactics related to preparation and in-the-moment strategies can help teachers close the gap between curriculum-as-plan and curriculum-as-lived (Aoki, 1991).

Objective and Tactic 3: Preventing Defensiveness

Because difficult emotions are so central to many aspects of teaching, there is a requirement that teachers themselves not only have a sensitivity and awareness of opportunities for difficult emotions and defensive behaviors (i.e., derogation, assimilation, accommodation, and support for annihilation) from worldview and self-esteem threat to occur as a conflict/obstacle, but also have a high level of their own emotional awareness. Rachel noted how she was seeking ways to articulate to students about how their bodies and minds are feeling when they learn about financial literacy and associated concerns about self-worth, the myth of meritocracy, and so on:

> after we introduce [TMT] like, "Hi, you might feel like an adrenaline rush, or uncomfortable because of this," do we give them anything that they can use to cope with that? Because how I see that can happen, let's say in a math class, [when] we'll play a Monopoly-type financial literacy game, and then you start

having kids call each other stupid because the other one needs a calculator. Stuff like that, right? So, I feel like that's a conversation I'll have with the kids early on.

Initial conversations with students could be powerful, particularly if they explain both physiological reactions (e.g., feeling flushed or pale, increased heart rate, shaking) and defensive reactions (e.g., derogating another student as "stupid").

It is key to note that a TMT-informed tactic is not about repressing emotions because denial is an unhelpful defense. Rather, tactics ought to name and respect emotions that arise while preventing unintended and hurtful outcomes from those emotions. To that end, some participants modeled their struggle with difficult emotions with their students in addition to having conversations about defensive reactions. In the midst of engaging in a conversation about the environment and the uncertainty of the future, Serena noticed some of her students were "really uncomfortable" surrounding the topic of climate catastrophe. She explained how she handled the situation in the classroom:

> I was open with them. I let them know that . . . I'm uncertain about it, too, and we had this open conversation about [how] I remember learning about the environment and thinking, "Oh I can fix this, I recycle, I buy second hand," but the more I looked at it and went through it with the kids . . . we realized how this is all cycling together and that it's like a big snowball that we might not be able to stop . . . that's why I mentioned, "I feel that way, too, it's not just you guys, other people feel that, and some people choose not to think about that, which is dangerous. And some people choose to think too much about it, which is dangerous."

Serena's sensitivity to her students as well as her own emotions allowed for her to speak directly to what emerged organically within the context of the lesson. Her "in the moment" emotional modeling created space for her students to feel, express, name, and work through the difficult emotions that were felt, and important relational connections were drawn that allowed for students to have their feelings named, normalized, and validated through the role Serena played for her students. As researchers, the authors see the disruption of worldviews as a requirement to wrestle with the difficult emotions that lay underneath, and to have appropriate emotional role modeling done through a skilled teacher creates a safer space for this disruption, and the important resulting consequences, to occur.

Objective and Tactic 4: Diffusing Defensiveness

Humor is a tactic derived from Becker (1973) to deal with the conflict/obstacle of the defensiveness related to existential anxiety (Elgee, 2003), a topic that was discussed in the training session. Denise and Ken connected with that method (although wished for more examples to draw from in their teaching), and Serena utilized that method in her Grade 11 social studies class

when talking about the 1994 Rwandan genocide. Talking about such an atrocity is a direct reminder of death and thus troubling (and troublesome) emotions can arise (e.g., students laughing at inappropriate times). Much care is needed when employing humor in the context of mortality salience—one must not be glib about someone else's death. Instead, educators can consider how to use humor around associated issues instead of the deaths themselves. To harness the power of humor to a good end, Serena tapped into a popular "confused guy" meme: a young man smiling but looking confused with sets of question marks around him. She used this meme to illustrate the frustrations of Romeo Dallaire, the leader of the United Nations' peacekeeping forces in Rwanda, as he sought additional support from Kofi Annan, who at the time was the head of the United Nations' peacekeeping department. On her presentation slide, Serena had written that Dallaire repeatedly reported to Annan that preparations for mass killings were growing, but his reports did not convince Annan that Rwanda required peace keepers. Annan stated later (1998) that the United Nations did not recognize the potential of genocide in Rwanda, even though Dallaire had issues many warnings. It is here that she inserted the "confused guy" meme. By using a popular meme image, Serena made space for her students to vent some existential anxiety that may have arose from, as she noted, "the fact that all these people died because these people weren't communicating properly." She "thought that would be too much" and so she used the meme. Although the slaughter of hundreds of thousands of people is nothing to be laughed at, she found the meme pedagogically helpful for the students to stay with the topic at hand more earnestly without succumbing to their mortality salience.

Discussion

By approaching classrooms through a TMT lens, teachers are able to use insights gleaned from TMT to prevent and mitigate defensive moves stemming from worldview threat. Furthermore, educators might begin to develop TMT as a pedagogical attitude. Finally, TMT as a lens also helps students and teachers alike understand historical and contemporary situations.

TMT in Classroom Discussions

Allowing worldviews to be threatened, and navigating this tense space, entails finding ways to be able to work through contentious conversations and confronting the difficult emotions and defensive reactions that take place when such conversations occur. Before engaging with potentially worldview-threatening information, teachers could employ TMT to anticipate the emergence and manifestation of defensive compensatory reactions. From other educational scholarship it is clear that some dissonance and discomfort is comorbid with breaking down structures of oppression (e.g., Howard, 2003), and so educators must find ways to sit with troubling emotions without allowing them to become troublesome; for example,

"[t]eacher education must feel uncomfortable talking about White supremacy and the daily manifestations of Whiteness in order to achieve the ideal of antiracism" (Matias et al., 2016, p. 15). Before these troubling discussions ensue, educators could introduce the principles of TMT to their students either directly (i.e., teaching them about the theory itself) or indirectly (e.g., explaining the principles of the theory without naming it as such). The key is to develop a language with students to talk about worldview threat before it happens, anticipate when such worldview threats might occur, and then revisit the initial discussions with students to prepare them for the discomfort they might experience.

TMT as an Interpretive Lens

As a curricular lens. TMT is an innovative contribution in the context of education as a lens to understand historical and contemporary situations. Researchers and participants co-created applications for a variety of subject areas. In language arts, literature classes, and drama classes, worldview threat can help explain character motivation (e.g., Harrington, 1969) as well as why students might have resistances to portraying or engaging with certain characters. In the sciences, art, and music, worldview threat explains the difficulty in changing paradigms or when our sense of reality is stabilized (Solomon et al., 2015)—why there is so much resistance to new approaches and understandings, whether that be the excommunication of Galileo, climate change denial, or conversations regarding for/by whom art is made (e.g., shifts in Renaissance art) and what constitutes good art/music, as well as mathematical principles that challenge our perceptions (e.g., probability and the Gambler's Fallacy).

Physical Education presents fascinating opportunities to discuss TMT, ranging from politics in sport (e.g., the backlash to NFL players kneeling during the anthem and worldview threat) to sports fandom (e.g., hooliganism; Pilon, 2016) which is related to a sense of self-esteem and significance (e.g., "our team" will endure after us, giving us a sense of belonging) to the very fact that overcoming our physical limitations embodies TMT as we try to make our bodies resistant to decay and death (Arndt et al., 2003).

Social studies perhaps provides the most obvious curricular ties to TMT. Much of the historical component of social studies classes focus on conflict (e.g., war and civil strife), and in the Canadian context of this study, for example, a TMT lens can help students grapple with the compensatory reactions of assimilation and annihilation that are embodied in the Indian Residential School system, as well as ongoing derogation and accommodation/appropriation, all of which may be explained (but not excused) by worldview threat and defense (van Kessel et al., 2020).

As a pedagogical attitude. As a subtext to the research, there appeared a stark contrast between a perceived desire for a clear plan of how to manage disrupted worldviews within the classroom through utilizing TMT, versus recognizing that

disrupted worldviews will occur, and as such our own worldviews (including being the teacher always in control of one's classroom) deserve to be brushed up against, cracked, or downright shattered. It is at this moment where we might best utilize TMT in the classroom—when ourselves as teachers wrestle with the difficult emotions within us. In this way, TMT becomes a "pedagogical attitude," whereby educators have a lens to understand their own encounters with worldview threat and associated challenges to self-esteem and relationships with students.

TMT is, therefore, not only a teachable theory but also an experience in itself; that is, learning the theory calls us toward having our worldview(s) threatened and challenged, which might then equip teachers to help students work through experiences of worldview threat toward fostering a stance of empathy and compassion toward alternative worldviews. TMT as a pedagogical attitude allows for teachers to be open to the organic and emergent within the classroom as their own tolerance for uncertainty and challenge increases.

Considerations and Limitations

Judging from participants' experience, learning TMT has greater success upon repeated exposure, in groups, with professionals willing and able to lead discussions about TMT. Participants most comfortable teaching and otherwise engaging with TMT had initial instruction in the theory and then opportunities to revisit it in their specific teaching areas later in their coursework. Supplementary materials would need to be available for preservice teachers and their instructors, and so to this end researchers and participants have been contributing lesson plans to an open-access educational resource website associated with the project (van Kessel, 2018–2021). The most-needed component, however, appears to be the time and space to wrestle with existential concerns with a skilled facilitator.

Understandably, however, teachers are often concerned about more demands placed on them amid time constraints. It is important to note that many participants employed TMT in their classrooms without directly teaching their students about TMT. Some participants did teach the theory directly, although these situations were irregular (e.g., an International Baccalaureate course on the "Theory of Knowledge"). There are many ways to engage with these ideas, and that the key is not how (or whether) TMT is taught, but simply recognizing the existential anxiety linked to worldview threat. As such, teachers can help students manage resulting emotions, rather than denying or repressing them. Recent experiments have shown that priming participants to approach the topic of death "with acceptance or curiosity" results in decreased worldview defense (Pyszczynski et al., 2015, p. 56). This line of research is potentially fruitful and is also a logical next step for TMT in the context of education.

If educators and students (and people more generally) want to prevent treating each other harshly or with dismissiveness when worldview clashes, they might need to gain knowledge of, and tactics to deal with, defensiveness and avoidance. It is important to note that TMT as a pedagogical attitude does not devalue any emotional responses. Instead, TMT as an attitude involves keeping emotional responses in perspective. Furthermore, by allowing ourselves and others to experience existential anxiety, there is an opportunity to feel less anxiety from socially constructed sources (e.g., status, money), giving people an opportunity to foster immortality projects that do not adversely harm anyone.

The goal of a TMT-informed approach to teaching and learning is not to convert students to the teachers' worldview (i.e., assimilation), but to decrease rigidity and create a "pedagogy of discomfort." It is here where both educators and students are called upon to analyze critically their "cherished beliefs and assumptions" as "a means of creating 'space'" instead of adhering to habit (Boler, 2014, pp. 27–28). In this way, classroom spaces become "brave" rather than "safe" (Arao & Clemens, 2013) to give students time to process their emotional worlds. Like Megan Boler (2014), the authors of this paper realize the ethical danger of "pamper[ing] those who have experienced a life of privilege" and yet we also acknowledge that "education is not effective if it is combative and alienating" (p. 27). TMT provides an opportunity to understand unconscious roots of defensive behavior without excusing it. In some cases, however, students may need to withdraw emotionally/physically to process and/or there may be times when open conflict is productive (e.g., righteous rage of those frustrated by legitimate concerns), and so TMT-informed tactics cannot be considered universally helpful regardless of context. As a new area of inquiry, more research into targeted contexts would help provide more nuance to potential uses for TMT in classrooms.

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ORCID iDs

Cathryn van Kessel https://orcid.org/0000-0002-7450-5963

Nicholas Jacobs https://orcid.org/0000-0003-0780-1065

Kimberly Edmondson https://orcid.org/0000-0003-0803-3029

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Author Biographies

Cathryn van Kessel is an associate professor in the Department of Secondary Education in Faculty of Education at the University of Alberta in amiskwacîwâskahikan (Edmonton, Canada). She is the author of *An Education in Evil: Implications for Curriculum, Pedagogy, and Beyond* (Palgrave Macmillan), and her research interests include social studies education, curriculum theory, philosophy in/of education, and teacher education.

Nicholas Jacobs is a psychotherapist, instructor, and PhD candidate in the Department of Secondary Education at the University of Alberta. His doctoral research explores the nature of mortality through a lens of depth psychology and its implications within graduate education and beyond.

Francesca Catena is a French Immersion elementary school teacher. She holds a Masters of Education (Secondary) with an emphasis on intersectional feminism. Her teaching focuses on feminist pedagogy, shedding light on biases and inequalities in education as well as incorporating women's diverse voices and stories in learning.

Kimberly Edmondson is a doctoral student in the Department of Secondary Education at the University of Alberta. Her teaching and research are centered around social studies education, teaching and learning difficult histories, and navigating controversial issues in the classroom.