

St. Francis Xavier University

Psychological health and safety:

The role of an adult educator in building resiliency in First Responders

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Literature Review

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Introduction

The purpose of this literature review is to link adult education theory to practice, focusing on critical thinking and transformational learning, and applying those concepts to the role of an adult educator in building resiliency in First Responders. I will first introduce basic concepts of teaching and learning and examine facilitation versus teaching, where teaching is viewed as an art form, a collaborative effort, and not a show and tell of expert knowledge. From that foundation, I will review adult learning and the different theories behind how adults learn, including group, experiential, and self-directed learning, and how these theories are used in the fostering of critical thinking and of transformative learning. Subsequently, I will seek the intersection between the concepts of facilitation, learning, and cognitive psychology, leading to a critique and discussion, and identification of gaps in the literature. In general, the gaps I will explore include: how fostering transformational learning interrelates with resiliency to stress, if individuals can become self-directed transformational learners seeking out opportunities to change and adapt to accommodate their meanings interpreted from critical events into their belief structures, and how transformational learning can encourage self-directed posttraumatic growth in First Responders.

Scope

Literature searches were conducted using transformative learning and critical reflection as a primary framework. Results were manually scanned for subcategories of facilitation and co-learning, group learning, self-directed, spirit and body, and experiential learning; focusing on mental health and workplace. Further searches were conducted using

transformational learning together with motivational interviewing, stress, resilience, and Post Traumatic Stress Disorder (PTSD). Databases used were ERIC, ProQuest, SAGE Journals Online, Google Scholar and Amazon.ca. All articles, chapters and books have been published post 2012 except for seminal literature on experiential learning (Dewey, 1938/1997; Kolb, 1984), Critical Thinking (Brookfield, 1987), and a film documentary on PTSD by Carson and Jackson (2011). Results were narrowed through analysis of reviews and abstracts, looking for connections to adult education principles in general, but predominantly critical reflection and change or improvement in mental health and/or self. Each review revealed additional authors and articles for consideration. Although many relevant articles were found, few, if any, brought all of the topics together as building resiliency is traditionally in the domain of psychology, not adult education. The literature chosen to be included focuses on adult development, the cognitive domains of learning and how it is used in cognitive behavior therapy, and how adult learning and development can be applied to first responder resiliency to stress. This literature review will undertake the task of identifying links between the two disciplines of adult learning and psychology in relation to resiliency and thusly will follow a progression beginning with general concepts of teaching, learning and adult development, then progressing to a more in-depth review of ways adults learn. I will then compare, contrast and link adult education to psychology in the context of building resiliency in First Responders through the facilitation of critical thinking skills and fostering transformational learning.

Teaching

Cranton (2016) states that because we are different in the way we are, where we work and live, and what we learn, it would seem “fruitless to try to delineate general characteristics of

adult learning” (p. 2). She sums up the expectations from the literature of what the role of an adult educator should be:

experts, resource people, facilitators, counselors, mentors, models, reformers, and activists. We read that we should love our subject, share our enthusiasm and passion, be knowledgeable, consider learners’ needs, organize and structure learning activities in a clear way, be good listeners, establish a supportive learning climate, motivate learners, use humor, challenge students’ perspectives to encourage critical thinking, promote involvement, provide positive feedback, use learners as resources, and consider learning styles. (p. 78)

However, historical traditions of postsecondary institutions, and many learners’ uncritically examined assumptions, such as an expectation of a highly teacher centered lecture methodology (Virtanen, Myllarniemi, & Wallander, 2013), can be barriers to practicing in the manner just described by Cranton. Cranton, and Merriam and Bierema (2014) tell us the application of different theories of adult learning can lead to improved practice for adult educators.

Facilitation and co-learning

Facilitation versus teaching stems from a humanistic philosophy, where instead of being teacher-centered, for example dispensing knowledge as discussed by Virtanen et al. (2013), facilitation is “student-centered” (Merriam & Bierema, 2014, p. 29). Merriam and Bierema (2014), and Mezirow (2012) premise the role of an adult educator as facilitator of self-directed learning, acting as an educational agent, or even an agent of change. Merriam and Bierema elaborate that facilitators are guides, not teachers that dominate learning. Cranton (2016) clarifies that a facilitator is an educator establishing a role of co-learner versus teacher, collaborating in learning. Merriam and Bierema agree and expand on the idea that if the goal of

the educator is to assist the learner to “construct knowledge about themselves, others, and social norms” (p. 81), the primary role of the adult educator is as a facilitator of a co-directed process.

Brookfield (1987), in his discussion on being a critical teacher, represents the function of a teacher as a “contributory group member” (p. 80) with multiple roles, such as advocate, adversary, and mediator, accepting that there are multiple views and interpretations of ideas, becoming a learner simultaneously as a facilitator. Cranton (2016), and Fazio-Griffith and Ballard (2016) both promote the need to be willing to learn from each other and establish a co-learner role, and Fazio-Griffith and Ballard go as far as suggesting giving up control of the class and trusting student exploration and self-reflection; becoming “a coach, mentor, or guide” (p. 227), a premise Charaniya (2012) says may be uncomfortable but required. A question we are left with is: when acting in the role of a coach, mentor, or guide, is control actually relinquished or is it exerted in a different fashion either passively or through a social hierarchy?

Many scholars suggest we become collaborative learners through the function of open discourse within a group and building relationships with learners. It is through these social interactions and working collaboratively where learning takes place, including our own. We, as facilitators, are no longer considered the expert and should be a part of the process (Charaniya, 2012; Coady, 2013; Mezirow, 2012; Williams, Fellows, Eastwood, & Wallis, 2014). Hollins, Luna and Lopez (2014) temper this concept suggesting the teacher at times still serves as the expert, occasionally playing the part of a role model and co-constructing knowledge through discussions of experience where learning can be reciprocal. The ability to play the multiple roles becomes important in environments where hierarchies and different levels of power exist. Williams et al. (2014) add, “the ability to teach a skill inherently requires a deeper knowledge” (p. 88) and caution that solely acquiring deeper knowledge in itself is a barrier, as understanding

how to be more than a role model, a mentor, coach, or guide takes time, resources and experience; learning.

Learning

Constructivism and adult development

Learning is not only defined as a change that has occurred in a person, but also as the action or experience that led to that change (Brookfield, 2012). “Learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience as a guide to future action” (Mezirow, 2012, p. 74). This definition is based on a constructivist theory, which consists of using multiple perspectives to make sense of an experience influenced by perceptions and actions. Constructivism, where reality is considered to be subjective and socially constructed, is central to the concepts of creating meaning from experience (Cranton, 2016; Kreber, 2012; Merriam & Bierema, 2014; Taylor & Cranton, 2013).

Mezirow (2012) says “learning occurs in one of four ways: by elaborating existing frames of reference, by learning new frames of reference, by transforming points of view, or by transforming habits of mind” (p. 84). Merriam and Bierema (2014) agree and suggest the heart of this learning is “engaging in, reflecting upon, and making meaning of our...physical, emotional, cognitive, social or spiritual [experiences]” (p. 105). Mezirow adds that by interpreting and encoding our experiences in such a holistic but individualistic manner, we create our own realities, explaining that the meanings we have applied to our personal past experiences serve as our unique lens through which we view the world. This is the core of constructivism. The spotlight is on the experience of the individual, and on the whole person. It is a lifelong process, and when viewed through a humanistic perspective, it is a potential source for growth and development.

Adult Learning

Cranton (2016), and Merriam and Bierema (2014) tell us an adult comes to learning with a plethora of life experience, with social roles and duties different of a child. Mezirow (2012) clarifies an adult learner is mature and “old enough to be responsible for his or her acts” (p. 88). Cranton, Merriam and Bierema, and Mezirow all agree adults are usually internally motivated by a desire for self or community improvement, or even just for the experience through gaining, elaborating, or changing their knowledge, skills or values; they want to learn. This definition is narrow as it only takes into consideration those who seek to learn. Adult learners can also be those who experience learning incidentally without being fully aware that it is occurring, for example, situations of spontaneous conversations with peers that occur in the workplace (Lloyd, Pfeiffer, Dominish, Heading, Schmidt, & McCluskey, 2014). This leads to a definition that substantially widens the scope of who is considered an adult learner as learning experiences can occur at any time, thus all adults in general could be considered adult learners.

Group learning

Whether an adult is seeking to learn, or learning through spontaneous conversation, Brookfield (1987), and Coady (2013) suggest that learning can be encouraged through the legitimization of private interpretations, trying out new roles, skills and competencies through discourse, to help the individual interpret meaning from experience. Coady, Cranton (2016), and Pretorius and Ford (2016) add although learning is an individual process, it can also be achieved through discussion and group work, providing an environment where reflective dialogue can occur, and the mentoring and support that comes from small group situations can improve information sharing.

English (2012), and Hollins et al. (2014) add that through careful planning, collaboration, and group participation, opportunities for increased knowledge, growth, and development can be fostered. Cranton (2016), and Walinga and Rowe (2013) agree that group learning provides support for growth and add that the experience can reinforce individual instruction and other sources of informal learning. Group learning provides a social space where informal learning can occur through sharing, peer interaction, constructive dialogue, and meaning making. Hollins et al. (2014) clarify that group learning is a forum for participants to have dialogue to analyse and interrogate their experiences to co-construct new understandings.

Experiential learning

Merriam and Bierema (2014), Coady (2013), Cranton (2016), and Virtanen et al. (2013) indicate there is much research building on the works of seminal authors such as Dewey (1938/1997) and Kolb (1984), supporting the idea of adult learning as being predominantly experiential, adapting experience from one situation and being able to immediately apply/use the new learning in other situations leading to new learning and new understanding, building on a foundation of experience. Merriam and Bierema explain that “Experience is thus a resource and a stimulus for learning” (p. 106). A review of traditional learning theories reveals that most involve experience whether it comes from a classroom, everyday life, or even incidental experiences, from which we construct meaning. Coady, Merriam and Bierema, and Pretorius and Ford (2016) clarify that although experiential learning reinforces insights, the learning, the experience and the interpretation of meanings from the experience, require critical assessment or comparison to prior interpretations of meanings and assumptions.

Experience can be used to relate to theoretical concepts and connect past experiences to a new concept being discussed. Past experiences can also help the individual recognise a

phenomenon when applying it to new concepts. Furthermore, by applying value or meaning to new concepts through reengagement with experience, a deeper level of learning can be fostered (Heddy, Sinatra, Seli, Taasobshirazi, & Mukhopadhyay, 2017; Kreber, 2012; Pretorius & Ford, 2016). Merriam and Bierema (2014) warn that prior learning or experience can also act as a barrier through the development of biases distorting new learning thus requiring unlearning prior to being open to new ideas. Toblin and Adler (2016) agree with Merriam and Bierema, that a negativity bias can prevent new learning and elaborate that negative bias can contribute to organisational or workplace cultures that prevent all types of learning including informal and incidental learning.

Coady (2013), Fazio-Griffith and Ballard (2016), and Heddy et al. (2017) suggest biases can be transformed to new ways of knowing, through the design of experiential learning; by encouraging reflection on experiences from different perspectives, which challenges the learner's beliefs and values. Merriam and Bierema (2014), and Pretorius and Ford (2016) agree, suggesting it is in this type of experiential learning, where learners become more comfortable and confident, and make meaningful discoveries as a result of the experience, that a new value for self-directed learning is cultivated.

Self-Directed learning

According to Cranton (2016), although the concept of self-directed learning is often equated with adult education theory, it is actually a learning preference and therefore we cannot assume that all adults are automatically self-directed. Lai, Gardner, and Law (2013), and Merriam and Bierema (2014) define self-directed learning as an autonomous process where learners diagnose their own learning needs, identify their preferred ways of learning, and self-assess their progress. Lai et al. (2013), Merriam and Bierema (2014), and Pretorius and Ford

(2016) further explain, depending on the developmental stage of an individual, their capacity for self-directed learning may vary. A self-directed readiness depends partially on cognitive variables and the ability to connect new learning to what the individual already knows (Merriam & Bierema, 2014). Pretorius and Ford add self-directed learning is cognitively demanding however, if there is willingness, motivation, curiosity, and a problem-solving orientation, self-directed learning can be nurtured.

Although there seems to be a correlation between cognitive ability and willingness to be a self-directed learner, reasons why remain mostly unknown. Lai et al. (2013) suggest that the learner may self-impose barriers, such as claiming a daunting workload, or questioning a self-directed process, and may prefer to have guidance from a facilitator to ease or normalize the chosen route. This may be an initiative, motivational or independence issue, but the research does not indicate if this contributes to, or is a result of, lower cognitive ability and understanding. Pretorius and Ford (2016) found that encouraging self-discovery through journaling, with the support of reflective dialogue with peers, resulted in more engagement in self-directed learning. They suggest that critical reflection helps individuals identify their educational needs. Cranton (2016) agrees, adding that a “self-directed learner [is] one who participates freely in dialogue in order to test perspectives against those of others and modify them accordingly” (p. 17), which is a form of critical thinking. According to Mezirow (2012), the goal of adult education is to help adults become autonomous learners. To achieve such autonomy, Kreber (2012) agrees with Pretorius and Ford, and Cranton, and suggests the answer is critical reflection.

Transformational learning

A common theme amongst the scholars of transformational learning is, transformation is not likely to occur without critical reflection (Brookfield, 2012; Cranton, 2016;

Meriam & Bierema, 2014, Mezirow, 2012). Critical reflection can be viewed as a link between being a self-directed learner and a transformational learner. Just as in the theory of transformational learning, where critical reflection comes before transformation, I will unpack critical reflection prior to applying the concepts to transformational learning.

Critical thinking and critical reflection

Often the terms reflection, critical reflection, and critical thinking are used interchangeably. Kreber (2012) and Meriam and Bierema (2014) suggest that reflection is a principal or central goal of adult education. It is through reflection and sharing of experiences with others that new knowledge is constructed. Learning occurs when the understanding from those experiences are applied to new situations (Cranton, 2016; Merriam & Bierema, 2014). According to Brookfield (1987), English (2012), and Kreber (2012), critical reflection is about challenging ideas that are taken for granted; examining underlying assumptions of ideas, actions, perceptions or meanings; attending to life's complexities; and pondering alternative ways of thinking.

Brookfield (1987) differentiates his version of critical thinking from that which is taught in many educational institutions, citing that analysis of evidence and problem solving is only part of the equation, and a missing component is critical reflection. Kreber (2012) distinguishes critical reflection from critical thinking and suggests that while the practice is closely related, the foundation of critical reflection is critical theory where resulting knowledge is not contaminated by the ideology of others. Brookfield (2012), like Kreber, looks at critical reflection through the lens of critical theory, suggesting that instead of critical reflection being individual and competitive, it is cooperative and collective, working towards equality. It is emancipatory and an unmasking of power. Although Merriam and Bierema (2014) agree that

critical thinking does not occur without critical reflection, they focus on the individual. It “is a reflective thought process of assessing what we believe or do” (p. 213). The common thread between Brookfield (1987) and Merriam and Bierema (2014) is that critical reflection is simply an attribute of critical thinking, where assumptions are challenged and identified, and alternatives are explored and imagined individually in the context of social structures; how we fit in the world.

Brookfield (1987), and Merriam and Bierema (2014) tell us critical reflection includes three phases; identification of assumptions, exploration of the assumptions and how they compare to our constructed reality, and integration of modified assumptions into our realities. Pretorius and Ford (2016) add it is cognitively demanding, takes time to develop, and is difficult to teach as instruction alone is insufficient. Brookfield, Cranton (2016), and Taylor and Cranton (2013) counsel that not everyone is willing to engage in critical reflection as it may be uncomfortable for some. Many of the authors agree that critical reflection may challenge core beliefs and assumptions, and personal weaknesses may be revealed, resulting in the potential for emotional upheaval (Brookfield, 1987; Cranton, 2016; Hollins et al., 2014; Mezirow, 2012; Taylor & Cranton, 2013), but both Brookfield and Kreber (2012) imply there is a need to overcome the potential unpleasantness, as critical reflection is an important part of adult development.

Fostering critical reflection

There are many methods to foster critical reflection. Brookfield (1987), Kreber (2012), and Mezirow (2012) all describe a common theme where many individuals are confronted with unexpected or unfamiliar ideas that cause them to consider their beliefs or perceptions. It is this disequilibrium that initiates the process of critical reflection. The

differences in the methodologies are based on how the individual is presented with the disorientating information. Since there are many methods, the ones examined here are germane to the focus of this literature review; using critical incidents; through experience; engaging in dialogue (critical questioning); and journaling.

Brookfield (1987), Cranton (2016), and Walinga and Rowe (2013) discuss a process where sample scenarios of critical incidents, designed in a way that could cause stress or discomfort for the individual, are analysed and compared with personal experiences, and articulated in a group setting. Ochoa, Casellas-Grau, Vives, Font, and Borràs (2017), and Pretorius and Ford (2016) discuss unintentional critical incidents such as a sudden illness or surprising event that cause individuals to question and analyse their values and beliefs. In both described processes, individuals encounter perspectives that challenge their previous knowledge acquired through past experiences, fostering critical thinking and reflection. This is in concordance with Mezirow (2012) who believes critical reflection can be fostered by something read, seen, experienced, or through discussion with others.

Dialogue with others is often used for peer support to balance the negative emotions that can come with critical reflection. Brookfield (1987) explains dialogue with others involves critical questioning that can occur through group conversation, prompting reflective analysis. However, according to Cranton (2016), and Pretorius and Ford (2016), critical questioning can be used to stimulate critical reflection and critical self-reflection skills through independent journaling where individuals can articulate assumptions. Fazio-Griffith and Ballard (2016), Hollins et al. (2014), and Pretorius and Ford (2016) all agree, with or without critical questioning, journaling has proven to be a successful method to encourage critical reflection, although journaling is focussed more on critical self-reflection in contrast to critical reflection. It

provides a private forum where experiences can be documented, reflected upon, and actioned; where theory can be connected to experience and practice.

The significance of learning to think critically is to see our own beliefs and values in action, to become aware of possible distortions in our perceptions and of those around us, and to act on the new interpretations of our reality arising from our reflection. Merriam and Bierema (2014) suggest it is through systematic reflection where we make new meanings of experience, we change, or transform. Mezirow (2012) agrees suggesting that “reflection is key to transformative learning” (p. 25) or as Cranton (2016) explains through a constructivist lens, changing the way an individual sees themselves in the world; changing their perspective of their constructed reality.

Transformational learning theory

Transformational learning is where constructivism and adult development; group, experiential, self-directed learning; and critical thinking and reflection, are brought together. According to Mezirow (2012), transformational learning is “transforming a problematic frame of reference to make it more dependable in our adult life by generating opinions and interpretations that are more justified” (p. 85). Cranton (2016), Fazio-Griffith and Ballard (2016), and Mezirow, explain a frame of reference is the habit of mind or set of assumptions; the way an individual thinks, feels and behaves, based on each individual’s life narrative. Our frames of reference include values and beliefs that act as a filter for interpreting meaning that comes from our experiences. According to Brookfield, (2012), transformative learning

is to transform one's meaning schemes (sets of assumptions governing particular situations) and meaning perspectives (broader worldviews) so that they explain the disorienting dilemmas (situations that take us by surprise and cause us to

question assumptions) we inevitably encounter as we journey through adulthood.

In the process we alter how we see ourselves, our purpose in the world, and the way that purpose can be realized. (p. 142)

Taylor and Cranton (2013) add “it is the revision of the meaning of experience that is the essence of learning” (p. 35). Brookfield, and Cranton agree, adding that transformational learning is the result of critical reflection and dialogue fostered by an event and occurs by critically examining habits of mind, revising them, and acting on the revised point of view. Brookfield, and Merriam and Bierema (2014) suggest transformational learning is freeing, empowering, and emancipatory. Brookfield, Charaniya (2012), and Merriam and Bierema all suggest in transformational learning, it is not just the meaning itself that changes, but the way we know that changes. Charaniya adds it is a circular process where beliefs are revisited and simultaneously created, by meanings associated with experience. Mezirow describes transformational learning as a primarily cognitive exercise, but according to Charaniya, and Illeris (2013), it also includes emotions and social dimensions; it is developmental and therefore involves the identity of the individual.

Identity and spirit in transformational learning

Brookfield (2012), and Illeris (2013) tell us that who we are and how we think—our identity— is shaped by our cultures and dominant ideologies of society. It includes our individual cognitive, emotional, and social elements and is linked directly to our environment and social position. According to Charaniya (2012), transformation is an ‘extrarational’ process involving all of these elements that redefine an individual’s place in society; how they see themselves and their role; what and how they think. By understanding transformational learning through the lens of identity, a better viewpoint can be elicited. Through the filter of identity, it

can be seen that values and beliefs are much deeper than just cognitive thought and make up a spiritual and cultural foundation inherent to the learner's identity. It is for this reason Brookfield and Illeris caution that for transformation to occur, ideology and personal identity must also transform, a potentially painful experience.

Charaniya (2012) explains the realities we create for ourselves; our personal narratives and the knowledge socially and collaboratively constructed through dialogue; the whole person and the interconnectedness to others, links identity and spirit. Therefore, according to Illeris (2013) and Taylor and Cranton (2013), areas of identity need to be addressed cautiously and in a way that the change is not overwhelming, promoting a desire or a willingness to learn. Merriam & Bierema (2014) agree and warn when situations take us by surprise, caution becomes difficult to employ. When facilitators make attempts to foster transformational learning, the whole person needs to be considered including affect, intuition, physical, and spiritual self.

Fostering Transformational Learning

Mezirow's (2012) original conception was a ten-step process for transformational learning to occur but Charaniya (2012) counters that it is not a simple linear progression of steps but "an ongoing, cyclical smorgasbord of opportunities to dialogue, share stories, explore symbols, and learn from each other" (p. 238). Coady (2013) discusses a readiness for change where opportunities for self-examination of the assumptions of the individual as well as those of others, agreeing that such a social learning environment can lead to transformational learning experiences. Although linear and cognitively focussed, the concept of constructive discourse with others is at the core of Mezirow's transformational theory. Critical discourse and social dialogue is supported by Hollins et al. (2014) and can create a "meaningful and productive process for understanding and transforming" (p. 101). Cranton (2016) states discourse with

others is a requirement for perspective transformation. Merriam and Bierema (2014) agree suggesting discourse and social interaction cuts across most research on transformational learning.

Another common theme in fostering transformational learning is that an event or experience usually initiates the process. Mezirow (2012) suggests a ‘disorienting dilemma’ starts the process. Cranton (2016) proposes that uncomfortable questions can start the process. Coady (2013), and Fazio-Griffith and Ballard (2016) add that encouraging ‘preflection’ on ideas prior to an activity or experience and reflection afterwards are important. In all of the scenarios, the experience causes questioning of deeply held beliefs and attitudes that can lead to a transformation of core beliefs (Cranton, 2016; Lindstrom, Cann, Calhoun, & Tedeschi, 2013; Merriam & Bierema, 2014; Mezirow, 2012). According to Brookfield (2012), Charaniya (2012), Mezirow (2012), and Taylor and Cranton (2013), it is important to note that although the types of experiences being discussed can lead to transformational learning, an openness to change in the individual must exist. The individual cannot be forced to transform, an idea according to Taylor and Cranton that is not clearly addressed in the different views of transformational learning theories. What none of the authors touch on is what psychological state is the individual in if an event or experience causes questioning of deeply held beliefs, and transformational learning does not occur?

Learning and Mental Health

Links to Psychology

Brookfield (2012), Charaniya (2012), Cranton (2016), Merriam and Bierema (2014), Mezirow (2012), and Taylor and Cranton (2013), imply that the interpretation of meaning of an experience, and any change of prior meanings arising from the new interpretation, is solely in the

mind of the individual, as Dewey (as cited in Taylor & Cranton, 2013) says “in the sense of the psychological ... which is intrinsically psychical, mental, [and] private” (p. 36). According to Merriam and Bierema, many adult learning theories or models are rooted in psychology. Cranton narrows this concept and adds transformation is “learning through reflection on the psychic structures that make up one’s uniqueness” (p. 39), adding, according to Jungian psychology, the emergence of Self.

Mezirow (2012) makes the distinction between psychotherapy and adult education. Critical reflection in psychotherapy focuses on feelings and interpersonal relationships where in adult education, its focus is much wider including cognitive, affective, and conative dimensions. Cranton (2016) adds transformational learning is about changing self-perception and the sense of self in the world, but she also warns that it is important to know and understand where the role of an adult educator ends and where professional counselling is needed. Brookfield (1987) makes connections to therapy, counselling, and social work, describing how critical teaching focuses on scrutinizing the perceptions of individuals using group discourse, and presenting alternative realities. This is a process similar to cognitive behaviour therapy (CBT) where people learn how their beliefs or thoughts about specific events influence their emotions and behaviours (Toblin & Adler, 2016), a method used successfully in facilitating stress interventions (Carson & Jackson, 2011).

Facilitating stress interventions

Blaney and Brunsten (2015) describe an intervention to assist firefighters cope with stress through a process where fire fighters verbally ventilate and articulate about extreme incidents they have experienced. Personal reactions to the incident and coping mechanisms are discussed in a supportive environment, where reframing of incidents can occur, socially building

personal narratives. Blaney and Brunsten add that personal past experience with similar incidents helps individuals in this process. The process described by Blaney and Brunsten can be likened to critical reflection and discourse in social settings; the process of transformational learning (Brookfield, 2012; Cranton, 2016; Fazio-Griffith & Ballard, 2016; Illeris, 2013; Merriam & Bierema, 2014; Mezirow, 2012; Taylor & Cranton, 2013). The process includes scrutinizing the perceptions of the individuals, analysing and comparing their interpretation of their current experience to prior interpretations, and offering alternatives. Lindstrom, Cann, Calhoun, and Tedeschi, (2013) call this ‘selfdisclosure’, which can lead to “deliberate positive rumination” (p. 51), a form of critical self-reflection that can result in resiliency and growth versus intrusive rumination that results in distress. The difference between Blaney and Brunsten, and Lindstrom et al. is the former is reporting on an observation where the latter is describing an intentional process.

Blaney and Brunsten (2015), Smith and Ascough (2016), and Walinga and Rowe (2013) propose teaching health prevention, such as coping skills, to facilitate resiliency to stress. Smith and Ascough add that although coping strategies are a key, the stressor itself does not cause the inability to cope. It is the influence or the lens of the individual’s beliefs that create the reality to which they respond thus requiring cognitive appraisal; learning to discover, challenge and change how they view the stressor being experienced. This concept is in line with Walinga and Rowe where, in addition to learning coping skills, there must be reflection, framing of goals, learning strategies that support change, and trying on new roles. Merriam and Bierema (2014) agree that the constant change of adulthood, and the associated potential crisis of this change, can evoke transformational learning; changing how we think; reframing our understanding of circumstances; making meanings, and occasionally changing beliefs as a result of learning from

life experiences. When the concepts of changing beliefs as a result of learning from life experiences are applied to resiliency to stress, Ochoa, Casellas-Grau, Vives, Font, and Borràs (2017) add another paradigm to consider: is the resulting change negative, causing distress/posttraumatic stress, or positive, causing eustress/*posttraumatic growth* (PTG)?

Ochoa et al. (2017) suggest PTG can be facilitated by using assimilation, making the event consistent with an individual's beliefs to avoid change, or; accommodation, changing beliefs to incorporate the event. Smith and Ascough (2016), similar to Ochoa et al., and Toblin and Adler (2016), suggest that if the situation (event or experience) can't be changed or assimilated, that the individual can be trained to change how they view the situation, to view events from a positive aspect, changing their narrative. Ochoa et al. cite an ethical dilemma, cautioning that accommodation may "[call] into question the coherence, sense, and self-esteem of the subject's identity" (p. 30), a potential outcome of critical reflection and transformational learning that according to Brookfield (1987), Kreber (2012), and Taylor and Cranton, (2013), may be a painful but required outcome. Kreber (2012) contributes to assist in overcoming any ethical dilemma, educators must be open and honest about the potential consequences. Toblin and Adler add teaching must be realistic, identifying what can be changed, and seeking out the positive events, where Walinga and Rowe (2016) promote a transformation in stress perception where each event is viewed as opportunity for growth; reframed by rethinking, social networking, and problem-solving communication strategies.

Summary of the Literature

Brookfield (1987), Cranton (2016), Fazio-Griffith and Ballard (2016), and Merriam and Bierema (2014) tell us to teach is actually to facilitate, to collaborate, to be part of the group and learn together as a group. It is to be *an* expert, not *the* expert. To guide, mentor, have

dialogue, to critically reflect and foster critical reflection, and learn. According to Merriam and Bierema, (2014), Coady (2013), Cranton (2016), and Virtanen et al. (2013), learning is about the individual's meanings developed from experience, how those meanings are applied to new experiences, and how we create our realities from those experiences. It is how adults grow and develop. We learn through and by experience, and the meanings we create through critical reflection, dialogue and discourse with others (Mezirow, 2012; Merriam & Bierema, 2014). Merriam and Bierema (2014) and Pretorius and Ford (2016) add that self-directed learning enhances the ability to critically reflect, but not all adults prefer or have the innate ability to be a self-directed learner. Self-directed learning can and should be encouraged as it leads to a more autonomous learner who is willing to engage in critical self-reflection and group learning; critical reflection with others.

Brookfield (1987), Cranton (2016), Kreber (2012), Merriam and Bierema (2014), and Pretorius and Ford (2016) promote reflection as the cornerstone of adult learning, where the ability to critically reflect is a significant component of adult development. Brookfield and Merriam and Bierema propose that critical reflection is how we identify and challenge our assumptions and see how we fit in the world, through the identification and exploration of assumptions, how they compare to our constructed reality, and integration of the modified assumptions into our realities. Brookfield, Cranton, Hollins et al. (2014), Mezirow (2012), and Taylor and Cranton (2013) all agree critical reflection is difficult to teach, as challenging core beliefs may be painful for some. Regardless, both Brookfield, and Kreber emphasize the importance of critical reflection in adult development. They suggest that critical reflection can and should be taught, learned, and fostered. There are many methods used to teach critical reflection, but the common theme highlighted by Brookfield, Kreber, and Mezirow is the

confrontation of individuals with unexpected or unfamiliar ideas that cause them to reconsider their previously held beliefs or perceptions. Mezirow summarizes that critical reflection can be fostered by something read, seen, through discussion with others, or experienced, including unexpected critical incidents. Cranton builds on Mezirow's foundation suggesting the result of critical reflection can be a change in the way an individual sees themselves in the world; changing their world, resulting in transformational learning.

Brookfield (1987), Cranton (2016), Fazio-Griffith and Ballard (2016), and Mezirow (2012) explain transformational learning as changing *how* we know by interpreting experiences and generating meanings that are more justified. It affects our values and core beliefs that act as a filter for interpreting meaning that comes from our experiences, explaining the disorienting dilemmas we encounter, and changing the way we see ourselves and the world. Cranton, Merriam and Bierema (2014), Mezirow, and Hollins et al. (2014) submit critical reflection and constructive discourse with others is key to transformational learning, regardless of what causes the critical reflection—be it fostered, or as a result of a critical incident. Brookfield (2012), Charaniya (2012), Coady, (2013), Mezirow, and Taylor and Cranton (2013) add that although critical reflection and dialogue can be fostered, an openness to change in the individual must exist for transformational learning to occur.

We see many similarities when using critical reflection and transformational learning as a lens to view facilitation of stress resilience strategies. Smith and Ascough (2016), and Walinga and Rowe (2013), propose that it is the lens of the individual's beliefs that create the reality to which they respond, learning to discover, challenge and change how they view stressors. Walinga and Rowe add that there must be reflection, framing of goals, learning strategies that support change, and trying on new roles when responding to stress, similar to the

steps involved in transformational learning as described by Mezirow (2012). Merriam and Bierema (2014) agree that the constant change of adulthood and reframing our understanding of circumstances can evoke transformational learning. Ochoa et al. (2017) add a new paradigm to consider, the potential of positive and negative outcomes of transformational learning. Their goal of transformational learning is to foster PTG after stressful or traumatic events, avoiding potential negative outcomes, cautioning the transformational learning involved can influence the self and identity. Brookfield (2012), Charaniya (2012), and Illeris (2013) also advise caution when areas of identity are involved, but suggest for transformation to occur, ideology and personal identity must also transform.

Critique and discussion

The transformation discussed by Ochoa et al. (2017), Smith and Ascough (2016), and Walinga and Rowe, (2013) focuses on reflection and transformation subsequent to a critical event, versus rumination resulting in negative coping strategies. Conversely, Brookfield (1987; 2012), Cranton (2016), Kreber (2012), Hollins et al. (2014), Merriam and Bierema (2014), Mezirow (2012), and Pretorius and Ford (2016) suggest that critical reflection and discourse is key to transformational learning, the difference being it can be fostered with or without a critical event, if the individual is open to transformation (Brookfield, 2012; Charaniya, 2012; Coady, 2013; Mezirow, 2012; Taylor & Cranton, 2013). Brookfield (1987), Cranton, and Walinga and Rowe tell us individuals can be taught how to think critically; to critically reflect. It is through the use of reflection and discourse with others that individuals can be encouraged to be self-directed learners (Pretorius & Ford, 2016) where, according to Brookfield (1987) and Coady (2013), legitimization of private interpretations of meanings of experiences can occur. It is these legitimizations that become important in learning as it is where meaning can be ascribed to

experience. Brookfield (1987), Cranton, Merriam and Bierema, and Mezirow suggest a facilitator or co-learner is required to encourage the process. Lloyd et al. (2014) suggest such co-learning can occur spontaneously with peers. Common amongst the authors is there must be reflective and supportive dialogue with others to analyse experiences to interpret meaning and potentially experience transformational learning (Brookfield, 1987; Cranton, 2016; Pretorius & Ford, 2016; Walinga & Rowe, 2013).

Both fostering PTG, and fostering critical reflection and transformational learning, follow the same principles, with the difference being fostering PTG focuses on feelings and relationships (Mezirow, 2012), changing rumination to reflection (Lindstrom et al., 2013), and only after a crisis; and transformational learning focuses on perceptions, the way people think, and can occur as a result of critical reflection with or without a crisis (Brookfield, 1987; Cranton, 2016, Mezirow, 2012). Brookfield (1987) suggests that the most important desired result from fostering critical thinking is to resolve the anomalies between what we believe is supposed to be happening and what appears to be taking place. Brookfield adds that the role of the facilitator of critical thinking is to analyse underlying assumptions and help imagine alternatives, encouraging an openness to alternative ideas and making enlightened choices. Coady's (2013) and Fazio-Griffith and Ballard's (2016) concept of prefection would suggest that the analysis of underlying assumptions, and imagination of alternatives, can occur in advance of experiencing critical events. The question the literature leaves is: can an individual be trained to think critically to respond to, and in preparation for, expected, potential, or real critical events, as a stress resiliency strategy? The connections made in the literature suggest that since it is the influence or the lens of the individual's beliefs that create the reality to which they respond to, that by facilitating or guiding an individual to become a self-directed learner, willing to seek discourse with others, to

preflect, critically reflect, imagine alternatives, and be open to transformation, to resolve the anomalies between what we believe is supposed to be happening and what appears to be taking place, may serve as a self-directed resilience strategy.

Theoretical Gap in the Literature

Brookfield (2012), Charaniya (2012), Illeris (2013), and Merriam and Bierema (2014) suggest a major component of critical reflection, and the resulting transformational learning, is changing how we think. Brookfield (1987), Cranton (2016), Charaniya (2012), Illeris (2013), Kreber (2012), and Merriam and Bierema (2014) emphasize the importance of this action in the process of adult development. Brookfield (1987) goes as far as suggesting the ability to think critically, and having the capacity for cognitive restructuring, results in a more satisfying life, “somehow more developed, mature, or adult” (p. 113), adding that the ability to think critically is tied to life experience. Our implicit assumptions, which form the lens through which we view the world, are created through our life experiences. By making our assumptions explicit through discourse with others, they can be reflected on, analysed, and our interpretive perspectives of life’s events may be changed.

What can be inferred is an individual who constantly critically reflects on life’s events, seeks out opportunities to have dialogue on their experiences; changing how they know, continuing to grow, develop, and mature; could be classed as a transformational learner, a concept not identified in the literature. Can the concept of a transformational learner explain why so many who experience critical events go on about their lives with minimal distress, or even experience PTG in comparison to the smaller number that experience distress? Can a facilitator of adult education assist individuals in becoming better transformational learners—adults who use critical thinking on an ongoing basis to constantly analyse what, why, and how they think

and believe? And if so, can the same strategies be used to promote resiliency to stress, to learn to be able to critically reflect instead of ruminating on life's experiences? To undergo self-initiated critical reflection and discourse with peers or others, to self-initiate their own cognitive restructuring or transformational learning, and accommodate their beliefs to incorporate change and experience PTG versus distress? The connections made in this literature review, and the gaps in the literature, suggest further research is required to explore how transformational learning can encourage resiliency and self-directed PTG in First Responders, where individuals become transformational learners, self-initiating their own cognitive restructuring; seeking out opportunities to change and adapt to accommodate their meanings interpreted from experiences into their belief structures.

References

- Blaney, L., & Brunsten, V. (2015). Resilience and health promotion in high-risk professions: A pilot study of firefighters in Canada and the United Kingdom. *The International Journal of Interdisciplinary Organizational Studies*, 10(2), 23-32. Retrieved From <https://viurrspace.ca/handle/10613/2580>.
- Brookfield, S. (1987). *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco, CA: Jossey-Bass
- Brookfield, S. (2012). Critical theory and transformative learning. In E.W. Taylor & P. Cranton (Eds.), *The handbook of transformational learning: Theory, research and practice* (pp. 131–145). San Francisco CA: Jossey-Bass.

- Carson, B. (Producer), & Jackson, J. (Director) (2011). *War in the mind* [Motion Picture].
Canada: Judy Films Inc. Retrieved from
<http://www.cultureunplugged.com/documentary/watch-online/play/52568/WAR-IN-THE-MIND>
- Charaniya, N. (2012) Cultural-spiritual perspective of transformational learning. In E.W. Taylor & P. Cranton (Eds.), *The handbook of transformational learning. Theory, research and practice* (pp. 231–244). San Francisco, CA: Jossey-Bass.
- Coady, M. (2013). Adult health learning and transformation: A case study of a Canadian community-based program. *Adult Education Quarterly: A Journal of Research and Theory*, 63(4), 321–337. Retrieved from <http://libproxy.stfx.ca/login?url=https://search-proquest-com.libproxy.stfx.ca/docview/1651852602>
- Cranton, P. (2016). *Understanding and promoting transformative learning: A guide to theory and practice* (3rd Ed.) [Kindle version]. Sterling, Virginia: Stylus Publishing.
- Dewey, J. (1938/1997). *Experience and education*. New York, NY: Simon & Schuster.
- English, L. (2012). A critical theory of adult health learning in adult education and health. In L. English, (Ed.), *Adult education and health* (pp. 12–26). Toronto, ON: University of Toronto Press.
- Fazio-Griffith, L., & Ballard, M. (2016). Transformational learning theory and transformative teaching: A creative strategy for understanding the helping relationship. *Journal of Creativity in Mental Health*, 11(2), 225–234. doi:10.1080/15401383.2016.1164643
- Heddy, B. C., Sinatra, G. M., Seli, H., Taasobshirazi, G., & Mukhopadhyay, A. (2017). Making learning meaningful: Facilitating interest development and transfer in at-risk college students. *Educational Psychology*, 37(5), 565–581. Retrieved from

- <http://libproxy.stfx.ca/login?url=https://search-proquest-com.libproxy.stfx.ca/docview/1913349867>
- Hollins, E. R., Luna, C., & Lopez, S. (2014). Learning to teach teachers. *Teaching Education*, 25(1), 99–124. Retrieved from <http://libproxy.stfx.ca/login?url=https://search-proquest-com.libproxy.stfx.ca/docview/1651843889>
- Illeris, K. (2014). Transformative learning and identity. *Journal of Transformative Education* 12(2), 148–163. doi:10.1177/1541344614548423
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, N.J: Prentice-Hall.
- Kreber, C. (2012). Critical reflection and transformative learning. In E.W. Taylor & P. Cranton (Eds.) *The handbook of transformational learning. Theory, research and practice* (pp. 323–340). San Francisco CA: Jossey-Bass.
- Lai, C., Gardner, D., & Law, E. (2013). New to facilitating self-directed learning: The changing perceptions of teachers. *Innovation in Language Learning and Teaching*, 7(3), 281–294. Retrieved from <http://libproxy.stfx.ca/login?url=https://search-proquest-com.libproxy.stfx.ca/docview/1826519836>
- Lindstrom, C. M., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2013). The relationship of core belief challenge, rumination, disclosure, and sociocultural elements to posttraumatic growth. *Psychological Trauma: Theory, Research, Practice, and Policy*, 5(1), 50–55. Retrieved from <http://dx.doi.org/10.1037/a0022030>
- Lloyd, B., Pfeiffer, D., Dominish, J., Heading, G., Schmidt, D., & McCluskey, A. (2014). The New South Wales allied health workplace learning study barriers and enablers to learning

- in the workplace. *BMC Health Services Research*, *14*(134). doi:10.1186/1472-6963-14-134
- Merriam, S., & Bierema, L. (2014). *Adult learning: Linking theory and practice*. San Francisco, CA: Jossey-Bass.
- Mezirow, J. (2012). Learning to think like an adult. In E.W. Taylor & P. Cranton (Eds.) *The handbook of transformational learning. Theory, research and practice* (pp. 73–96). San Francisco, CA: Jossey-Bass.
- Ochoa, C., Casellas-Grau, A., Vives, J., Font, A., & Borràs, J. (2017). Positive psychotherapy for distressed cancer survivors: Posttraumatic growth facilitation reduces posttraumatic stress. *International Journal of Clinical and Health Psychology*, *17*(1), 28–37. Retrieved from <http://dx.doi.org.libproxy.stfx.ca/10.1016/j.ijchp.2016.09.002>
- Pretorius, L., & Ford, A. (2016). Reflection for learning: Teaching reflective practice at the beginning of university study. *International Journal of Teaching and Learning in Higher Education*, *28*(2), 241–253. Retrieved from <http://libproxy.stfx.ca/login?url=https://search-proquest-com.libproxy.stfx.ca/docview/1871585423>
- Smith, R., & Ascough, J. (2016). An overview of cognitive affective stress management training. In *Promoting emotional resilience: Cognitive-affective stress management training* (Loc 821–1518) [Kindle version]. New York, NY: Guilford Press.
- Taylor, E., & Cranton, P. (2013). A theory in progress? Issues in transformative learning theory, *European Journal for Research on the Education and Learning of Adults*, *4*(1), 35–47. Retrieved from <http://dx.doi.org/10.3384/rela.2000-7426.rela5000>

- Toblin, R., & Adler, A. (2016). Resilience training as a complementary treatment for PTSD. In D. M. Benedek & G. H. Wynn (Eds.), *Complementary and alternative medicine for PTSD* (pp. 263–290). New York, NY: Oxford University Press.
- Virtanen, P., Myllarniemi, J., & Wallander, H. (2013). Diversifying higher education: Facilitating different ways of learning. *Campus-Wide Information Systems*, 30(3), 201–211. Retrieved from <http://libproxy.stfx.ca/login?url=https://search-proquest-com.libproxy.stfx.ca/docview/1373090258>
- Walinga, J., & Rowe, W. (2013). Transforming stress in complex work environments. *International Journal of Workplace Health Management*, 6(1), 66–88.
doi:10.1108/17538351311312420
- Williams, B., Fellows, H., Eastwood, K., & Wallis, J. (2014). Peer teaching experiences of final year paramedic students: 2011–2012. *Journal of Peer Learning*, 7(13), 81–91. Retrieved from <http://libproxy.stfx.ca/login?url=https://search-proquest-com.libproxy.stfx.ca/docview/1697497121>