Transformative Learning

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Definition

Throughout childhood – based on our families, language, history, culture, schooling, and all life experiences – an overarching, complex, and mostly unconscious set of beliefs of how the world works are developed. Akin to our own personal philosophy, this entirely unique "worldview" developed over the first two decades of life, is comprised of "frames of reference" (or hidden-meaning structures of assumptions) which we consider to be common-sense, unquestionable truths about what is good, right, true, and valuable. We view and comprehend our experiences through these frames of reference and, consequently, frames of reference shape our feelings, perceptions (views), expectations, cognition, and subsequently guide our actions (Mezirow 1991).

Sometimes, however, during life, we experience moments and processes that highlight our unconscious beliefs and instigate significant and lasting changes in our worldview, or more specifically, the "frames of reference" that comprise our worldview (Cranton 1994; Mezirow 1991, 1995, 1996, 2000, 2007). After watching his wife experience such a dramatic shift in her frames of reference, John Mezirow, Professor of Education at Columbia University, coined the term *transformative learning* to describe this process of deep learning. Mezirow (2003, 58) defined transformative learning as "learning that transforms problematic frames of reference – sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets) – to make them more inclusive, discriminating, open, reflective, and emotionally able to change".

Transformative learning is not a simple process. Humans have the propensity to reject perspectives which are not aligned with their own frames of reference and consider new perspectives illogical or as aberrations (Kaplan et al. 2016). Hence, a disorienting dilemma, which challenges a person's worldview, is often the catalyst for transformative learning. Disorientation happens when someone experiences something not yet contained within their "frames of reference", and hence affects them in deep and profound ways. However, reflection, discourse, and other tran-

srational meaning-making processes can support people through this disorientation to shift previous perspectives and assumptions (Cranton 2016; Feller 2015).

These processes – discourse, reflection, action – describe a type of learning where people make their own meaning of an experience and then use this interpretation to guide their actions or decision-making. According to John Mezirow (2003), critical reflection via discourse allows individuals to inquire into their existing frames of reference, leading to new or revised interpretations of experiences that guide our understanding and action. In essence, in transformative learning, "meaning" converts into three orders of learning: learning about the world (*what*), learning about their own worldview (*why*), and insights of how then to act in the world (*how*) (Cranton 2016, 28; Ross 2020). Therefore, transformative learning is not only about adding to the existing knowledge base, but it requires being aware of one's own and others' assumptions or perspectives and subsequently evaluating their relevance (critically) via reflection (Mezirow 2000), which may lead to expanding their worldview (Taimur and Onuki 2020, 2022).

Background

While John Mezirow's work is foundational to the theory and facilitation of transformative learning, there is a growing ecology of transformative learning theories building from other foundational scholars (Stuckey et al. 2013). Other contributors to transformative learning theory recognized in adult education literature include Paulo Freire, Carl Jung, Laurent Daloz, John Dirkx, and Patricia Cranton, and are briefly summarized here: *Paulo Freire's* transformative learning is focused on individual and social liberation. In his social-emancipatory transformative learning, Freire (1970) argues that conscientization, or raising awareness about systemic forms of oppression, is key and leads to social liberation. Carl Jung's (1921) concept of transformative learning is grounded in individualization. As a type of psychoanalytical transformative learning, an individual becomes aware of their own processes of formation, differentiation, and different selves operating within the psyche for the development of their individual personality (Boyd and Myers 1988).

According to Laurent Daloz (1986), transformative learning is a process that occurs between the cognitive developmental phases when the changing world requires learners to have new meaning structures to make meaning (Dirkx 1998). *John Dirkx* explores how transformative learning occurs through subjective reframing or self-reflection (rather than Mezirow's focus on objective reframing or critical reflection), using soul and subconscious mind work, to support an evolution in frames of reference (Dirkx 2008; Dirkx et al. 2006). Patricia Cranton supported individual transformations while taking the social context of the individuals into account, but the focus of her work was how individuals transform in

light of their own personality (Taylor and Tisdell 2020). Collectively, these theories illustrate several reasons why transformative learning is an integral part of transdisciplinary learning processes.

Firstly, transformative learning and transdisciplinary learning share an intention for transformative change. The word *transformation* appeared in 15th century Latin and French, specifically in reference to Christianity and ideas of liberation and conversion (Lange 2015). *Trans* means "beyond or across" and *formare* means "to form"; thus transformation is understood as "undergoing a change in form". The shared assumption of *transformation* across both learning theories is that change, specifically radical change, is beneficial for societal improvement, as compared to continuity or custom. Specifically, processes of transdisciplinary learning can actively seek transformative outcomes in three ways, including a change in situation, change in stocks and flows of knowledge, and transformative learning for all involved (Mitchell et al. 2015). The outcomes of transformative learning across both learning theories are similar, e.g. reflection and reconstruction of perspectives, values, and norms (Mitchell et al. 2015; Young and Karme 2015), giving more importance to social justice and environmental resources (Moyer et al. 2016), transformation of worldview and perspective (Feriver et al. 2016; Papenfuss and Merritt 2019; Ross and Mitchell 2018), and experiencing self-awareness (Taimur et al. 2022). Both learning theories seek transformative learning via continuous learning between internal interpretation, i.e. *why*, and external action, i.e. *how* (Müller et al. 2005; Ross and Mitchell 2018).

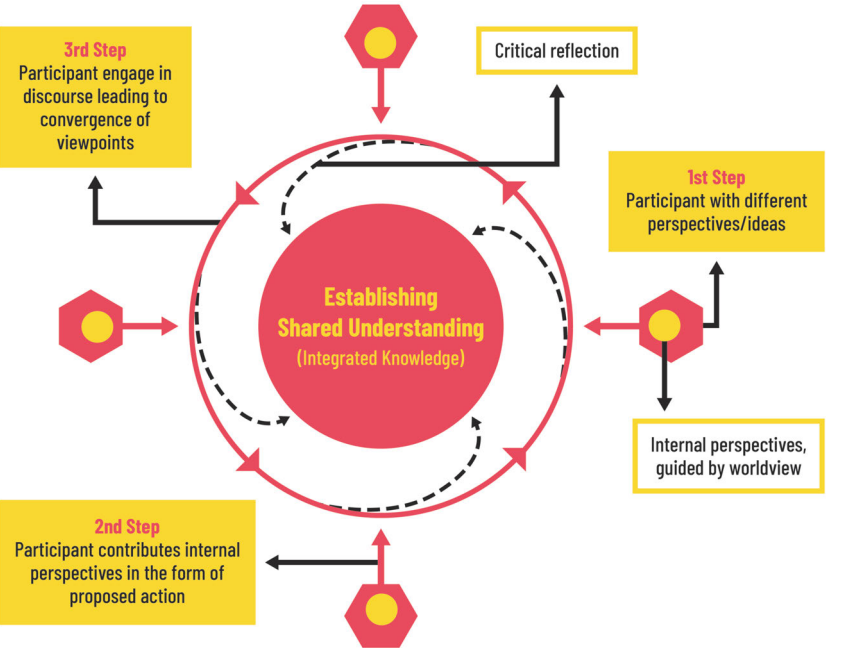
Secondly, transformative learning theory helps explain to educators and students alike why transdisciplinary learning is so often challenging for students. Students have often unconsciously learned through formal education that learning happens in a school, is discipline-based, and usually a single right answer is to be provided. In contrast, the first experience of a transdisciplinary course challenges many of these "common sense" learning "frames of references", e.g. beliefs about what learning is, who it is for, and how it is done. Many students can experience emotional responses to the challenges of their beliefs about what "learning" is. Similarly challenging, in transdisciplinary learning, participants engage with other actors in discourse and reflection to shift their perspectives and establish a shared, emergent understanding. Engagement in critical discourse and reflection to shift point of view is an emotionally disturbing process, where learners may feel uncomfortable, surprised, tormented, embarrassed, and emotional. Transformative learning theory guides educators and students on ways to honor, process, and use these "disorienting dilemmas" inherent in a transdisciplinary process as part of the meaning-making and learning in the experience, towards more inclusive, open, and reflective frames of reference.

Thirdly and more specifically, transdisciplinary learning requires critical evaluation of diverse perspectives, which Mezirow's processes of discourse and criti-

cal reflection can effectively support. For example, transdisciplinary learning to collaboratively address complex situations can involve a three-step (creative, descriptive, and normative) learning cycle. As a first creative step, each participant comes to the table with their own perspectives, knowledge, experiences, purpose, and interpretations (represented by pentagons in Figure 1) guided by their worldview (represented by circles within the pentagons in Figure 1). In the second descriptive step, participants share their internal perspectives in the form of proposed actions. Transformative learning processes allow individuals to be aware of their own worldviews and perspectives and be more open to others' perspectives, and hence can support step two. In the third normative step, these actions are discussed between the participants, leading to the convergence of viewpoints to create new integrated knowledge, concepts, and ideas. In this third step, transformative learning processes engage participants in critical discourse and help participants reflect on all proposed actions to converge towards a new integrated intellectual framework to establish a shared understanding between all the actors.

Similarly, many other transdisciplinary learning processes, when collaboratively undertaken in shared inquiry and dialogue, can lead to the conditions for transformative learning, including those summarized by Ross and Mitchell (2018):

Figure 1. Three-step transdisciplinary learning cycle and transformative learning (adapted from Müller et al. 2005, 202).



Checkland's Soft Systems Methodology and its notion of purpose (Checkland and Poulter 2010); Meadows' System Thinking and its notion of intervention points (Meadows 1999); Inayatullah's Causal Layered Analysis and its notion of myths and metaphors (Inayatullah 2008); Snowden's Cynefin model and its notion of complexity (Snowden and Boone 2007); Kooiman's meta-governance and its notions of values (Kooiman and Jentoft 2009).

Debate and criticism

From the 1990s onwards, Mezirow's conceptualization of transformative learning has changed the way we understand and design adult learning. However, Mezirow's transformative learning theory was not received without criticism. Scholars argued his theory focused too exclusively on individual transformations and the rational process of learning while avoiding the social and emotional sides of learning (Cranton 2016; Mälkki 2010). In response, Mezirow was receptive, but largely retained his original line of thought. The work of Daloz (1986), Dirkx (1998, 2002), and Cranton (1994, 2016), however, removed discourse as a mandatory condition for transformative learning.

The transformative learning field continues the dialogue of how to engage with the emotional side of learning, such as the role of empathizing. Empathizing is the ability to subjectively share and experience others' feelings or psychological states (Taylor 2007; Willis 2012), or, in simple words, putting oneself in another's shoes. While Mezirow's transformative learning theory does not pay much attention to empathizing, Mezirow has roughly referred to empathizing by using other terms as facets critical for transformative learning to occur. For example, having an open mind, bracketing or letting go of prejudgments, seeking common ground, and listening empathetically (Mezirow 2003).

Other scholars have sought to theorize the role of empathizing much more explicitly in transformative learning, for example in dealing with emotions in a group setting when going through the critical reflection phase of the transformative learning process and subsequently creating a safe and trustworthy space for critical discourse and reflections. Empathizing helps learners to be more open, and to identify and understand others' perspectives, decreasing the likelihood of prejudgment and increasing the opportunity to establish shared understanding. Research has shown that perspectival transformation increases the ability to empathize with others (Gravett 2004) – which is particularly essential for transdisciplinary learning as learners have to be empathetic when considering stakeholders' perspectives and when engaging in discourse and reflection to establish a shared understanding.

The ethical dimensions of transformative learning are also debated. Unfortunately, in formal settings (in universities), educators are often instructive, telling their students what needs to be done rather than nudging learners on a journey of critical reflection to instigate transformative learning. According to both Mezirow's work (1991) and subsequent educators like Moore (2005), an educator cannot decide on the specific outcome of transformative learning because predetermination of outcomes by an educator may lead to coercion, indoctrination, or brainwashing, more than transformation. Pluralism of thought should be encouraged and discussed instead of concealed. The question needing consideration is: can transformative learning be implemented in authoritarian regimes or places with radical policies? In authoritarian regimes, the perspectives not aligned to the perspectives of the regime are concealed forcefully; therefore, the outcome of learning is predetermined. If transformative learning is implemented in such settings, this may lead to brainwashing and oppression through manipulation. The learners may be able to think autonomously but not critically – they will only be able to think in one direction as diverse perspectives are not provided to them. This is not aligned to the basic ethical dimensions of transformative learning, i.e. pluralism of thought, autonomous thinking, critical discourse, and reflection; therefore, the outcome cannot be normative.

Current forms of implementation in higher education

In both formal and non-formal settings, transformative learning and transdisciplinarity are usually integrated around action-oriented projects, also termed problem-based learning (Biberhofer and Rammel 2017; Nielsen 2020; Taimur and Onuki 2022; Wynn and Okie 2017). For example, the *Sustainability Challenge* course fostered transformative learning while promoting transdisciplinarity to drive sustainable urban development by exposing learners to interdisciplinary teamwork, interacting with diverse perspectives from diverse actors, involving creative and collaborative problem-solving (problem-based learning). This course was conducted under the coordination of the Regional Centre of Expertise on Education for Sustainable Development (RCE), located at Vienna University of Economics and Business. Since 2010, the course has been offered as a collaborative project between four Viennese universities, which encourages cooperation between learners, university partners, and practitioners to establish a shared understanding of urban development and create solution concepts to respond to these challenges (Biberhofer and Rammel 2017).

In another example, problem-based learning was implemented in the secondary-level social studies course by preservice teachers at Kennesaw State University, in the United States. This course (a) engaged stakeholders to expose

learners to multiple truths (ontologies) and introduce the problem from multiple perspectives; (b) recognized the conflicting and competing positions; (c) generated solutions via deliberation on potential outcomes; and (d) guided reflection on types of thinking used by students (Wynn and Okie 2017). Teachers regarded problem-based learning as a transformative pedagogy as it allowed the teachers to create an environment for open discourse encouraging learners to think differently by considering different perspectives and see their relationship with the teachers differently (Wynn and Okie 2017).

Taimur and Onuki (2022) used design thinking, comprised of five stages (adapted from Plattner 2010), as a pedagogy to implement transformative learning in a semester-long university course in Japan and Germany. Both courses aimed to deal with sustainability challenges in a specific context (Kashiwa-no-ha, Japan, and Hude-Oldenburg, Germany). Throughout the implementation of design thinking for transformative learning, learners worked in diverse teams and consulted with the relevant stakeholders to identify the problem, ideate and prototype solutions, and present the problem with the corresponding solution. In this case, design thinking promoted consulting transdisciplinarity by implementing transformative learning via design thinking.

In conclusion, educators and students in higher education can co-facilitate ethical and supportive transformative learning within transdisciplinary learning. To support the undetermined nature of outcomes in transformative and transdisciplinary learning, educators must take the role of facilitators instead of being instructors. Before facilitating the transformative learning process, educators can reflect on: (1) Is it ethical for me to present my own perspective, which may influence the learners? (2) Is it ethical to decide which of the learners' beliefs should be questioned? (3) Is it ethical to facilitate transformative learning when the results may include hopeless or dangerous actions? (Taimur and Onuki 2020, 244). Therefore, educators must also ensure that a trusting, comfortable, and safe space is created before exposing learners to the transformative learning experience. Educators and participants should also discuss the uncomfortable nature of the transformative learning process and the role of empathy and compassion when engaging with others, which makes learners more mindful of their own behavior in the process.

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