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The Evolution of John Mezirow’s Transformative Learning Theory

Andrew Kitchenham
University of Northern British Columbia

This article is a review of Mezirow’s transformative learning from its inception to the latest definition. The review builds on Taylor’s earlier discussions, but unlike his review, this history of transformative learning relies predominantly on Mezirow’s publications to authenticate the discussion with support from the extant literature. The article begins with Mezirow’s explanation of the stages of transformative learning, continues with the influences on the theory, transitions into the criticisms, and concludes with a discussion of its evolution and development.

Keywords: Mezirow; transformation theory; adult education; learning theory; androgogy; role change

I became interested in transformative learning before I even knew what it was. As someone who had worked with adult learners for more than 20 years, I knew that there had to be a theory that described how they learned and why they learned that way. As educational technology became the zeitgeist, I realized that transformative learning would be an excellent theoretical framework in which to study adult learners’ experiences with technology. What I was missing was a thorough review of transformative learning theory from its inception to now. I did not find one source so I wrote my own review of Mezirow’s literature on the topic. That review is presented here.


Early Development

Mezirow (1978a) first applied the label transformation in his study of U.S. women returning to postsecondary study or the workplace after an extended time
out. In an effort to address the needs of U.S. women who were resuming their education or were considering employment after an extended period of time out of university or the workforce, respectively, Mezirow (1978a) conducted a qualitative study to “identify factors that characteristically impede or facilitate” (p. 6) women’s progress in the re-entry programs. In the original 1975 study, Mezirow (1978a, 1978b) investigated 12 re-entry college programs with 83 women. The 12 programs represented a diverse population from New York/New Jersey (five programs), San Francisco (five programs), and Washington state (two programs). As well, the women were participating in programs from both 4- and 2-year colleges and were divided into four distinct groups: re-entry into university after a long absence (51 women); college women’s centre for counselling (8 women); regular adult enrolling, first-semester community college students (16 women); and a program to assist working women to manage their careers (14 women). As a follow-up to the study, he conducted a nationwide telephone survey of 24 on-site programs in 11 states. In addition, he sent a mail enquiry to 1,172 2-year colleges and received responses from 846 colleges, of which 314 sponsored re-entry programs for women (Mezirow, 1978a). On the basis of their findings, Mezirow (1978a, 1978b) and his team of researchers concluded that the respondents had undergone a “personal transformation” and identified 10 phases that they could experience (see Table 1).

Two major elements of transformative learning are critical reflection, or critical self-reflection, on assumptions and critical discourse, where the learner validates a best judgement (Mezirow, 2006) or “the process an individual evokes to monitor the epistemic nature of problems and the truth value of alternative solutions” (P. M. King & Kitchener, 1994, p. 12).

The influences on Mezirow’s early theory of transformative learning included Kuhn’s (1962) paradigm, Freire’s (1970) conscientization, and Habermas’s (1971, 1984) domains of learning (Mezirow, 1978a, 1991a, 2000). The key ideas of these theorists informed Mezirow’s transformative learning theory and the significant concepts of disorienting dilemma, meaning schemes, meaning perspectives, perspective
transformation, frame of reference, levels of learning processes, habits of mind, and critical self-reflection. Table 2 outlines these early influences on specific facets of transformative learning theory.

Kuhn’s (1962) conception of paradigms provided a basis for Mezirow’s notion of transformative learning. During a 1-year period at the Center for Advanced Studies in the Behavioral Sciences, Kuhn wrote an essay on the history and nature of science. In the process of writing the essay, he realised that there was a major disagreement between the social scientists and the natural scientists as to what constituted legitimate scientific inquiry. In investigating the source of the disagreement, Kuhn theorised the importance of paradigms, which he defined as “universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners” (p. viii). In Mezirow’s (1985, 1991a, 1991b, 2000) theory, paradigms became the frame of reference (see Table 2). Furthermore, paradigms shared two essential elements: a scientific discovery that was clearly unprecedented enough to attract a group of researchers away from other interests (i.e., a set of meaning schemes) and an open-endedness that would leave problems to be solved or redefined by the scientists (i.e., a meaning perspective) (see Table 2). Kuhn provided several examples of paradigms throughout history but argued that the history of electrical research in the first half of the 18th century exemplified best the nature of a paradigm.

According to Kuhn (1962), there were numerous and conflicting views on the nature of electricity, and all were derived from the theories of the day; however, despite having read each other’s work, there was no discernible commonality across the various views, or a shared frame of reference (Mezirow, 1991a). Benjamin Franklin and his successors evolved a theory that combined many aspects of the conflicting theories and answered several of the unanswered questions, thus attracting a group of “electricians”

<table>
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<tr>
<th>Influence</th>
<th>Transformative learning facet</th>
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<tr>
<td>Kuhn’s (1962) paradigm</td>
<td>• Perspective transformation</td>
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<td></td>
<td>• Frame of reference</td>
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<td>• Meaning perspective</td>
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<td>• Habit of mind</td>
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<td>Freire’s (1970) conscientization</td>
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<td>• Critical self-reflection</td>
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<td>• Habit of mind</td>
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<td>Habermas’s (1971, 1984) domains of learning</td>
<td>• Learning processes</td>
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<td>• Perspective transformation</td>
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<td>• Meaning scheme</td>
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<td>• Meaning perspective</td>
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who continued Franklin’s pioneering work. This community of practitioners also demonstrated why some theories or views do not become paradigms because “in the absence of a paradigm or some candidate for a paradigm, all of the facts that could possibly pertain to the development of a given science are likely to seem equally relevant” (Kuhn, 1962, p. 15). In short, a paradigm for electricity was formed through the combined efforts of these scientists because they shared a common set of problems and solutions (i.e., habits of mind or meaning perspective) and yet were able to pursue their own interests (i.e., meaning schemes) within that paradigm and came to share a common worldview (i.e., perspective transformation) (see Table 2).

As transformative learning involves a frame of reference that comprises habits of mind and meaning perspectives, which lead to a perspective transformation, the influence of Kuhn’s (1962) paradigm is quite apparent in Mezirow’s (1978a, 1978b, 1981, 1985) work (see Table 2). In addition, the theory of transformative learning itself has become a paradigm, as it has explained many of the unanswered questions about adult learning and created its own group of specialised practitioners.

Like Kuhn’s (1962) paradigm, the work of Paulo Freire also informed Mezirow’s (1975) initial theories. Freire (1970) likened traditional education to the “banking” method of learning, whereby the teacher deposits information to those students whom the teacher deems worthy of receiving the gift of knowledge. The major problem with this form of education is that students become dependent on the teacher for knowledge and do not learn to think for themselves: “The more students work at storing the deposits entrusted to them, the less they develop the critical consciousness which would result from their intervention in the world as transformers of that world” (Freire, 1970, p. 60). Freire’s (1970) antidote to this reliance on someone else and the lack of free thought was conscientization and its emphasis on developing a consciousness that has the power to transform reality. He defined conscientization as “learning to perceive social, political, and economic contradictions—developing a critical awareness—so that individuals can take action against the oppressive elements of reality” (Freire, 1970, p. 19). Freire (1970) argued that for education to be empowering, the teacher needs not only to be democratic but also to form a transformative relationship between him or her and the students, students and their learning, and students and society. To Freire, education does not stop in the classroom but continues in all aspects of a learner’s life. Therefore, education is always political in nature—regardless of whether the learner and teacher realise their politics (Shor & Freire, 1987). For instance, politics influences the way the teacher discusses concepts with students, the types of tests used, the activities and materials chosen for study, and the level of risk taking in the classroom (Shor, 1993).

Freire (1973) further argued that teachers themselves have a difficult time getting past the “instilled certainty” (p. 52) that teaching is lecturing and that knowledge is unidirectional. Before the classroom can be democratic, the teacher has to welcome input from the students as well as present critical ideas for discussion so that they “affirm themselves without thereby disaffirming their students” (Freire & Faundez,
1989, p. 34). The conduit for this democracy is conscientization and its related critical consciousness, which Freire argues is actualised through three stages of consciousness growth (Freire, 1973).

The lowest stage of consciousness growth, “intransitive thought,” occurs when people feel that their lives are out of their control and that change is up to fate or God. They fatalistically believe that their actions cannot change their conditions and feel disempowered with little hope for the future. The next stage, “semitransitive,” involves some thought and action for change, but an individual at this stage addresses problems one at a time and as they occur rather than seeing the problem as one of society in general. At this stage, an individual may follow a strong leader who is seen as one who can change one’s lot in life rather than become a leader or see oneself as a change agent. The highest level of “critical transitivity” is reflected in individuals who think globally and critically about their present conditions and who decide to take action for change. These people are able to merge critical thought with critical action to effect change in their lives and to see what the catalyst for that change could be. It is this last stage of critical consciousness that clearly influenced Mezirow in his notions of disorienting dilemma, critical reflection, critical self-reflection on assumptions, and critical discourse (Mezirow, 1978a, 1978b, 1985) (see Table 2).

Habermas (1971) also influenced Mezirow’s theory of transformative learning. From 1956 to 1959, Habermas studied at the Frankfurt Institute for Social Research as an assistant to Theodor Adorno, who had been instrumental in Habermas’s formulation of his early ideas of social reform (Morrow & Torres, 2002). The Frankfurt Institute was originally grounded in Marxism but abandoned that focus when the founder, Max Horkheimer, repudiated his former Marxist ideology in favour of more right-wing ideologies. In fact, Horkheimer became threatened by Habermas and Habermas’s argument to return to Marxist roots and attempted to have Habermas dis-associated from the Frankfurt School. In 1961, Habermas accepted a professorship at Heidelberg University and produced his seminal work that critiqued modern democracy (Habermas, 1989). Three years later, he returned to the University of Frankfurt as a chair of philosophy and subsequently became involved in the emerging student political movement. He soon became isolated from the movement and eventually rejected Marxism in favour of his theory of communicative action (Habermas, 1984), which was articulated during his directorship of the Max Planck Institute. It was in this two-volume work that Habermas (1984) stressed the importance of people communicating with each other in an effort to come to a common understanding so that it was not the relation of a solitary subject to something in the objective world that can be represented or manipulated, but the intersubjective relation that speaking and acting subjects take up when they come to an understanding with one another about something. (p. 392)

The theory was revised throughout the next 20 years. However, it was primarily Habermas’s (1971) early work on domains of learning that was influential on Mezirow’s transformative learning theory (see Table 2).
In 1981, Mezirow turned to the work of Habermas to devise a critical theory of adult learning and adult education. Habermas (1971) had proposed three domains of learning: (a) the technical, (b) the practical, and (c) the emancipatory. Technical learning is that learning that is rote, specific to a task, and clearly governed by rules; in the case of my study (Kitchenham, 2006), teachers who learn the requisite parts of a Web page would be engaging in technical learning. Practical learning involves social norms; teachers who understand how to interact in an online chat room would be experiencing practical learning. Emancipatory learning is introspective as the learner is self-reflective and experiences self-knowledge; teachers who consider their beliefs on technology infusion within their social systems of learning and schools and come to an understanding of what, when, and why to infuse would be encountering emancipatory learning. Mezirow’s examination of these three domains led to his description of perspective transformation as

the emancipatory process of becoming critically aware of how and why the structure of psycho-cultural assumptions has come to constrain the way we see ourselves and our relationships, reconstituting this structure to permit a more inclusive and discriminat- ing integration of experience and acting upon these new understandings. (p. 6)

In other words, the perspective transformation encompassed the aforementioned 10 phases of adult learning (see Table 1).

Based on his pioneering research with adult learners, Mezirow (1978a) outlined “a theory of adult development and a derivative concept of adult education” (p. 153) that has been argued for and against for more than 20 years (Cranton, 2006). Several years after his initial theory was proposed, Mezirow (1991a) revised the original 10 phases that adults go through when experiencing a perspective, rather than a personal, transformation and added an 11th stage, altering present relationships and forging new relationships, to the theory. Table 3 outlines Mezirow’s changes in transformative learning theory during the past 30 years.

Mezirow’s (1978a, 1978b) initial theory became more developed as he expanded the view of perspective transformation by relating the emancipatory process to self-directed learning to form three revised types of learning. The original three types of learning (technical, practical, and emancipatory), based on Habermas’s (1971) work, became (a) instrumental, (b) dialogic, and (c) self-reflective (Mezirow, 1985). Simply stated, learners ask how they could best learn the information (instrumental), when and where this learning could best take place (dialogic), and why they are learning the information (self-reflective) (see Figure 1). Central to the perspective transformation and, therefore, the three types of learning are the meaning perspective and the meaning schemes.

A meaning perspective refers “to the structure of cultural and psychological assumptions within which our past experience assimilates and transforms new experience” (Mezirow, 1985, p. 21), whereas a meaning scheme is “the constellation of concept, belief, judgment, and feeling which shapes a particular interpretation”
(Mezirow, 1994b, p. 223). For instance, in the province of British Columbia (Canada), teachers are expected by their school district to integrate technology to increase student achievement, but based on their past experiences of curriculum implementation within that frame of reference (meaning perspective), teachers are discovering myriad ways to use technologies for other purposes, such as increasing interest in writing essays and presenting information with a variety of multimedia (meaning scheme). In short, a meaning perspective is a general frame of reference comprising a series of specific meaning schemes.

Within each of the three learning types, three learning processes operate: learning within meaning schemes, learning new meaning schemes, and learning through meaning transformation.

<table>
<thead>
<tr>
<th>Year</th>
<th>Salient Element</th>
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<tr>
<td>1978</td>
<td>• Proposed initial 10 phases of theory (see Table 1)</td>
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<tr>
<td>1981</td>
<td>• Adapted Habermas’s (1971) three domains of learning: technical, practical, and emancipatory (see Table 2)</td>
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<tr>
<td>1985</td>
<td>• Expanded theory to include instrumental, dialogic, and self-reflective learning</td>
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<tr>
<td></td>
<td>• Defined meaning scheme and meaning perspective</td>
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<tr>
<td></td>
<td>• Introduced three learning processes: learning within meaning schemes, learning new meaning schemes, and learning through meaning transformation</td>
</tr>
<tr>
<td>1991</td>
<td>• Added an additional phase, stressing the importance of altering present relationships and forging new relationships</td>
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<td></td>
<td>• Expanded earlier notion of the distorted meaning perspective</td>
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<tr>
<td></td>
<td>• Argued that there were three types of meaning perspectives: epistemic, sociolinguistic, and psychological</td>
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<td></td>
<td>• Presented three types of reflection: content, process, and premise</td>
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<td>1995</td>
<td>• Stressed the importance of critical self-reflection in perspective transformation</td>
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<tr>
<td>1998</td>
<td>• Articulated critical reflection of assumptions, which included objective and subjective reframing</td>
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<tr>
<td>2000</td>
<td>• Presented a revision of transformative learning by elaborating on and revising his original terminologies</td>
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<tr>
<td></td>
<td>• Acknowledged the importance of the affective, emotional, and social aspects of transformative learning</td>
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<tr>
<td></td>
<td>• Introduced habits of mind and points of view</td>
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<tr>
<td>2003</td>
<td>• Provided clear definition of his theory</td>
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<tr>
<td>2005</td>
<td>• Debated with Dirkx at the 6th International Transformative Learning Conference and conceded that the two points of view could coexist</td>
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<td></td>
<td>(Dirkx, Mezirow, &amp; Cranton, 2006)</td>
</tr>
<tr>
<td>2006</td>
<td>• Presented an overview of transformative learning</td>
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<td></td>
<td>• Further expanded on the theory in relation to constructivist theory, psychic distortion, schema therapy, and individuation</td>
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</table>
The first learning process, learning within meaning schemes, involves learners working with what they already know by expanding on, complementing, and revising their present systems of knowledge. The example of teaching in a computer lab can elucidate this first learning process within the three learning types. Instrumentally, teachers can review the most efficient manner to manage a large group of students in a computer lab. Dialogically, they may be inclined to question the best method of teaching a technological concept (e.g., hyperlinks) based on what they believe as well as on what their colleagues have discussed. Self-reflectively, teachers may record their observations of what appears to work best with the students and use that information to plan the next class or classes.
The second learning process within each of the three learning types is learning new meaning schemes that are compatible with existing schemes within the learners’ meaning perspectives. Instrumentally, teachers can attempt to create Web pages without relying on any notes, whereas previously, they relied on tutorials and handouts for guidance. Dialogically, they can acquire a new constructivist theory of Web learning (e.g., WebQuests) to augment their previous knowledge (e.g., Web page construction). Self-reflectively, they can view themselves as technology specialists when they previously saw themselves as competent and confident but not specialised.

The last learning process within each of the three learning types is learning through meaning transformation. This process requires “becoming aware of specific assumptions (schemata, criteria, rules, or repressions) on which a distorted or incomplete meaning scheme is based and, through a reorganization of meaning, transforming it” (Mezirow, 1985, p. 23). In short, the learner encounters a problem or anomaly that cannot be resolved through present meaning schemes or through learning new meaning schemes; the resolution comes through a redefinition of the problem. Transformation occurs by critical self-reflection of the assumptions that supported the meaning scheme or perspective in use. Through instrumental learning, the teacher understands that rearranging the physical layout of a computer lab could result in increasing efficiency in moving around the lab to assist students. Through dialogic learning, the teacher comes to the conclusion that gender and age are not inhibitors for learning how to operate a computer. Through self-reflective learning, the teacher, who felt anxiety based on past failures with technology, becomes confident and competent in digital video editing. It should be stressed it is only this last process, learning through meaning transformation, that results in perspective transformation.

Perspective transformation can occur in two dimensions. Each dimension is related to changing meaning schemes. On one hand, it can occur painlessly through an accumulation or concatenation of transformations in set meaning schemes (Mezirow, 1985). Thus, a teacher may experience a perspective transformation through a series of altered meaning schemes or “the constellation of concept, belief, judgment, and feeling which shapes a particular interpretation” (Mezirow, 1994b, p. 223). For example, teachers can examine how they learned to use keyboard shortcuts in Microsoft Word and realise that those same techniques are useful in related Microsoft products.

On the other hand, perspective transformation may also be an “epochal . . . [and] . . . painful” (Mezirow, 1985, p. 24) transformation of meaning perspectives, or sets of meaning schemes, as this dimension involves a comprehensive and critical re-evaluation of oneself. For example, teachers can critically examine their philosophy of technology and its role in primary school classrooms and come to the realisation that what they believed previously no longer holds true for them (i.e., self-reflective learning within meaning schemes).

Mezirow (1991a, 1994b) argued that the central element to the perspective transformation is critical self-reflection. In other words, if a learner rationalised a new
point of view without dealing with the deep feelings that accompanied the original meaning scheme or perspective, perspective transformation could not occur. Similarly, if a teacher adopted a new belief system through a top-down, power-coercion paradigm (Hord, 1992), perspective transformation would aborted (invariably be Mezirow, 1994b). In other words, if teachers did not reconcile the deep feelings or had points of view subjected on them, they would learn without questioning the veracity or utility of the information.

Revision of the Theory

In 1991, Mezirow (1991a) expanded the original 10-phase model of perspective transformation to include an additional phase, “renegotiating relationships and negotiating new relationships” (Mezirow, 1994b, p. 224), between the original Phases 8 and 9. This new phase reflected the importance of critical self-reflection. He further outlined the constructivist assumptions that formed the basis of the revised theory as including “a conviction that meaning exists within ourselves rather than in external forms such as books and that personal meanings that we attribute to our experience are acquired and validated through human interaction and communication” (Mezirow, 1991a, p. xiv). In other words, meaning is individualistic and found inside the learner and teacher rather than prescribed by external influences such as written texts and speeches; however, that meaning becomes significant to the learner through critical discourse with others. This view is reminiscent of Kuhn’s (1962) paradigm and Freire’s (1970) conscientization, as well as of the constructivists (Kelly, 1970; Knowles, 1975; Kolb, 1984; Piaget, 1972) and social constructivists (e.g., Vygotsky, 1978).

Mezirow (1991a) elaborated on his earlier notion of the distorted or undeveloped meaning perspective (Mezirow, 1985) that leads the learner “to view reality in a way that arbitrarily limits what is included, impedes differentiation, lacks permeability or openness to other ways of seeing, [and] does not facilitate an integration of experience” (Mezirow, 1991a, p. 188). He now contended that there are, in fact, three types of meaning perspectives: epistemic (related to knowledge and how a person uses knowledge), sociolinguistic (related to language and how it is used in social settings), and psychological (related to the way people viewed themselves). The remedy for any epistemic, sociolinguistic, and psychological distortions is the perspective transformation through the revised 11-phase model and accompanying reflective discourse. In other words, when a person begins to interpret new meaning perspectives and meaning schemes, discussion with peers provides an ideal vehicle for learning. However, it is not necessary that a person experience all 11 phases or in a set order to experience a perspective transformation.

According to Mezirow (1991a), under optimal conditions, participation in this discourse would have
accurate and complete information, be free from coercion and distorting self-perception, be able to weigh evidence and assess arguments objectively, be open to alternative perspectives, be able to reflect critically on presuppositions and their consequences, have equal opportunity to participate (including the chance to challenge, question, refute, and reflect, and to hear others do the same), and be able to accept an informed, objective, and rational consensus as a legitimate test of validity. (p. 78)

The use of distortions in epistemic, sociolinguistic, and psychological meaning perspectives, as well as the use of critical discourse with others, is clearly applicable to learning educational technology. Teachers would need to re-evaluate what they believed they knew and what they actually knew (epistemic), what specific language was used in educational technology settings (sociolinguistic), and what they perceived about their own ways of learning (psychological) through critical discourse with other learners or mentors.

In a book chapter on adult learning theory, Mezirow (1995) emphasised the importance of critical reflection in transformative learning theory. Straightforward reflection is the act of “intentional assessment” (p. 44) of one’s actions, whereas critical reflection not only involves the nature and consequence of one’s actions but also includes the related circumstances of their origin. He presented three types of reflection and their roles in transforming meaning schemes and perspectives: content reflection, process reflection, and premise reflection. In the process of reflection, teachers ask themselves critical questions (Cranton, 1994). Figure 2 illustrates the relationship between these types of reflection.

Content reflection involves thinking back to what was done and, therefore, might involve a transformation of a meaning scheme (see Figure 2). For example, a teacher might ask, “What do I believe I can do with PowerPoint in my Grade 6 class, given my knowledge and past experiences?” Process reflection causes a person to consider the aetiology of actions and whether there are other factors yet to be unveiled; this form of reflection might also transform meaning schemes (see Figure 2). For instance, a teacher might ask, “What were the positive and negative factors when students created PowerPoint projects that will assist me in planning the lessons for this new program?” Premise reflection requires the person to see the larger view of what is operating within his or her value system, for instance, and could transform a meaning perspective rather than a meaning scheme (see Figure 2). For example, the teacher might ask, “Why is using PowerPoint so important to me at this time in my career when I could use the same strategies I have used for 20 years?” Thus, critical reflection is the process of premise reflecting (see Figure 2).

In other words, learners can transform an individual meaning scheme by examining previous actions (content reflection or learning within meaning schemes) or where the actions and their related factors originated (process reflection or learning new meaning schemes), but when they consider a more global view, the reflection is much deeper, more complex, and involves transforming a series of meaning schemes
In short, there are two types of transformation: straightforward transformation of a meaning scheme, which occurs through content and process reflection, and a much more profound transformation of a set of meaning schemes (i.e., meaning perspective) by critically reflecting on premises.

Based on further research, Mezirow (1998a) refined his earlier work on critical reflection (Mezirow, 1995). He presented two new aspects of critical reflection. One of these aspects was the critical reflection of assumptions, whereby the learner not only looks back on something that occurred but also examines the assumptions or
presuppositions that were involved in the reflection process (i.e., content and process reflection) (see Figure 3). The other new aspect was the related concept of critical self-reflection of assumptions. It involves “a critique of a premise upon which the learner has defined a problem” (Mezirow, 1998b, p. 186). Therefore, critical self-reflection of an assumption is akin to premise reflection (Mezirow, 1995). Learners examine their worldview in light of their own particular belief or value system; an example would be a teacher who believes that only younger colleagues can learn about computers and resists attending educational technology workshops. Citing P. M. King and Kitchener’s (1994) seven stages of adult learning development, Mezirow (1998a) argued that their Stages 6, “abstract concepts of knowledge [that
could] be related,” and 7, “abstract concepts of knowledge [that] are understood as a system” (p. 208), respectively, together were what he was describing as critical self-reflection of assumptions.

Mezirow (1998b) went on to articulate a taxonomy of critical reflection of and on assumptions that involved objective reframing and subjective reframing. The distinction between the objective and subjective reframing is that the former is a consideration of the assumption, whereas the latter is a consideration on what caused the assumption to occur. This taxonomy is illustrated in Figure 3.

Objective reframing is either (a) a narrative critical reflection of assumptions and requires critically examining something that was being communicated to a person (e.g., a colleague tells you that attending a 2-hour educational technology workshop is not worth the time spent on it) or (b) an action critical reflection of assumptions and requires taking a moment to critically consider one’s own assumptions in a task-oriented problem-solving situation to define the problem itself (e.g., considering what you believe would constitute the worth of an educational technology project) (see Figure 3).

Subjective reframing is, in fact, critical self-reflection on, rather than of, assumptions (see Figure 3). Subjective reframing can include one of four forms of critical self-reflection on assumptions: narrative, systemic, therapeutic, and epistemic:

- **Narrative critical self-reflection on assumptions** is the application of narrative critical reflection of assumptions to oneself. For example, a teacher, who is told by a fellow teacher that the time spent on creating a PowerPoint-based interactive game is not worth it, considers the amount of teacher time devoted to the creation of that game, adds that amount to how long the students are engaged in the activity, and decides that the hours devoted to the creation of the game outweigh the benefits. This demonstrates narrative self-critical reflection on assumptions as the teacher critically examined something communicated to him or her (i.e., narrative reflection of assumptions), considered the problem as applied to himself or herself, and came to a resolution.

- **Systemic critical self-reflection on assumptions** is going beyond the action critical reflection of assumptions to self-reflect on the taken-for-granted cultural influences, which might be organizational (e.g., workplace) or moral-ethical (e.g., social norms). A teacher, who self-reflects on the assumption that he or she cannot learn how to create Web pages because of his or her age and realises that his or her age is irrelevant to the learning process is demonstrating systemic critical reflection on assumptions.

- **Therapeutic critical self-reflection on assumptions** is examining one’s problematic feelings and their related consequences. When a teacher reflects on the belief that he or she will never learn how to attach a document to an e-mail message and acknowledges that this assumption is because he or she becomes frustrated so quickly, he or she is demonstrating therapeutic critical reflection on assumptions.

- **Epistemic critical self-reflection on assumptions** is investigating not only the assumptions but also the causes, the nature, and the consequences of one’s frame of reference to surmise why one is predisposed to learn in a certain manner (Mezirow,
Mezirow (1998b) argued that “learning to think for oneself involves becoming critically reflective of assumptions and participating in discourse to validate beliefs, intentions, values and feelings” (p. 197).

Mezirow (2000) presented another revision of transformative learning in the edited book entirely devoted to discussing the “theory in progress” (Mezirow, 1991a, p. xi) by elaborating and revising his original terminology (see Figure 4). He argued that a meaning perspective is a frame of reference and comprises habits of mind and subsequent points of view. Habits of mind were expanded to include a variety of dimensions: sociolinguistic, moral-ethical, epistemic, philosophical, psychological, and aesthetic (see Figure 4). These perspectives were expressed by teachers as their points of view, which comprise clusters of meaning schemes (see Figure 4), or “sets of immediate specific expectations, beliefs, feelings, attitudes, and judgments” (Mezirow, 2000, p. 18), which shape a particular interpretation and assign causality. Although they tend to operate outside of awareness, meaning schemes can be described in terms of what one sees and how one sees it. For instance, they can be described in terms of cause-and-effect relationships, sequences of events, or characterisations of colleagues or of the individual. However, because they are habituated in responses, meaning schemes tend to determine a specific chain of events or actions that are followed automatically unless they are considered through critical reflection and critical self-reflection.

To his previous articulations (Mezirow, 1985, 1991a, 1991b, 1994b) of the three ways learning occurs, Mezirow (2000) added a fourth to reflect the emphasis on transforming points of view. In addition to elaborating existing frames of reference (or meaning perspective; see Figure 4), learning new frames of reference, and transforming habits of mind, learning can occur by transforming points of view (see Figure 5). It is important to note that people can change their points of view “by trying on another’s point of view” (Mezirow, 2000, p. 21). One cannot, however, try on someone else’s habit of mind.

For example, Teacher A can share the point of view that a PowerPoint presentation can replace an overhead projector presentation. However, this does not mean that she has adopted Teacher B’s constructivist position of educational technology’s role in the classroom (habit of mind). Teacher B believes that all present media (e.g., overhead projector, video recorder and television, blackboard) should be replaced by a laptop and a data projector. Teacher A could easily duplicate the replacement of the media (point of view) but not Teacher B’s belief system underlying that replacement (habit of mind). This distinction between point of view and habit of mind is often critical, as it is here when considering the implementation of the effective use of educational technology.
In short, Mezirow’s revisions of the initial theory led to a tighter description of the theory. This revision involved an expansion of and a more thorough explanation of the distinct elements of transformative learning theory.

**Conclusion**

Arguably, transformative learning theory has changed the way that we teach adults. Like all strong theories, it has been critiqued, tested, revised, and retested.
throughout the past three decades to arrive at a definitive framework for describing how adults learn best (Cranton, 1996, 2001; Cranton & Carusetta, 2004; Cranton & King, 2003; Cranton & Roy, 2003; Taylor, 1997, 1998, 2000). As more researchers test the theory in other disciplines, such as educational technology (K. P. King, 1997a, 1997b, 1998, 2000, 2002; Kitchenham, 2006; Whitelaw, Sears, & Campbell, 2004), the evidence for the robustness and applicability of the theory will grow.

Interest in Mezirow’s transformative learning theory has resulted in seven international conferences, each devoted to a different aspect of the theory and producing numerous peer-reviewed papers, including many in the *Journal of Transformative Education*. More than a dozen books, hundreds of scholarly papers and presentations, and more than 150 doctoral dissertations (Mezirow, 2006) have addressed the theoretical and practical implications of the theory. Transformative learning theory has undergone modifications and incorporated new constructs as they are debated and tested and will, undoubtedly, continue to influence adult learning praxis across many disciplines.

**References**


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