

Chapter 10

Learning and Transformation

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Abstract One of the biggest challenges of twenty-first century higher education is to transform students into dynamic workers who can adapt to fast-changing environments. The objective of this chapter is to draw on published and new research to articulate the lessons learned and propose new insights from the field of transformative learning and how to incorporate them into teaching and learning in higher education.

Transformative learning expands our perspective on education beyond the pragmatic foundation of selecting optimum learning tools among new forms of lecture, construction methods such as case studies, and transaction activities that include collaborative learning.

This chapter examines the research foundation of transformative learning and adds findings from original studies on fostering transformative learning in the post-secondary classroom conducted in 2005, 2008, and 2010. It first describes the steps preceding transformative learning. Then, after reviewing the current transformative learning literature and the scholarly writing on college student learning, the next six sections elaborate on the key transformative learning concepts, its incidence, the characteristics of those more likely to exhibit it, as well as the factors fostering it: instructional methods, life events, and types of people who stimulate it. Previously unreported verbatim comments from three original studies expand understanding of the process of transformative learning. Conclusions are then drawn.

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10.1 Steps to Transformative Learning

Transformative learning has been important in the development of college and adult education since Jack Mezirow proposed it more than 40 years ago as a theoretical description of the steps learners undergo in changing their worldviews (Mezirow 1978). From an educator's perspective, transformative learning is when a learner is struck by a new concept or way of thinking and then follows through to make a life change; it supplements more common types of learning such as acquiring facts or learning new skills (Cranton 2006).

The 10 steps predicted to precede transformative learning were set out by Mezirow as (1) a disorienting dilemma; (2) a critical assessment of assumptions; (3) recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change; (4) exploration of options for new roles, relationships, and actions; (5) self-examination with feelings of guilt or shame; (6) provisional trying of new roles; (7) planning a course of action; (8) acquisition of knowledge and skills for implementing one's plans; (9) building of competence and self-confidence in new roles and relationships; and (10) a reintegration into one's life on the basis of conditions dictated by one's new perspective (Mezirow 1978, 2000).

An example of these transformative learning steps would be a student who believed that Americans have the most innovative ideas. In a class composed of diverse nationalities, innovative ideas are put forward by Italian, Chinese, and Bolivian students (Step 1). She could then question her assumption (Step 2). In chatting with others or in class discussion, she might realize that others had held the same faulty assumption (Step 3). Then, she considers what it means in terms of how she regarded other nationalities' capacity for innovative ideas (Step 4). She may even feel a bit ashamed that she had been so parochial (Step 5). The next class, she could then be more open to ideas expressed by non-Americans (Step 6). If that worked out well, she might adopt this broader perspective when she sought new ideas (Step 7). She could plan a more formalized approach, even writing herself a reminder card (Step 8). As she practices her more inclusive approach, it will become more natural (Step 9) and be made a habit (Step 10).

These 10 precursor steps may or may not be conscious; and they may not necessarily be linear (Cranton 1994; Mezirow 1994). A number of researchers have condensed the process into fewer steps (King 2000; Taylor 2009). One version included only the steps of critical reflection, discourse, and action (Merriam and Caffarella 1999). Some researchers (Newman 2012; Kilgore and Bloom 2002; Kovan and Dirkx 2003) have emphasized their "disproof" of transformative learning because they have shown it not to require the first step of disorienting dilemma. Mezirow has stated that all steps are not required to experience transformative learning (Mezirow 1978, 1994) although Brock (2010) showed quantitative evidence that the more of these steps remembered, the more likely transformative learning occurs and that critical reflection may be more important than the other steps. Also Kelly and Fetherston (2007) indicated that a cluster of

students of conflict resolution did not change their points of view if unwilling to engage in critical examination. Brock et al. (2012) further showed that reporting *none* of the precursor steps is a strong predictor of *not* experiencing transformative learning.

10.2 Transformative Learning Literature

Since 1978, when Mezirow reported his grounded case study that is the foundation of transformative learning, the field has expanded through much qualitative research and more recently, quantitative research.

The two most popular topics in research using the transformative learning model have been (1) the push to validate the pivotal step of Mezirow's model, critical reflection, beyond the cognitive realm to emotional, spiritual, and situational dimensions (Kovan and Dirkx 2003; Kroth and Boverie 2000; Tisdell 2000); and (2) the questioning of the cataclysmic character that Mezirow posited about the process of transformative learning (Newman 2012; Eisen 2001; Kovan and Dirkx 2003).

The first two issues (validating critical reflection and examining the time frame required for transformative learning) indicate an incomplete reading of Mezirow's original exposition of transformative learning. However, Mezirow did acknowledge that the term critical reflection, on which he centered his theory, might have better been called perspective reflection or reframing because it implies the use of exclusively cognitive functions; rather, he was referring to the use of all dimensions including affective (Mezirow 1998). There is some discussion in the transformative literature about "adding in" emotional (Kilgore and Bloom 2002) and spiritual elements (Christopher et al. 2001; Tisdell 2000) to the step Mezirow called critical reflection. Mezirow has said all along that critical reflection includes emotional and spiritual elements; it covers context, other ways of knowing, and relationships. As to the second issue, in 1985 Mezirow said transformative learning can be either "an accretion" or an "epochal" moment (Mezirow 1985). Generally, Mezirow's theory has held up and has stimulated continued original research and debate.

The transformative learning research literature has expanded well beyond Mezirow's original sample of housewives returning to work. Transformative learning has been shown to be useful in explaining the transformative process among women in the workplace (Carter 2002), older adults (Moon 2011), mixed gender professionals (Maybury 2001), mixed gender environmentalists (Kovan and Dirkx 2003), and mixed gender students (Bamber and Hankin 2011; Brown 2006; Clare 2006; Cragg et al. 2001; Eisen 2001; Gliszinski 2007; Hanson 2010; Harris 2002; Hodge 2011; King 1997; Kroth and Boverie 2000; Sessa et al. 2011; Ziegahn 2001). Mixed gender welfare recipients experienced all of the transformative learning elements mentioned in the literature except one (spirituality) in a family-empowerment project focusing on life skills (Christopher et al. 2001).

At the end of a major longitudinal study (Baumgartner 2002; Courtenay et al. 2000), Baumgartner concluded that the transformative learning approach was helpful in examining the nature of perspective transformations made because of a diagnosis of HIV/AIDS, specifically that perspective transformations held and individuals continued to expand their meaning as time went by. These researchers confirmed what Taylor had posited in summarizing 5 years of transformative learning research (Taylor 1997), i.e., that social interaction was important for change to take place.

In one of the few mixed methods studies incorporating both qualitative and quantitative techniques found, King discovered the transformative learning model was useful in identifying how undergraduates in four diverse evening programs learn, and she presented a validated instrument to measure the 10 steps of the Mezirow model (King 1997). In a later mixed method study, King expanded her interpretation to show that the perception of empowerment that ESL (English as a Second Language) students had fostered transformative learning, as did the occurrence of other life changes such as immigration and changing jobs, and/or residence (King 2000). One other quantitative study (Cragg et al. 2001) showed transformative learning among graduate nursing students although these authors found a values scale too unreliable to further expand understanding of the impact of transformative learning on values.

Only a few of the many qualitative studies did not find the transformative model predictive. Reasons cited were the lack of consideration of the multiple realities of drug-addicted mothers (Kilgore and Bloom 2002) and several misreadings of Mezirow, e.g., that transformative learning does not allow for gradual transformations, as well as cataclysmic ones (Baumgartner 2002; Eisen 2001; Kovan and Dirx 2003).

After an extensive review of the transformative learning literature, Taylor concluded that transformative learning was supported by the research, but more was needed to capture actions taken because of transformative learning (Taylor 1997). He recommended less emphasis on critical reflection (although Mezirow 1998, disagreed) and more emphasis on context, other ways of knowing, and relationships. Mezirow expected that the transformative learning model would always be evolving but defended the importance of critical reflection as a key step; the point Mezirow continued to make is that critical reflection covers context and relationships, as well as other ways of knowing besides the rational (Mezirow 1998).

10.3 College Student Learning

Contributing factors to college student learning are faculty (Smart et al. 2000), out-of-classroom college activities (Terenzini et al. 1996), and peer support, especially for women (Kuh 1995).

Most college students progress toward maturity as they stay in school and advance their class standing. Several theorists have created models of such growth.

For example, Kegan's developmental stages include the socialized mind (focuses on one's own needs), the self-authoring mind (identity includes interpersonal relationships), and the self-transforming mind that accepts ideological differences (Kegan 1994). In a later study, it was Kegan and Miller (2003) who concluded that the last stage rarely occurs until after graduation and presented evidence that higher levels of development predict success in work and organizational life. In a longitudinal study of cognitive development of college students, Baxter Magolda found four stages of growth: absolute knowing, transitional knowing, independent knowing, and contextual knowing (Baxter Magolda 1999). The passage is from certainty about one's knowledge to the ability to question in the last stage, which can be likened to critical thinking. She found gender differences in the first stages with women more likely to use what she called a receiving pattern and male students preferring an active approach to learning. This researcher went on to characterize how female students valued peers more as collaborators, whereas male students used peers for testing achievement. In the maturation process, she found that men grew in finding common ground with others and women by taking the initiative to meet their own needs. She also found that the gender difference in thinking had disappeared at the last stage of contextual thinking (Baxter Magolda 1992).

Stage and her colleagues connected the frameworks and theories of learning such as multiple intelligences, social cognitive theories, and motivation theories; and they identified learning activities that foster college student learning:

- social learning experiences, particularly those that promote group construction of knowledge and that allow a student to observe other students model successful learning and that encourage him or her to emulate those such as peer teaching and group projects;
- varying instructional modes to deviate from lecture format such as visual presentation modes, site visits, use of the Internet;
- varying performance expectations for students from merely individual written formats to group work that includes writing and presentation, interpretation of musical, theatrical, dance, or artistic work, and performance of actual work site tasks;
- providing choices that allow students to capitalize on personal strengths and interests;
- overt use of socio-cultural situations and methods that provide authentic contexts and enculturation into an academic disciplinary community;
- course material that values diverse cultural, ethnic, class and gendered groups (Stage et al. 1996, pp. iv–v).

This broad list showing the diversity of influences on learning while in college relates to the learning experiences that increase the likelihood of transformative learning. So does the importance of the context outside the classroom (Stage 2003). Other scholars underscored the importance of the active support of others in growing, e.g., support from other students, classmates, advisors, and teachers (Merriam et al. 1996), as well as woman–woman friendships in undergraduate school (Aleman 1997). The demands of modern culture such as partnering,

parenting, working, and learning are believed to be inadequately addressed in today's schools (Kegan 1994). Life events such as marriage, divorce, moving, and job change or loss play an important part in creating the stimulus for transformative learning (Cranton 1994).

To summarize perspectives on college students, the individuals enrolled in a university have chosen (and devoted significant amounts of time and in many cases money) to learn and change themselves so they are better prepared for the workplace. Some scholars indicate that there may be differences in how males and females learn during a college career and that maturation is an important contributing factor to effecting changes in perspective. Many factors affect the quality of the educational experience: the classroom curriculum, interactions with faculty and other students, and other changes in the student's life.

10.4 Methodology

A series of studies measured the incidence of transformative learning and each of the 10 precursor steps as well as demographics and college majors. Samples of undergraduate populations were gathered in 2005, 2008, and 2010 from two colleges in a large metropolitan area in the northeast USA via a Web survey. Total sample sizes for each year are 298, 454, and 468, respectively. The 2005 sample consisted of traditional age undergraduates (mean age 19), whereas the later two samples had mean ages of 26 and 27.

10.4.1 *Instrument*

Data describing students' experiences were collected using a quantitative survey, previously validated through use of an expert panel and multiple pretests (King 1998). Respondents self-reported whether they had experienced transformative learning and the 10 steps leading to transformative learning, and there were questions on demographics and college major. Recall of each of these precursor steps was measured by check boxes and included the option to say "none," followed by a question whether or not transformative learning occurred while at this institution. Those respondents reporting transformative learning were asked to explain in their own words how they experienced it. These open-ended responses were used to confirm that students reporting transformative learning understood that it was not merely learning a new tool, such as SWOT (a commonly used model in business, describing strengths, weaknesses, opportunities, and threats). For this study, the instrument was modified to add class rank in the demographic section. This paper-based survey was first piloted to assure the original method would be replicable on the Web. Further piloting showed comparable results between the paper-based instrument and a Web-based version of the survey.

10.4.2 Procedures

Participation in all three studies was voluntary and had been approved by the colleges' Institutional Review Boards. In 2005, the Dean of the Undergraduate School helped recruit students; recruitment invitations were included in four editions of the school's weekly e-newsletter. Those students interested in volunteering were directed to a link for a Web site (surveymonkey.com) displaying the survey. In the 2008 and 2010 studies, undergraduate students were e-mailed directly and offered a link to the SurveyMonkey.com Web site. In the 2005 study, participants were offered participation in a \$250 lottery as suggested by Dillman (2000) to increase response rate. No incentive was offered in the latter two studies, but in all three the offer was made to provide a summary of the completed results if an e-mail address was provided. Response rate was 13 % in the 2005 study, the relatively low level being attributed to the invitation appearing at the end of the weekly Dean's letter and "below the fold" of this electronic communication and thus not on the opening screen (Lynch and Horton 2001). In the latter two studies, the response rate to the more direct solicitation was 60 % (2008) and 61 % (2010). Split half reliability was checked between responders and non-responders in each of the three studies. The resulting randomly selected halves did not show significant differences on key variables.

Selected information from these three studies (Brock 2010; Brock and Abel 2012; Brock et al. 2012) has been reported elsewhere, but not the verbatim comments described in the next sections.

10.5 Incidence of Transformative Learning

What proportion of a classroom can be expected to have at least one transformative experience in a college career? As reported earlier in Brock et al. (2012), the range in the three studies elaborated on here was from 38 to 55 %. King (1997, 2000) found a similar range with the highest percentages coming from ESL classes where students are older than traditional-aged and likely to have moved residence and are living and working in a culture new to them. Glisczinski (2007) reported that 35 % of college students said they had experienced transformative learning.

10.6 Characteristics of Transformative Learners

What are the characteristics of those more likely to undergo transformative learning? Brock et al. (2012) found that more mature students (25+) reported higher rates of transformative learning as did Hispanic students and students with the non-traditional GED (graduate equivalent diploma). The finding related to ages

does support discussions in the educational literature that transformative learning is related to the maturation process. This finding is important in that educators are encouraged not just to celebrate the sudden aha type of learning but continue to stimulate the more gradual change of framework occurring over time. The work of Perry and other stage theorists may be useful in framing how incremental transformative learning can be fostered (Baxter Magolda 2000; Kegan 1994; Perry 1970). In looking back over a semester, learners can be surprised that life lessons have been absorbed. Reflecting on behavior and life can foster seeing the world in a new way.

Maturation and the building of self-confidence are major contributors to the experience of transformative learning. Many students talked about the usually gradual process that occurs in college:

- “The normal course of self discovery led me to change what I expected out of myself; going through classes helped initiate this.” “I think it’s more about growing up than the college I was in. Living away from home and being self-supportive gave me more self esteem and made me respect others who are hardworking and self-starting.”
- College is “the time in life to grow up.”
- “I just began to not feel comfortable with what other students and teachers were saying or automatically believed in, and also was starting to be independent from my parents’ beliefs (which are the polar opposite); I started questioning more and also started becoming more verbal about my own beliefs.”

The emergence of a more confident self was mentioned by a number of students as characteristic of transformative learning:

- “I became more ambitious and self-confident; I viewed life as something I am in control of.”
- “I feel more confident in dressing, talking and acting in the way that my belief requires.”
- “Having a college degree gives you much more confidence with yourself.”
- “All the undergraduate courses helped me to identify and to make sense of my own life and the life of the people in the community where I live; it helped me put a name to what I was feeling and to validate me as a person.”
- “Being in school helped me to think in a different direction, helped me to build my confidence and believe I can accomplish anything.”
- “I think that the fact that I am in school, and thinking of completing college with a master’s degree makes me feel as if I am going to cut that dense boundary that separates me from people above.”
- “School influenced me by building my self-confidence, self-esteem, and goals. Getting good grades, making it through each semester has shown me I can do it!”
- “It proved to me that I was capable of achieving more than I had thought. That I can inspire people with how I inspired myself.”

In some cases that increase in confidence directly related to the transformative learning step of role redefinition.

- “On my return to college after many years, I doubted my academic ability in being able to comprehend and retain the work; the professor shed a whole new light on my esteem.”
- “My self-confidence went through the roof; I realized I didn’t need to be in the relationship I was in; I realized that I was smart and my self-worth was more than what he thought of me and what he made me think of myself.”
- “School helped me to realize that I was able, willing, and ready to take my education to the next level. It also helped me to evaluate things that were going on in my personal life as far as parenting, becoming a single mother, and starting my life all over again.”

When looking at gender, it appears that males and females are not different in the proportion likely to experience transformative learning (Brock et al. 2012). However, the mechanics of undergoing it may be different. Women may process competition differently than men, adding a frame of reference, whereas men appear to absorb it directly.

Responses to open-ended questions give some possible explanation of the difference between men and women in response to a competitive class environment found by other researchers (Gneezy et al. 2003). These answers seemed to indicate men may be more used to thriving on competition, whereas women need to contextualize competition to see it as a positive. For example, male student responses talked about a class environment as:

- “Fierce in competition and constantly moves me to forward. In this atmosphere, one is more future-driven than before;”
- “I realized that if it were not for the competitive nature of the school and the city, I would not have been as motivated in my studies... I have adopted a more serious tone in all aspects of my life.”
- “I began to see that I needed to raise my expectations and work much harder than I ever have before.”
- “My friends in [this school] are all hard-working and smart; so, I feel like I am competing with them. This has improved my skills and perspective.”

While many of the female students reported a positive reaction to competition, they appeared to have expanded definitions of what competition is, for example:

- “This is a mature, thought-provoking setting in which we are all hammered by different presences. Diversity in thoughts provided me with the motivation to change and be open-minded.”
- “I was put in a place with high achievers and this influenced me to raise my own expectations.”
- “I knew coming to college means exposing myself to a myriad of ideas. I’m fine with that and I’m willing to change if I find the new ideas more applicable and convincing.”

Some female students just observed competitiveness as part of the environment, saying:

- This school is “very fast paced (as is [this city]) as well as competitive and there are the students [who] have very strong character, including the women.”
- “Each person is for himself in school. No one will look after you. I must take responsibility to organize my academic time, social time, and relaxing time.”
- “I realized that starting now, I need to be more responsible and dedicate more time to what should be my higher priorities to help me prepare for the future.”

10.7 Instructional Methods Stimulating Transformative Learning

The studies on the instructional methods that foster transformative learning have a common theme that shifts the goal from instructor-centered design to student-centered and to one where students are active learners in the classroom. A number of studies examined the classroom elements that contributed to transformative learning. An adult education experience could itself be a disorienting dilemma (Kroth and Boverie 2000).

Factors within the classroom found to contribute to transformative learning were the importance of a non-threatening educational environment (Christopher et al. 2001), peer learning partnerships for expert instructors in a practice improvement class (Eisen 2001), as well as reflection, class discussion (Harris 2002), and storytelling (Maybury 2001). The time and space in asynchronous distance learning gave more space for the critical reflection necessary for transformative learning (Ziegahn 2001). Other possible connections between transformative learning and spirituality (Tisdell 2000), with for-pleasure reading choices (Jarvis 2003) and with the mission defined for one’s life (Kroth and Boverie 2000) were explored but not found to be significant contributors. In workplace studies, contributing factors to transformative learning have included new meaning perspectives to manage the conflict precipitated in their personal relationships by a mid-life academic degree for eight women (Kennedy 2002), as well as sharing “fundamental existential dilemmas” in personal stories, and creating relational space for 11 mid-level executive men working in nine different Silicon Valley corporations (Robin 1998).

Learning activities found to support transformative learning include personal learning assessments, reflection, dialog, discussing concerns, and self evaluation, as well as the concept of the instructor as a support to, rather than an originator of, learning (Cranton 1994). Other devices include learning journals, communities of learners, and the recognition of the need for support of students’ emotional needs (Baxter Magolda 2000). Student choice of learning activity can also affect learning positively; in a study where undergraduates in a communications course were

given the personal choice of type of assignment and evaluation method, students reported not only preferring this approach, but also those who considered the long-term payoffs had a significantly more positive learning outcome (Lewis and Hayward 2003). Efforts have been made to show that setting up motivational sessions prior to classes may provide stimulation to learning. Some of the influencers of motivation included giving the learner the opportunity to provide input to whether to take the class (Cheng and Ho 2001), but at least one effort to stimulate motivation by a pre-class session did not bear fruit (Werner et al. 1994).

The format of a classroom situation can also affect transformative learning. Prior research had also confirmed the value of assignments to write or talk about concerns, critical thinking and reflection, as well as internships (Brock 2010). The 2008 and 2010 studies confirmed the value of actually recording concerns as an aid to transformative learning.

The three current studies show that talking and writing about concerns, deep concentrated thought and personal reflections were consistent facilitators of transformative learning. The 2005 study with a sample of traditional-aged students added a non-traditional class structure and internships to the list of facilitators to transformative learning. The 2012 study of slightly older students added a personal learning assessment to the list.

Verbatim comments in 2008 pointed to specific class subject as being foundation for change, although quantitative analysis did not show significant differences in the incidence of transformative learning among different majors. The subject of psychology and of religion came up but one student mentioned an acting class as “increasing perception to the energy around me.” English class was a platform for debating political issues. A science class taught one student “how people became braver and improved other people by themselves.” In 2010, a student noted “A journalism class made me more aggressive and unafraid of approaching strangers. I realized questioning doesn’t mean being too forward, it means learning.” Another learned through a biology class “to question research when it’s presented through the media.” And, “the undergraduate portion of the Doctor of Physical Therapy program is constant work and pressures, so it forced me to have to figure out what works practically rather than what works in an ideal situation.” Lastly, “Psychology classes have been very profound. I have thought of my past a great deal and relearned how to proceed dealing with life changes.”

The concept of critical thinking has greatly influenced the design of learning activities that prepare students for a world where one has to make judgments in complex and ambiguous situations (Merriam and Caffarella 1999). Critical thinking, going back to Kant’s use of rationality to examine what had been faith-based, has been an important stream in social sciences research (Creswell 1998). Brookfield defined critical thinking, which is also the second of Mezirow’s steps leading to transformative learning, as a habit of looking at the assumptions beneath behaviors and ways of thinking (Brookfield 1993). Other scholars besides Brookfield have shown critical thinking skills learned through classroom lectures, application exercises in classroom and library, student presentations, and testing (Tremblay and Downey 2004).

The adult education literature indicates that learners need support, e.g., breast cancer survivors found self-directed learning provided useful information, but that it also was needed to help them deal with negative emotions (Rager 2003). Personal support and expression of care may be important supplements to self-directed learning, especially among women.

Quantitative research conducted among three separate samples of undergraduate business majors in two colleges sheds more light on the steps preceding transformative learning in the classroom. Brock et al. (2012) reported that the step of *reflection* was more important in predicting transformative learning than any of the other precursor steps. They found that the steps of *acquiring the skills/knowledge to implement a changed perspective*, *trying on new roles*, and *building confidence* were also important to transformative learning. Surprisingly, other precursor steps were not significant predictors: *recognizing others shared the discontent*, *exploring new roles* (as contrasted to *trying new roles*), *self-examination with feelings of guilt/shame*, *planning a new course of action*, and *reintegrating new perspectives to life*.

10.8 Life Events Stimulating Transformative Learning

Changes outside of the classroom, such life events as marriage, divorce, moving, and job change or loss, play an important part in creating the stimulus for transformative learning (Cranton 2006) as do immigration and changing jobs, and/or residence (King 2000), role transitions (Isopahkala-Bouret 2008) and out-of-classroom college activities (Terenzini et al. 1996).

To summarize key points of research published elsewhere, Brock (2010) reported that moving residence, which could represent anything from a move away from the parental household to immigrating to a new country, is the single life event most predicative of transformative learning. It would appear that moving not only calls for redecorating the walls of one's home, but also the walls of one's mind. As many college students do move to campus, this seems a natural to tie in the dislocations made to the internal potential for readjustment. In a repetition of this study in 2010 at another college with an older, commuter student base with both liberal arts and professional majors, moving was also a significant predictor of transformative learning. However, in a 2008 study at the latter college, it was only death of a loved one or retirement that predicted transformative learning.

The immigrant experience as a facilitator to transformative learning was found by King (2000) and echoes through the current research. Not only do immigrants move they also encounter many new cultural influences. One student said, "I feel a lot more comfortable living in New York City as an immigrant than I did before; furthermore I feel I have a better view about America." Another that "I re-immersed myself in America and realized I had to be different."

10.9 People Supporting Transformative Learning

Summarizing research published elsewhere, teachers were shown to be a catalyst to transformative learning less in original research done in 2008 and 2010 at a New York area commuter college than Brock and Abel (2012) found in a 2005 study among traditional-aged students. The influence can come from either a positive or a negative experience.

Respondents in 2008 talked about the positive influence of instructors:

- [Had] “a dynamic teacher,”
- “My teacher challenged me to meet my potential,”
- “My teacher presented a different point of view,” and
- “Hearing professors’ thoughts and experiences.”

Verbatim comments of negative experiences included:

- “Teacher expressing inappropriate ideas,”
- “Being avoided by one professor and suspended by another,” or being told “you’re not a good writer.”

In 2010, positive experiences with teachers mentioned:

- “I had a great professor who really inspired me to try to make a difference for what I believed in;”
- “My professor has guided me to realize I can be more than what I originally planned;”
- “I respect Professor ___ and looked up to her as a mentor;”
- “The professors always had fun anecdotes, quotes, or poems along with our assignments and these included some that were very compassionate;”
- “The professors made you think about who you are and what role you are playing in today’s society;” and
- “I know that I am being guided by smart, professional people who have been in this position before.”

The negative experiences also were stimulants to transformation:

- “A professor gave another student who did not do as well as me the same grade; in discussing it, I was disrespected;” or,
- “The teachers’ knowledge of the system opened my eyes to what I was about to get into.”

The diversity of a student body also is a key stimulant to transformative learning. In the 2008, research students described their transformations as due to “exposure to different nationalities.” They also said:

- [I] “realized that disabled people are people just like you and me, who expect to be treated with the same respect as everyone;”
- “Seeing many students from many different backgrounds has opened my eyes to see the different options and opinions that are out there,” and

- “I was placed in a class with people from many different ethnic backgrounds and some of their personal stories, struggles and trials of life influenced me to be more open.”

Other comments about the influence of diversity included:

- “My beliefs changed in a more positive way towards other cultures. I had a better understand of what other people had to experience in their everyday lives;”
- [I] “became a little open minded about other people who may have a different lifestyle, though sticking very strongly to my own religious beliefs;” and
- “Not to make assumptions about people from their role or cultures and not to be dismissive, to learn to become more attuned when I am not familiar with a person’s background, rather than just tune into the familiar.”

A few of the comments mirrored back to the original case study done by Mezirow, for example, one woman said, “while attending college I have met different individuals that made me realize that there is more to life than marriage. I learned to believe in myself.”

In the 2010 study, students talked about stimuli for transformative learning as:

- “Meeting other people who had their own ideas of what to do with life/schooling/working made me question some of my own motives;”
- [It was] “exposure to people I normally would not have hung out with” and “to others outside my social circle;” also,
- “Meeting new people from different backgrounds and learning about different ways of life were eye opening.”

10.10 Conclusions

Much research, writing, and thought has been devoted to how educators can foster transformative learning and stimulate students to break through perceptual barriers to new ways of thinking. It is certainly true that this kind of resilience and flexibility of mind will be required for success in the twenty-first century.

What can be concluded about how to increase an individual student’s likelihood of experiencing transformative learning? Not all college students will be changed by the experience. In fact, only half report a transformation. And what to look for? First, start with students who have chosen to immerse themselves in new cultures and be open to change: the immigrant, the one who moves out of the parental household, or the person who has decided to start a new life. Then, respect that there is a process of maturation that traditional college-aged students go through that, when considered, can reinforce the likelihood of transformation and new perspectives on life. And bring on people and experiences who both challenge and

support existing patterns of belief. Do not ignore the value of diversity of cultures and lifestyles in our increasingly global communities.

Also the 10 precursor steps to transformative learning that Mezirow hypothesized can be building blocks to a foundation for it. The more of these steps remembered, the more likely transformative learning occurs and that critical reflection may be more important than the other steps.

Some classroom techniques are better than others in fostering transformative learning. Techniques that cause students to reflect on their values (and do so critically) create a fertile field for transformative learning. Examples are talking and writing about concerns, stimulating deep concentrated thought, and personal reflection.

The teacher is often at the core of the life-changing nature of education. A well-placed challenge to existing beliefs, whether direct or by putting students in situations different from their life experiences, can begin a process of transformative learning. This observation may be well to remember as post-secondary education moves to place more emphasis on delivery through technology and increasingly larger classes.

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