# Creating a Learning Climate for the 21st Century: Applying Transformative Learning to Teaching Methods in Business Schools

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## Abstract:

Students in an undergraduate business school reported incidences of transformative learning in this quantitative study of 256 students. Learning activities previously associated with transformative learning, e.g., writing and talking about concerns, deep concentrated thinking, personal journaling, internships, and self evaluation, were shown to foster transformative learning. A teacher's challenge was demonstrated to be a significant element in creating an environment for high-level learning, and more important than the support of either a teacher or peer. Moving was the most significant life event contributing to transformative learning environments.

## Key Words:

Transformative learning, undergraduate students, business school, learning activities.

## Introduction

Given turbulent economic and business conditions of today, business school graduates will have to adapt to rapid change (Eisner, 2010) in their roles as entering professionals and organization managers. Within business schools, instructors need new tools and a broader understanding of how to prepare graduates for the dramatic changes occurring in the 21st century workplace. Transformative learning may be a valuable approach that instructors can use to support student development. Transformative learning, defined as the "a-ha" experience that shifts one's view of the world, is a concept drawn out of practical education (Mezirow, 2000; 2009) and may be a useful lens as teachers strive to create more participatory classrooms that place emphasis on how students learn (Nijhuis, Segers, & Gijselaers, 2007).

The purpose of this study was to identify the educational factors that may foster transformative learning and answer these research questions:

1.  What is the relationship, if any, between types of learning experiences reported and the indication of transformative learning?

2.  Which reported learning activities appear to create a fertile environment for experiencing transformative learning?

Educators may be interested in these findings as they can help set priorities in selecting instructional design elements and lend insight into how to connect external learning experiences to the classroom. For example, incorporating work experience and cultural diversity may be an important part of the backdrop to transformative learning in the classroom. Recommendations are offered to practitioners seeking to support transformative learning in their classrooms.

## Transformative Learning -- Theoretical Background

From the educator's perspective, transformative learning occurs 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). Mezirow (2009) most recently defined it as "learning that transforms problematic frames of reference to make them more inclusive, discriminating, reflective, open, and emotionally able to change" (p. 22). His initial example was a study of housewives returning to employment outside the home and how their worldviews shifted (Mezirow, 1978).

### Factors Contributing To Transformative Learning

Factors contributing to transformative learning can be divided into three areas: (a) personal support factors, (b) learning activities, and (c) life changes. Researchers have identified personal support factors that foster transformative learning, such as trusting and authentic relationships (Taylor, 2009), perception of empowerment (King, 1997), a non-threatening educational environment (Earley & Mosakowski, 2000), and social interaction (Baumgartner, 2002). Other scholars underscore the value of support from other students, classmates, advisors, and teachers (Merriam, Mott, & Lee, 1996; Kegan, 1994), presence of faculty (Smart & Fledman, 2003), and peer support (Kuh, 1995).

King summarized the personal support factors that have appeared in the literature as fostering transformative learning (King, 1998; 2005). They included another student's or classmates' support, a challenge from a teacher, a teacher's support, and an advisor's support.

Classroom activities recommended included: class/group projects; verbally discussing your concerns; writing about personal concerns; term papers/essays; personal journals; self-evaluations in a course; non-traditional structure of a course; class activity/exercises; internships; lab experiences; deep, concentrated thought; personal reflection; prior learning assessments; and, assigned readings (King, 1998; 2005). Other researchers further identify classroom factors that promote transformative learning as those stimulating reflection and class discussion (Harris, 2002) inner dialogue (Kovan & Dirkx, 2003), emotion-laden images (Dirkx, 2006), talk (Carter, 2002), as well as a holistic orientation, awareness of context, and authentic practice (Taylor, 2009).

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, changing jobs, and/or residence (King, 2000), role transitions (Isopahkala-Bouret, 2008) and out-of-classroom college activities (Terenzini & Pascarella, 1996).

There are continued calls for more research to assist the practitioner in bringing about transformative learning (Cranton, 2006; Ruth-Sahd, Beck, & McCall, 2010, Taylor, 2009). Extensive qualitative literature exists about transformative learning (Aleman, 1997; Carter, 2002; Christopher, Dunnagan, Duncan, & Paul, 2001; Cragg, Plotnikoff, Hugo, & Casey, 2001; Kovan & Dirkx, 2003; Maybury, 2001), but sparse quantitative research has been conducted (Taylor, 1997). Based on the literature, we would expect that challenge and personal support from instructors and peers, classroom assignments that encourage contrasting internal values with external events, and life events such as moving away from home to be related to the occurrence of transformative learning.

## Methods

### Sample and Data Collection

The target sample for this study was undergraduate business students at a large North-eastern university in a major metropolitan area. Permission had been granted by the school's Institutional Review Board for the research.

To collect data, the Dean of the Undergraduate Business School agreed to recruit students in autumn 2005. Recruitment invitations were sent out in four editions of the undergraduate business school's weekly e-newsletter to approximately 2000 students inviting them to participate in a web-based survey. The email headline asked, "Interested in participating in a study on how students learn in undergraduate school?" and mentioned confidentiality and a chance for a $250 lottery ticket redeemable at the school's bookstore. The newsletter also featured school activities occurring that week, opportunities for community volunteering, and details about yearbook photographs. It is estimated that majority of the students did not read the research request, as it occurred at the end of a 4-page email. Information occurring "below the fold" has shown in prior

studies to have significantly depressed readership (Lynch & Horton, 2001). By the end of 10 weeks, 356 responses had been received and 256 of these were usable (71.9% usable). Incomplete surveys were the largest reason for removing 100 questionnaires from the analysis. The remaining 256 usable questionnaires were sufficiently robust and varied for informative analysis, which included Chi-square and t-testing.

The 256 usable responses did exceed the requirement shown in power analysis to test with an alpha set at .05 (Elashoff, Dixon, Crede, & Fotheringham, 1995-2002). There were also observable standard deviations on most of the questions asked, indicating differences among responders. For example, Table 1 shows the range of standard deviations in the incidence of the 30 possible answers to the question on learning activities experienced, which was a yes/no question. Most of the standard deviations to these answers were .4 or higher. Therefore, in this exploratory study, the data were sufficiently robust and varied to expect that findings could prove useful in answering the three research questions posed.

### Sample Characteristics

Females represented most (64.2%) of the total sample, compared to a population equally divided between sexes. Over half (52.7%) of the total was Asian, and half (49.5%) of the total consisted of finance majors. Each class rank was well-represented with freshmen as the biggest group (32.8%), followed by juniors (26.2%), sophomores (23.4%), and seniors (17.2%).

### Instrument

Data describing students' experiences were collected using a quantitative survey with two open-ended questions developed by King (1998) and used with her permission. She had previously validated the survey through use of an expert panel and multiple pre-tests (King, 1998). The two open-ended questions were:

- Since you have been taking courses at this institution, do you believe you have experienced a time when you realized that your values, beliefs, opinions or expectations had changed? If yes, briefly describe what happened.
- Thinking back to when you first realized that your views or perspective had changed, what did your being in school have to do with the experience of change?

The instrument also covered the ten steps leading to transformative learning, the reporting of transformative learning, activities contributing to it, as well as questions on demographics and learning activities encountered through personal interaction, classroom assignments, and life events. Those respondents reporting transformative learning were asked to explain in their own words how they experienced it and the impact of school life and activities on their learning experience. For this study, the instrument was modified to add class rank and learning techniques often used in business school. 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.

**Data Analysis**

Statistical testing was used to answer the research question of what fosters transformative learning among this group of undergraduate business students. Three series of Chi-square tests were performed; one for each of the three types of learning activities: personal support, class assignments, and life events. One-tailed testing was used because prior literature indicated a positive relationship between the learning activities listed on the questionnaire and the report of transformative learning (King, 1997; 2000).

As a check for data reliability, a comparison was also made to determine if there was a difference between early and late responders. A two-tailed Chi-square analysis indicated there was no significant difference on transformative learning or on any of the key demographics between these two sections of responders.

## Findings

The incidence of transformative learning reported was 48.8% of the total sample. Transformative learning can be fostered in at least three discrete ways: by other people, by classroom activities, and by life events themselves. The proportions of the sample reporting each of these categories and subcategories can be found in Table 1. Operationally, each of the three categories was defined by the closed end responses listed underneath it. The answer choice was "yes" or "no" to each of the categories, as described in the following table, so each respondent created any definition needed beyond the minimal-word description. Respondents did have the opportunity to write in additional activities but fewer than 10% did so.

### Table 1: Learning experiences reported

| N = 256 | % | s. d. |
| --- | --- | --- |
| Personal support activities: | 77.0 | .48 |
|    Another student's support | | |
|    Classmates' support | 58.6 | .50 |
|    Teacher's challenge | 50.0 | .48 |
|    Teacher's support | 43.0 | ,45 |
|    Advisor's support | 27.0 | .27 |
| | | |
| Class assignments: | | |
|    Term papers/essays | 73.8 | .53 |
|    Assigned readings | 68.0 | .47 |
|    Class/group projects | 68.0 | .49 |
|    Class activity/exercise | 63.3 | .48 |
|    Personal reflection | 57.4 | .50 |
|    Deep concentrated thought | 46.1 | .50 |
|    Verbally discussing concerns | 45.7 | .49 |
|    Case study | 44.9 | .20 |
|    Internship/co-op | 36.3 | .46 |
|    Self evaluation in a course | 35.9 | .39 |
|    Non-traditional class structure | 28.1 | .38 |
|    Writing about concerns | 25.8 | .52 |
|    Personal journal | 22.7 | .36 |
|    Lab experiences | 18.0 | .20 |
|    Personal learning assessment | 6.3 | .41 |
|    Other class activity | 4.7 | .43 |
| | | |
| Life events: | | |
|    Moving | 63.7 | .46 |
|    Death of loved one | 9.4 | .30 |
|    Parent's change of job | 7.0 | .26 |
|    Parent's job loss | 3.9 | .16 |
|    Parent's retirement | 1.2 | .15 |
|    Marriage | 0.8 | .16 |
|    Birth | 0.8 | .16 |
|    Parent's divorce/separation | 2.0 | .22 |
|    Other life event | 9.4 | .47 |

The people who support transformative learning include classmates, other students, advisors, and the support and challenge of a teacher. The relationship between the occurrence of transformative learning and various types of interaction with another individual at school was examined. Only one of these interactions, a challenge from a teacher, showed a significant positive relationship ($x2 = 4.01$, $p < .05$) with the incidence of students reporting transformative learning. See Table 2.

**Table 2: Relationship of personal support activities to incidence of reported transformative learning**

| Base = all respondents Reported: | Reported transformative learning n = 125 % | Did not report transformative learning n =131 % | Chi-square (with Yates correction) | 1-tailed p |
|---|---|---|---|---|
| Another student's support | 76.0 | 77.9 | .042 | .419 |
| Classmates' support | 59.2 | 58.0 | .004 | .474 |
| Teacher's challenge | 56.8 | 43.5 | 4.010 | .023* |
| Teacher's support | 47.2 | 38.9 | 1.463 | .113 |
| Advisor's support | 24.0 | 29.8 | .809 | .184 |

*Difference significant at .05 in one-tailed Chi-square test

The second type of learning activity, class assignments, had significant relationships to reports of transformative learning. In one-tailed Chi-square tests, three types of classroom assignments show a significant positive relationship with the reported incidence of transformative learning with $p < .01$. These are writing about concerns ($x2 = 10.384$, $p < .001$), verbally discussing concerns ($x2 = 6.776$, $p < .005$), and deep concentrated thought ($x2 = 8.884$, $p < .001$). A number of other class assignments were also positively related with transformative learning: internship ($x2 = 4.423$, $p < .05$), self-evaluation ($x2 = 4.997$, $p < .05$), personal reflection ($x2 = 4.865$, $p < .05$), a non-traditional course structure ($x2 = 4.171$, $p < .05$), prior learning assessment ($x2 = 3.628$, $p < .05$), term papers/essay ($x2 = 3.715$, $p < .05$), and personal journal ($x2 = 3.407$, $p < .05$). See Table 3.

## Table 3: Relationship of class assignments to transformative learning

| Base = all respondents<br><br>Reported: | Reported transformative learning<br><br>n = 125<br>% | Did not report transformative learning<br><br>n = 131<br>% | Chi-square<br><br>(with Yates correction) | p |
|---|---|---|---|---|
| Writing about concerns | 35.2 | 16.8 | 10.384 | <.001* |
| Verbally discussing concerns | 54.4 | 37.4 | 6.776 | .005* |
| Deep, concentrated thought | 56.0 | 36.6 | 8.884 | .001* |
| Internship | 43.2 | 29.8 | 4.423 | .018** |
| Self-evaluation | 43.2 | 29.0 | 4.997 | .013** |
| Personal reflection | 64.8 | 50.4 | 4.865 | .014** |
| Other class activity | 8.0 | 1.5 | 4.638 | .014** |
| Non-traditional course structure | 34.4 | 22.1 | 4.171 | .020** |
| Prior learning assessment | 9.6 | 3.1 | 3.628 | .027** |
| Term paper/essay | 68.0 | 79.4 | 3.715 | .027** |
| Personal journal | 28.0 | 17.6 | 3.407 | .032** |
| Assigned readings | 64.0 | 71.8 | 1.429 | .116 |
| Lab | 15.2 | 20.6 | .930 | .167 |
| Class/group projects | 71.2 | 64.9 | .899 | .171 |
| Class activity/exercise | 62.4 | 64.1 | .024 | .438 |
| Case study | 45.6 | 44.3 | .008 | .465 |

*Difference significant at >.01 in one-tailed chi-square test

** Difference significant at >.05 in one-tailed chi-square test

The relationship of life events to transformative learning showed that moving to this large metropolitan city was positively related to reporting of transformative learning. Moving was the life event having the biggest impact on these undergraduates; more than half (63.7%) reported moving, and it was significantly related to the indication of transformative learning ($x^2$ = 4.229, p < .05). The incidence of any other of the life events was below 20%. Despite this low incidence, in one-tailed Chi-square tests, three types of lifestyle events show a significant positive relationship with the reported incidence of transformative learning with p <.01. These are parent changing or losing job ($x^2$ = 7.800, p < .01; $x2$ = 2.853, p = .05), and other (diverse) life events ($x^2$ = 14.289, p < .001). These other life changes were varied and included being in a new social group and illness. See Table 4.

### Table 4: Relationship of life events to incidence of transformative learning

| Reported: | Reported transformative learning<br><br>n = 125<br>% | Did not report transformative learning<br><br>n = 131<br>% | Chi-square<br><br>(with Yates correction) | 1-tailed<br><br>p |
|---|---|---|---|---|
| Moving | 70.4 | 57.3 | 4.229 | .020** |
| Other life event** | 16.8 | 2.3 | 14.189 | >.001* |
| Parent's change of job | 12.0 | 2.3 | 7.800 | .002* |
| Parent's job loss | 6.4 | 1.5 | 2.853 | .054** |
| Death of loved one | 11.2 | 7.6 | .584 | .223 |
| Marriage | 1.6 | 0.0 | .553 | .237 |
| Birth | 1.6 | 0.0 | .553 | .237 |
| Parent's divorce/separation | 2.4 | 1.5 | .003 | .478 |
| Parent's retirement | 1.6 | 0.8 | .002 | .482 |

*Difference significant at >.01 in one-tailed chi-square test

**Difference significant at >.05 in one-tailed chi-square test

## Discussion

   To answer the research questions about the relationship of learning activities with transformative learning, findings showed specific learning activities were more often mentioned by those who also reported transformative learning. Those activities were a teacher's challenge, writing about and verbally discussing concerns, deep, concentrated thought, self-evaluation, personal reflection and journaling, term papers, and internships. In addition to these learning activities, life events such as moving residence, and a parent's change or loss of job may foster transformative learning.

   It may be useful to note that the importance of challenge from an instructor is in line with what students expect from this highly competitive business school, a honing of their abilities to compete in a business career. Challenge may play a critical role in promoting change and growth in college students (Cranton, 2006; Perry, 1970; Morris, 1981; Smart & Fledman, 2003). And the lack of significance of support from either peer or adult is consistent with the expression of "each person out for his or her own interests" noted in the competitive culture of this school (Lavalle, Gerdes, Jespersen, Gloeckler, & Symonds, 2006). These results would seem to indicate that peer support was not as important a factor to this respondent base as it might have been to college students in other schools. The value of peers to learning has been frequently reported in the literature (Aleman, 1997; Baxter Magolda, 1999; 2000; Cranton, 2006; Harris, 2002; Merriam, Mott, & Lee, 1996; Stage, Muller, Kinzie, & Simmons, 1996). A possible condition operating in this study was the acknowledged competitiveness of this school, both in difficulty in getting accepted (39% acceptance rate) and in the atmosphere of the school and environment (Anonymous, 2008). The students in this study may have been

less likely to expect personal support especially from peers given the environment of competitiveness.

The current results appear to confirm what has been recommended in the transformative learning literature as important to changing worldview: writing and talking about concerns as an extremely important way to integrate what is happening in an educational institution with one's internal worldview. Also consistent with the literature was the impact on transformative learning of deep concentrated thought, self evaluation, personal reflection, and a non-traditional structure of a class (Cranton, 2006; King, 1997; 2005; Stage, Muller, Kinzie, & Simmons, 1996). Insofar as active learning was important to transformative learning (Revans, 1971), these results do indicate working in an internship was more related to transformative learning than analyzing case studies in the classroom.

Moving to a large metropolitan city was the life event having the biggest impact on these undergraduates in terms of reported transformative learning. Moving has been cited in the transformative literature as being a strong motivator for transformative learning (King, 2000). Results suggest that changing the four walls of one's residence also allows one's mind to be open for "redecorating." The move of a student from a parental home to a different kind of living condition is likely to emphasize the transformative impact of change. Also, it comes as no surprise that changes in a parent's job would especially impact these undergraduate business students who were likely to be preparing for a business job. These repercussions may be true whatever the student's major, however.

### Delimitations and Limitations

This survey is limited to undergraduates in one business school in a major North-eastern city in the United States. The school has a low acceptance rate and students selected are highly competitive. Therefore, the results may be only generalized to similar contexts. It is also limited by having been conducted at only one point in time. The results are cross-sectional and causality cannot therefore be implied.

Other questions must be posed in interpreting this research. One important concern is that the occurrence of transformative learning was determined by one question and it was left to the student to decide whether it had occurred.

In interpreting the usefulness of various learning experiences, there may have been confounding in that students pre-disposed to transformative learning may have also been more attuned to certain learning experiences.

Additionally, the instrument was based on King's Learning Activities Survey (King, 1998) that was validated among adult learners in part-time college programs. In this sample, respondents were traditional aged undergraduate students. The difference is that the mean age in the current study was 19.3, whereas King typically used the Learning Activities Survey among populations where 75% of participants were 18-29 and the rest 30-59 (King, 2000). Some change was made in collecting demographics to reflect this difference. For example, retirement and job loss were framed in terms of parents and not the individual respondent. Nonetheless, this difference delimits study interpretation.

**Recommendations to Practitioners**

Transformative learning entails internal awareness, and it has been found previously that those classroom activities that encourage examination of differences between the external world and a student's individual values fostered transformative learning (Cranton, 2006). The results of this study were consistent with the literature in showing the strongest positive relationship to transformative learning were classroom assignments such as, talking and writing about concerns; deep concentrated thought; self-evaluation; personal reflection and journaling; and, a non-traditional structure in a class (King, 1997; 2000). Therefore, such teaching techniques would appear to be associated with transformative learning for business school undergraduates. Consideration of future roles also has been a key concept in transformative learning (Cranton, 2006). In these results, activities that helped students explore work roles such as internships were supported as relating positively to transformative learning and therefore are an important tool in preparing students for the 21st century workplace.

Among the personal support activities thought to provide a positive learning environment, it was only a challenge from an instructor that was significant in predicting transformative learning. Since transformative learning requires a change of perspective, challenge, not the more passive concept of support, is associated with it.

With undergraduates, many factors outside of the school foster transformative learning; therefore, instructors may need to think about the whole person and make sure that what is done in the classroom supports the transformative learning process created by factors such as moving away from home, trying on adult roles and undergoing a process of maturation. Understanding the whole student may be an important consideration in how the undergraduate business school environment is designed.

Based on this study, previous scholarship in the field, and the authors' experience, specific recommendations are offered for instructors. Four themes emerged as important for the practitioner to consider in creating an environment conducive to transformative learning:

1. Encouraging comparison of students' internal values and the new world they inhabit;

2. Creating opportunities to try on work roles;

3. Providing challenge by setting high standards, questioning opinions and surfacing alternative viewpoints;

4. Enhancing the whole student's experience of new ideas, people, and behaviours.

These four areas all showed statistical significance in the study results. Recommendations are presented in Table 5, considering the statistical significance to reported transformative learning, verbatim comments, and our experiences in teaching undergraduate business students.

**Table 5: Variables that foster transformative learning with examples**

| Transformative learning factors in undergraduate life | Examples that may foster transformative learning |
| --- | --- |
| Comparing internal and external values | Providing and encouraging disparate points of view and facilitating their discussion. |
| | Assignments to compare personal beliefs and values with others' in discussion and writing. |
| Trying out work roles | Discussions of the various and often-conflicting roles played in a business career, as well as internships and simulations. |
| Challenge by setting high standards, questioning opinions and surfacing alternative viewpoints | Giving voice to diversity in and outside of the classroom, creating intellectual debate, high expectations and provocative subject frames. Ethics, politics, and role definitions are especially fertile ground. |
| Enhancing the whole student experience | Extracurricular activities related to class learning objectives, competitions, case creation, in-market student primary research, outside speakers, and site visits. |

The first recommendation for practitioners is to encourage students to compare their internal values with the world of new ideas, attitudes, and behaviours they encounter in undergraduate business school. To do that, instructors could incorporate learning activities that encourage students to compare their internal values with the new ideas, people, and behaviours they are encountering. Thinking and writing about and verbally discussing concerns had strong connections to transformative learning in these results. In general, introducing disparate points of view and encouraging students to discuss their perspectives in class appears to foster transformative learning.

Assignments that require these activities and encourage students to set aside time for them may be among the most important components of an instructor's repertoire. Other useful instructional tools that encourage comparison of internal and external values could be self-evaluation and personal reflection. Where possible, instructors could give students the opportunity to grade themselves and reflect on how their view of the world is changing since coming to undergraduate business school. Term papers and essays could be used as stimuli for transformative learning, especially insofar as they encourage students to write about their concerns and engage in deep, concentrated thought. Non-traditional structures in a class may also create stimuli for transformative learning. Decreasing emphasis on traditional business school formats such as lectures may create a richer environment for transformative learning.

**Create Opportunities to Try on Work Roles**

The second recommendation for the practitioner is to create opportunities for students to try out work roles and understand the diversity of role definitions existing for success in the workplace. Discussions about the many and conflicting roles of a

business person appear to stimulate transformative learning. These results suggest that internships stimulate transformative learning; although this study was not specific about the type of internship, results suggest that assuming the role of worker did help students look at the world differently. Also, the trend toward incorporating live business problems in the undergraduate business school classroom for students to solve (Lavalle, Gerdes, Jespersen, Gloeckler, & Symonds, 2006) and providing external work experience for students along with studies may be effective in increasing the chance for transformative learning.

### Provide Challenge

The third recommendation for practitioners is to encourage instructors to challenge their students as a stimulus for transformative learning. To do this, the instructor could challenge individual student's ideas in verbal or written discussion, provide more thought-provoking materials in instructional design, and communicate high expectations. The instructor's challenge may be a key tool in the instructional repertoire of transformative learning. Other personal learning activities examined, such as the support of instructors, advisors, and peers, need not be discounted, but emphasis on challenge could more directly stimulate change in perspective for students.

### Enhance the Whole Student's Experience of New Ideas, People, and Behaviours

The last recommendation for practitioners has to do with considering the student as a whole person with many experiences both inside and outside the classroom. Instructors could repeatedly remind themselves that the entire experience of undergraduate business school and the age of the student are important elements in fostering transformative learning. What happens in the classroom can be one specific stimulus. Class assignments may be more likely to precipitate transformative learning if they align with the whole student's experiences and encourage change of perspective. Many students hold part-time jobs or summer internships. In the classroom, instructors can facilitate discussion amongst students to share their working experiences and connect them to the class lecture. Additionally, a student's participation in volunteer, community, and family events can also be incorporated to support classroom lessons. Facilitating the connection between what happens inside and outside the classroom can help integrate a student's learning experiences. Creating a school club and extracurricular menu that allows students to explore ethics, politics, and community diversity may help students make the comparison between internal values and external reality that sets the stage for transformative learning.

The instructors who have recognized transformative learning experiences in their own lives have an advantage in creating a climate for transformation in their students. However, even those instructors who have not been able to recognize transformation in their own lives can use examples of other people who have experienced a change in world view because of education. Furthermore, Centers for Teaching Excellence can assist instructors in using more sophisticated techniques to increase transformative learning in the classroom (Shroyer & Yahnke, 2007). The reflection techniques inherent to transformative learning can also be used to make sure that the transformation is a positive and not a negative one. Part of the building of these skills would include ways

to build trust in the classroom, as this has been shown to be a correlate of positive transformative learning (Eisen, 2001; Kilgore & Bloom, 2002).

## Future Research

A potentially fertile area of future research could be further exploration of the connection of transformative learning with other developmental models, such as the stage theory of learning (Baxter Magolda, 1999; 2000). Future longitudinal research can aid understanding of how transformative learning builds throughout the undergraduate school experience. Further research, both qualitative and quantitative, could explore how transformative learning is accommodated by students in other kinds of professional education and by employees in the workplace. Continued exploration of what types of instructional methods, the role of the faculty, and the learning environment in fostering transformative learning is recommended.

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