# Transformative Learning – Purple Paper

Truman State University – Summer 2011

The 2008-2011 Strategic Plan lists several desired characteristics of graduates (http://spac.truman.edu). As part of our participation in the HLC Pathways Demonstration Project and in the Wabash Study, Truman is exploring methods of creating powerful learning experiences designed to facilitate the development of these characteristics. The Transformative Learning Taskforce has prepared this "Purple Paper" – a summary of our current understanding of how we create the powerful learning experiences that may contribute to in the development of the identified desired characteristics.
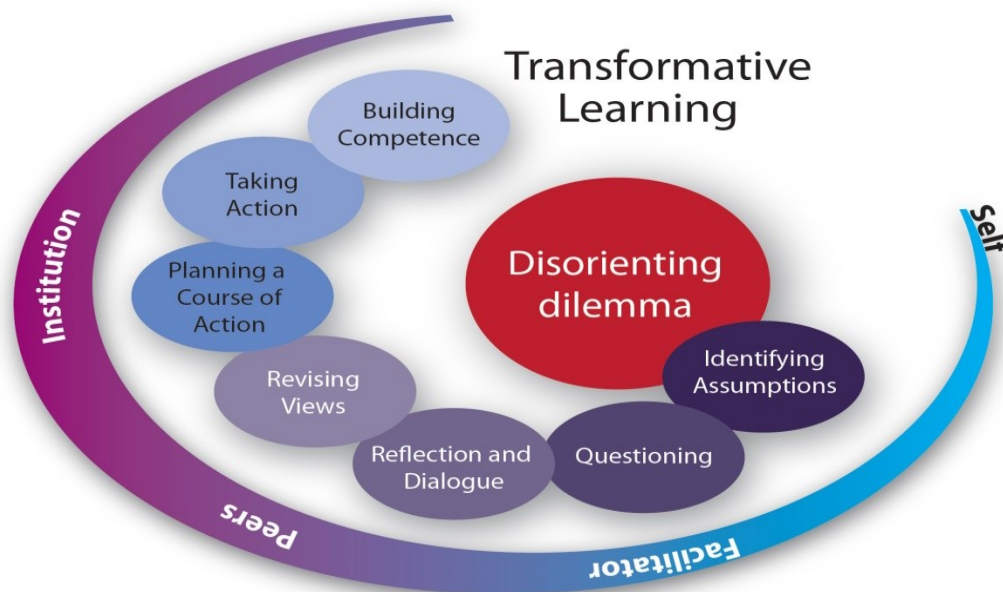
Explanation of the Model

(Adapted from Meirow and associates [2009], p.102)

Disorienting Dilemma: A triggering event that leads to an awareness of the inconsistency among thoughts, feelings and actions, or a realization that previous views and approaches no longer seem adequate, resulting in the experience of disequilibrium.

Identify Assumptions: Identification of prior interpretations or views (assumptions, perceptions, and presuppositions) that are held largely unconsciously.

Questioning: A questioning and examining of held views, including the context that shaped them and the consequences of holding them.

Reflection and Dialogue: An engagement in reflective and constructive dialogue in which alternate views are explored and assessed.

Revision of Views: A revision of views, and in some cases, broad perspectives, to make them more discriminating and justifiable.

Competence: A building of competence and self-confidence in new roles and relationships.

Self, Facilitator, Peers and Institution: Characteristics of the learner, facilitators, peers and the institution can contribute to, or detract from conditions conducive to transformative learning.

Transformative Learning: The combination of these components and supportive relationships can result in transformative learning leading to a variety of desired outcomes such as improved critical thinking, leadership and wellness.

What we mean by "transformative learning."

Patricia Cranton (1994) defines transformational learning as "the development of revised assumptions, premises, ways of interpreting experiences, or perspectives on the world by means of critical self-reflection." (p. xii) We already use several similar terms to describe learning experiences at Truman.

- High Impact Educational Experiences (HIEE) is a term adopted by the State of Missouri from a publication by the Association of American Colleges and Universities (Kuh, 2008). Universities in Missouri are required to report their involvement in these experiences annually. The focus of HIEE is on the characteristics of experiences rather than the outcomes resulting from those experiences.
- Deep learning is "learning that takes root in our apparatus of understanding, in the embedded meanings that define us and that we use to define the world" (Tagg, 2003, p. 70). There are similarities among definitions of deep learning and transformative learning. Both approaches emphasize various forms of reflection and critical thinking. Transformative learning, however, focuses specifically on critical self-reflection and results in a significant attitudinal or behavioral change. It would appear that all transformative learning involves deep learning but not all deep learning results in transformation.

Given that the focus for both the HLC and Wabash projects involves the development of desired characteristics of graduates, transformative learning seems the most relevant term and theory to guide the process. Our Task Force has, therefore, adopted Cranton's definition to guide our work.

What we know about transformative learning at Truman.

Two current assessment tools, the Truman Portfolio and the NSSE Survey, provide insight into student participation in transformative learning.

Truman Portfolio Results
Summary:
- 86% of graduating students report participating in potentially transformational experiences while at Truman.
- 68% of graduating students report participating in an experience they found "transformational"
- Study Abroad continues to be reported as particularly transformational.
- Leadership opportunities and course-embedded experiences result in transformational reports similar to study abroad for some students.
- Research experiences and Service learning experiences are less consistent in the quality of transformational opportunities.

Description:
As part of the portfolio, students are asked to respond to a prompt about a Transformational Learning Experience. This ten minute survey asks students about their participation in a list of experiences (study abroad, service-learning, internship, research, student-led learning, and leadership) and if they reported participation in those experiences, asks them to rate and describe the transformational value of the experience on a zero to three scale (0 = not transformational, 3 = transformational). Students are given the following definition for transformational learning experiences: *Transformative learning occurs when an educational experience that includes reflection results in a profound change in the way you think and/or behave relative to what you have learned.* Students are then prompted as follows: *If you participated in and found one or more of the these experiences meets the above definition of transformational learning, describe the experiences below and discuss how it was a transformational learning experience for you. If you have more than three such experiences, please choose the three that you believed were*

most transformational. The survey also asks them to report other transformational experiences at Truman not listed, including those that happen within traditional classroom settings.
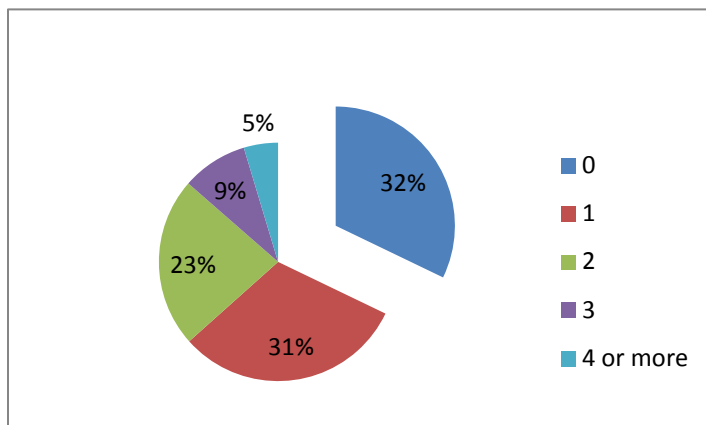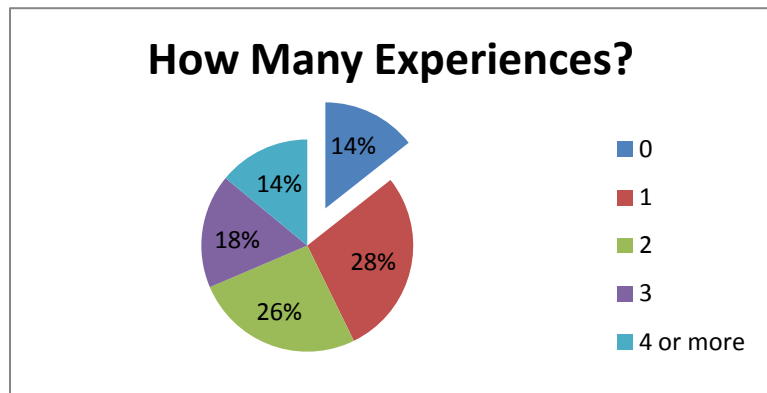
Limitations:
- This Truman Portfolio is a local instrument (we are unable to compare to other institutions) and the prompt is fairly recent (began in February 2010).
- "Course" and "Other" responses measure only those students who found those experiences transformational, so ratings may be artificially high.
- Terms were not fully defined, so students may have different ideas of "Research," "Service-Learning," and other terms used in this study.

Relevant Charts and Graphs:

	N	Pct	Rating	**% 3s**	% 2+3s
Leadership	395	35.3%	2.6	**68.9%**	95.7%
Internship	334	29.8%	2.6	**69.3%**	92.2%
Research	329	29.4%	2.2	**44.9%**	83.3%
Study Abroad	252	22.5%	2.8	**85.9%**	96.8%
Service Learning	247	22.1%	2.1	**35.1%**	78.9%
Student-Led	71	6.3%	2.4	**50.7%**	81.7%
Course*	388	34.6%	2.8	**80.1%**	100.0%
Other*	92	8.2%	2.9	**85.8%**	95.7%

The chart to the right shows that 86% of students report participation in at least one activity on the list. Fourteen percent indicated not participating in any transformational experiences. Fourteen percent of respondents also reported participating in 4 or more experiences they considered to be transformational.

How Many Experiences?

- 0 — 14%
- 1 — 28%
- 2 — 26%
- 3 — 18%
- 4 or more — 14%

- 0 — 32%
- 1 — 31%
- 2 — 23%
- 3 — 9%
- 4 or more — 5%

When asked about the quality of those experiences, 32% did not report any of their experiences at Truman as transformational, while roughly that same number reported having one transformational experience at Truman.

National Survey of Student Engagement (NSSE) Results

Summary:
- In comparison with private national liberal arts colleges, Truman students report less engagement with components connected with transformative experiences, such as relationships with faculty members and critical thinking.
- Detailed 2010 results are at: http://assessment.truman.edu/almanac/2010/CH2.pdf

Description:
All freshman and seniors are asked to complete this fifteen minute online survey administered each spring.

Limitations:
- Comparison groups are not perfect.
- Although statistically significant, many effect size differences are small.
- Different cohorts are included, rather than comparing a group of seniors with the scores given by the same students earlier in their career.

Relevant Items:

1. In your experience at your institution during the current school year, about how often have you done each of the following?

        1: Never
        4: Very Often

1t. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.69	2.75	2.90
Seniors	2.80	2.93	3.00
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.79	2.85	2.88
Seniors	2.95	2.99	2.99

6. During the current school year, about how often have you done each of the following?

        1: Never
        4: Very Often

6d. Examined the strengths and weaknesses of your own views on a topic or issue

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.63	2.65	2.76
Seniors	2.71	2.73	2.82
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.67	2.69	2.73
Seniors	2.78	2.76	2.79

1v. Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values.

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.85	2.78	2.91
Seniors	2.84	2.78	2.89
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.85	2.81	2.84
Seniors	2.87	2.77	2.84

6e. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective.

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.79	2.84	2.90
Seniors	2.76	2.88	2.93
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.83	2.87	2.90
Seniors	2.89	2.91	2.94

6f. Learned something that changed the way you understand an issue or concept.

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.81	2.90	3.00
Seniors	2.82	2.92	3.03
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.85	2.92	2.98
Seniors	2.94	2.95	3.00

8. Mark the box that best represents the quality of your relationships with people at your institution.
        1: Unfriendly, Unsupportive, Sense of alienation
        7: Friendly, Supportive, Sense of belonging

8a. Relationships with other students

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	5.70	5.44	5.72
Seniors	5.79	5.59	5.73
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	5.69	5.43	5.57
Seniors	5.92	5.54	5.66

11. To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?
        1: Very Little
        4: Very Much

11b. Thinking critically and analytically

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	3.32	3.23	3.40
Seniors	3.40	3.40	3.58
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	3.31	3.22	3.35
Seniors	3.48	3.40	3.49

8b. Relationships with faculty members
        1: Unavailable, Unsupportive, Sense of alienation
        7: Available, Helpful, Sympathetic

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	5.19	5.28	5.63
Seniors	5.48	5.66	5.84
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	5.30	5.32	5.54
Seniors	5.53	5.61	5.77

11k. Understanding yourself

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.72	2.81	2.93
Seniors	2.79	2.84	3.07
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.71	2.79	2.89
Seniors	2.81	2.86	2.97

11m. Solving complex real-world problems

2008			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.61	2.67	2.74
Seniors	2.65	2.70	2.82
2010			
Year	**Truman**	**COPLAC**	**Lib Arts**
First Year	2.60	2.64	2.75
Seniors	2.76	2.75	2.82

Summary of Assessment data

These data suggest that Truman could do more to facilitate the quality and quantity of transformational learning experiences. Although a majority of students report transformational experiences, many do not, and the quality of some experiences is reported to be inconsistent. Although Truman lags behind other liberal arts colleges on some important measures that are associated with transformational experiences, we receive higher ratings in terms of peer relationships. Given the importance of caring and trusting environments to self-reflection and discourse, the positive relationships with peers may provide an advantage for Truman in designing opportunities for transformative learning.

What others have said about transformative learning.

In two separate articles, Edward Taylor (1998; 2007) reviewed over 25 years of literature dealing with the theory of transformative learning postulated by Jack Mezirow (Mezirow, 1978). The findings of most interest for our purposes involve fostering transformative learning. These findings will be the focus of our brief review. Taylor (2008) in a third article concluded that the literature had broadened the conception of transformative learning from Mezirow's original psychocritical approach to include psychoanalytical, psychodevelopmental, social-emancipatory, neurobiological, cultural-spiritual, race-

centric and planetary conceptions of the desired results of transformative learning (Taylor, 2008). These findings help us to realize the wide variety of ways in which students can experience transformative learning. Taylor (1998) originally concluded that the literature "affirmed many of the ideal learning conditions" (p.60) postulated by Mezirow (i.e. critical reflection, collaborative classrooms, exploration of alternative perspectives) but also identified new conditions of interest in promoting transformative learning including student-teacher relationships; affective learning; and personal self-disclosure, self-dialogue, and solitude. In addition to classrooms, other setting and even life events present opportunities for transformative learning (Taylor, 2008). The literature identifies several important factors in promoting transformative learning including the need to act on new perspectives; the importance of critical reflection on content, process, *and* premise; the power of both written and verbal communication; the need to explore feelings as well as cognitions; the role of relationships and ongoing support; following transformative learning with instrumental learning; and student readiness (Taylor, 2007; 2008).

The literature also discusses responsibilities of the learner and facilitator.

Responsibilities of Learner	Responsibilities of Facilitator
Be free from coercion, distorting self-deception or immobilizing anxiety	Create settings that value respect, listening and willingness to look at differences.
Have accurate and complete information	Encourage reflective discussions.
Be open to alternative points of view	Help students recognize their own support networks.
Participate in the various roles of discourse	Create experiential learning experiences.
Test validity of new perspectives; understand, weigh evidence and to assess arguments objectively.*	Provide opportunities for groups to share their values and commitments in ways that combine both confirmation and challenge.**

* Mezirow (2009) **Mezirow (2000)

In addition, the research has identified some of the barriers that inhibit transformative learning including rules and sanctions; rigid role assignments; emphasis on task completion rather than reflective dialogue, and unequal distribution of group responsibilities (Taylor, 2007). It should be noted that relatively few of the national studies reviewed utilized a traditional-aged undergraduate population.

Works Cited

Cranton, P. (1994). *Transformative Learning: A Guide for Educators of Adults.* San Francisco: Jossey-Bass.

Kuh, G. D. (2008). *High-Impact Educational Practices: A Brief Overview.* Retrieved from LEAP/High-Impact Practices: www.aacu.org/LEAP/hip/cfm

Mezirow, J. (1978). Perspective Transformation. *Adult Education* , 100-110.

Tagg, J. (2003). *The Learning Paradigm College.* Bolton, MA: Anker Publishing Company, Inc.

Taylor, E. W. (2007). An update of transformative learning theory: a critical review of the empirical research (1999-2005). *International Journal of Lifelong Education* , 173-191.

Taylor, E. W. (1998). The Theory and Practice of Transformative Learning: A Critical Review. *ERIC Clearinghouse on Adult, Career and Vocational Education* , 1-85.

Taylor, E. W. (2008). Transformative Learning Theory. *New Directions for Adult and Continuing Education* , 5-15.

Emotionally and Physically Healthy Lives

Truman State University – Summer 2011

The 2008-2011 Strategic plan lists several desired characteristics of graduates, including living "emotionally and physically healthy lives." As part of our participation in the HLC Pathways Demonstration Project and in the New Wabash Study, the Healthy Living Task Force has prepared this "Purple Paper" – a summary of our current understanding of how students achieve this goal.

What we mean by "emotionally and physically healthy lives."

Good health is not merely the absence of disease or symptoms (World Health Organization). Rather, it is the presence of well-being and dignity in the lives of individuals, communities, and cultures. It is the holistic integration of the six dimensions of wellness – physical, emotional, intellectual, social, spiritual, and environmental.

Psychosocial well-being refers to characteristics of positive mental health as measured by purpose in life, supportive social relationships, feelings of efficacy, and optimism about the future. It places emphasis on the conditions that enable people to flourish. (Keyes, 2002)

The positive aspects of health depend on the quality of the interactive relationships between an individual and his or her environments. (National Association of Student Personnel Administrators-NASPA) Thus, the campus environment itself is an influential factor on the health status of faculty, staff and students.

Using an ecological perspective to address campus wellness provides a multifaceted approach to addressing health-related behaviors of students and groups. It makes it possible to recognize that individual behaviors are a result of influences on the individual from the environment and vice versa. Successfully addressing the health of today's college students requires us to move beyond simply looking at individuals and their behaviors to establishing a healthy campus community. (NASPA, 2004)

What we currently know about emotional and physical health at Truman.

Summary:
Data is plentiful about the emotional and physical health of Truman students with minimal information about faculty and staff.

Students: Areas that stood out in the reviewed data include stress and suicidality, lack of physical activity, poor dietary habits and weight management.

1. **<u>Stress</u>** is common but not much higher than reported levels of college student stress across the nation; however, it appears to have a higher impact on academic performance at Truman than at other schools.
    a. 75% of students stated stress levels have increased since coming to Truman (EBI,2010)
    b. 54% of students responded "Academics" have "been traumatic or very difficult to handle". (ACHA, Spring 2011)
    c. The highest factor negatively impacting students' academic performance, as reported by students, was stress (34.3%). Additionally, 23.0%

identified anxiety as a negative impact on their academic performance. (ACHA, Spring 2011).

    d. Top stress sources according to MCHBS survey 2011:
        i. 79% Academics
        ii. 51% Finances
        iii. 47 % Time management
        iv. 44% Future plans
    e. Stress impacts academics considerably or a great deal for 25% of Truman students vs. 16% nationally (MCHBS)
    f. Overall stress and academic stress have a significant positive correlation (.539) (Student Interview Project 2011)
    g. Academic stress has a significant negative relationship with academic control (-.291) (Student Interview Project 2011)
    h. Academic stressors falling in moderate stress or higher categories according to the Student Interview Project 2011 include:
        i. Multiple back to back assignments and tests in different classes (91.2%)
        ii. Amount of work required in classes (73.7%)
        iii. Keeping a high enough GPA for scholarships or graduate school (68.4%)
        iv. Group projects (64%)
        v. Studying for tests (60.5%)
        vi. Getting into required/desired classes (58.8%)
    i. Stress impacts personal life considerably or a great deal for 28% of Truman students vs. 21% nationally(MCHBS)
    j. 18.7% felt overwhelming anxiety in the last 2 weeks. (ACHA, Spring 2011)
    k. Stress coping strategies include 62% smiled/laughed, 55% talked with a friend, 55% napped, 53% made lists, 51% exercised (MCHBS)

2. **Suicidal Ideation, Intention, and Attempts**
    a. 25% of students seeking services at UCS had thoughts of killing themselves. (Counseling Services Annual Report, 2010-2011)
    b. 8.7 % of students in the Spring 2011 ACHA survey reported seriously considering suicide in the past 12 months.
    c. 17.6 % of students have had suicidal thoughts (MCHBS) (13.4 % nationally)
    d. 1.3 % of students reported in the Spring 2011 ACHA survey they had attempted suicide within the past 12 months. With a population of approximately 5,900 students, the sample statistics suggest that approximately 77 Truman students thus reported they had attempted suicide within the past 12 months.
    e. 25.1 % of students in the Spring 2011 ACHA survey felt things were hopeless at some point in the last 12 months. Hopelessness has been consistently identified as a leading risk factor for suicide (Mental Health First Aid, 2009)
    f. 25.1 % of student in ACHA survey felt things were hopeless at some point in the last 12 months.

3. **Physical activity**- Current recommendations from the American College of Sports Medicine and American Heart Association for adults under the age of 65
   - Moderate-intensity cardio or aerobic exercise for at least 30 minutes on 5 or more days per week, or
   - Vigorous-intensity cardio or aerobic exercise for at least 20 minutes on 3 or more days per week
   - Do eight to 10 strength-training exercises, eight to 12 repetitions of each exercise twice a week
   a. 18.6 % of students exercised at a moderate intensity 5 or more days/week for at least 30 minutes. (ACHA, Spring 2011)
   b. 27.1% did not complete any moderate intensity exercise (ACHA, Spring 2011)
   c. 31.0 % of students exercised vigorously for at least 20 minutes on 3 or more days/week (ACHA)
   d. 40.2 % did not complete any vigorous intensity exercise. (ACHA, Spring 2011)
3. **Dietary habits**
   a. Only 6.5% of students eat the recommended 5 servings of fruits and vegetables daily (ACHA, Spring 2011)
   b. 60.7% of students have only 1-2 servings of fruits and vegetables daily (ACHA, Spring 2011)
4. **Weight Management**
   a. 47.6 % of students are trying to lose weight (ACHA, Spring 2011)
   b. 10.6 % of students are classified as obese according to BMI (MCHBS, Spring 2011)
   c. 22.6 % of students are classified as overweight according to BMI (MCHBS, Spring 2011)

Faculty/Staff:
1. 84.1% of students indicated that the health of the university faculty and staff impact student learning and success. (ACHA Annual Meeting June 3, 2010; Best Practices in Faculty and Staff Health and Wellness).
2. Average BMI 27.28 (Recommended range is 18.5-25) (Faculty/staff needs assessment, Spring 2011)
3. 69% have completed a Wellness Check in the last 12 months (Faculty/Staff needs assessment, Spring 2011)
4. 32% felt they were exercising enough for overall well-being (Faculty/Staff needs assessment, Spring 2011)

Data sources reviewed:
GSQ (Graduating Student Questionnaire), Alumni Survey, Student Interview Project, NCHA (National College Health Assessment) from ACHA (American College Health Association), MCHBS (Missouri College Health Behavior Survey), CIRP (Cooperative Institutional Research Program), University Counseling Services 2011 utilization data, Student Health Center 2011 data, National Survey of Counseling Center Directors 2010, EBI

Survey(Educational Benchmarking Inc.), Student Recreation Center data, Student surveys completed for HLTH 100, Faculty/staff needs assessment, Faculty/staff data from Anthem, ACHA 2011 Annual Meeting presentations and data.

Unanswered questions:
- In what ways and how much do faculty/staff influence student health behaviors.
- Regarding relationship of civic engagement to psychosocial wellbeing:
   - Is depression a manifestation of behavioral & emotional disengagement?
   - Is there a link between civic engagement and psychosocial well-being that universities might be strategically able to strengthen through engaged learning and civic development?
   - What are some strategies for strengthening the relationship between civic engagement and the psychosocial well-being of individual students, as part of the core mission of higher education?

What others are doing about emotional and physical health of college students.

Some liberal arts schools are using opportunities for service, public work and civic engagement of students to enhance students' psychosocial well-being (Bringing Theory to Practice Project, AAC&U) and compliment the educational mission and democratic purpose of higher education.

Programs or resources available at other universities

University of Missouri   http://wellness.missouri.edu/

Suicide Prevention Training, Wellness Coaching, Smoke Cessation, Wellness Coaching, Nutrition Consultation, Fitness Consultation, Mental Health, Off Campus Housing Consultation

University of Iowa http://studenthealth.uiowa.edu/wellness

Drugs/alcohol, educational programs, fitness, nutrition, sexual health, stress management

Missouri State University http://health.missouristate.edu/68422.htm

Sexual Harassment, Wellness Screening, Tobacco Cessation, Weight Watchers, Financial Peace

The Ohio State University http://swc.osu.edu/

Student Wellness Center

University at Buffalo http://wellness.buffalo.edu/

Wellness education services, Mental Health Wellness and Safety Promotion, Stress Less

Purdue University http://www.purdue.edu/swo/nutritioncounseling/index.shtml
Offer many of the same programs as Truman, but they offer a 1-stop health shop
   1-stop health shop includes: alcohol/drug, general wellness, nutrition, sexual health

University of Nevada, Las Vegas http://studentaffairs.unlv.edu/units/studentWellness.html

Rebel Wellness Zone

University of North Dakota http://und.edu/health-wellness/wellness/index.cfm

Wellness Center, nutrition information/education

University of Texas at Dallas http://www.utdallas.edu/studentwellness/
Student Wellness Center

Suggested Further readings

Healthy Campus 2020 (to be available early fall)
Exercise is Medicine on Campus (http://exerciseismedicine.org/campus.htm)
WELCOA (Wellness Council of America) http://www.welcoa.org/wellworkplace/

Courageous, Visionary and Service-Oriented Leadership

The 2008-2011 Strategic Plan lists several desired characteristics of graduates, including demonstrating "courageous, visionary, and service-oriented leadership." As part of our participation in the HLC Pathways Demonstration Project and the New Wabash Study, the Leadership Task Force has prepared this "Purple Paper" to aid in campus conversations regarding achievement of this outcome.

What Do We Mean by "Courageous, Visionary, and Service-Oriented Leadership?"

Currently, our campus community lacks a dialog that explores or shares an understanding of either (1) what is sought by this goal in the previous Strategic Plan, or (2) where examples of these characteristics – if fully understood – are located in campus life in and out of the classroom. If we are to effectively assess this outcome, it seems reasonable to expect that we possess a clearer sense of what our colleagues see as leadership exemplified. In particular, it is worth noting that conceptions of leadership by scholars have evolved in recent decades. In the era of rapid industrialization, "leader" was often synonymous with "manager." While managerial skills are still important, in a post-industrial world, leadership may present itself in ways that are very different than the manager compelling employees to be more productive. In part because of our tendency to equate leadership with management, we sometimes associate leadership with a position held in an organization (president, manager, chair, etc.) without necessarily giving credit to leadership exhibited by individuals scattered throughout the membership of formal and informal organizations. If we begin to think of leadership as something that is a relational construct, rather than merely a positional one, and if we begin to think of leadership as being more collaborative than directive, we may be able to begin to think differently about the "locations" of leadership evidence in different aspects of our campus life. Further, we may be able to separate the lofty language of "courageous" and "visionary" from notions of "titular leadership" and associate them with a range of important acts carried out by our students every day.

Student Leadership Experiences at Truman: Assessment Data

Data regarding leadership is currently collected from several sources at Truman. This section provides a brief synopsis of the data for each source followed by an overview of the limitations of the available data. These limitations were provided from the discussions held during breakout sessions at the 2011 University Conference. Participants in these sessions were asked to review selected data and discuss the meaning and shortcomings of the data. Detailed data tables are available at http://assessment.truman.edu/.

Portfolio - Transformative Experiences Questionnaire
- 34% (2010) and 35.3% (2011) of students reported having leadership experiences.
- Students indicated that leadership experiences were very transformative, rating them 2.5 (2010) and 2.6 (2011) on a 0-3 scale (0 = "not at all transformative", 3 = "transformative").

GSQ
- Question 13a asks students to rate themselves on their leadership ability on a scale of 1 (low) to 4 (high).
- The means over the past 5 years (FY06 to FY10) have been consistently between 3.36 and 3.38, with approximately 47% rating themselves as a '4' and 91% as either a '3' or a '4'. The overall mean over the 5 years was 3.37.

Alumni Survey
- Question 25d asks how the Truman experience provided them with the knowledge and skills necessary for successfully exercising leadership on a scale of 1 (Very Inadequately) to 4 (Very Adequately).
- Results for FY06 to FY10 were fairly consistent, ranging from a low of 3.37 to a high of 3.44 with a mean of 3.41. Approximately 49.5% provided a rating of '4' and 92.4% as either a '3' or a '4'.

Educational Benchmarking Inc. (EBI)
- Various surveys from EBI are used on campus. The following questions use a 7-point Likert-scale with to measure satisfaction, with 1=Very Dissatisfied or No agreement, 4=Neutral, Satisfaction or Agreement, and 7=Very Satisfied or Extreme Agreement.
- To what extent do College Union activities: Provide opportunities for you to assume a leadership role. (3.4 – 2005, 3.39 – 2006, 3.61 – 2009)
- To what extent do College Union activities: Provide leadership training (3.27 – 2005, 3.19 – 2006, 3.44 – 2009)
- To what extent has attending student activities: provided opportunities for you to assume a leadership role (4.92 – 2010)
- To what extent has attending student activities: provided leadership training (4.6 – 2010)
- To what degree has your fraternity/sorority experience enhanced your ability to: assume positions of responsibility (5.84 – 2005, 5.97 – 2006)
- When compared to other participating institutions, Truman ranks in the bottom quartile on the first three items. Truman ranks in the second or third quartile on the remaining items.

Other Sources
- Cooperative Institutional Research Program (CIRP) Fall 2009 survey indicated that 61% of Truman freshmen rated themselves as "Above Average" in Leadership ability.
- 2010 Employer Survey indicated that 84.6% of the valid responses rated Truman graduates as either "Good" or "Excellent" in exercising leadership.

Feedback from 2011 University Conference
- The definition of leadership is not always clear.
- There is a need to incorporate and clarify student perceptions of leadership.
- While surveys and questionnaires provide data about the amount or satisfaction with leadership experiences, they do not generally provide information regarding things such as:
  - Are students growing in leadership abilities through their academic careers?
  - What aspects of these experiences resulted in increased leadership skills?
  - What specific leadership characteristics are being addressed by the experiences?

Leadership Programs

Many colleges and universities articulate a desire that graduates be prepared to take on leadership roles. Consequently, a large proportion of these institutions provide leadership development programs and experiences. These opportunities range from brief and episodic programs (lectures, workshops) to large-scale and systematic programs (academic courses, certifications, majors or minors).

Institutions often adopt a specific model for leadership development that is grounded upon a specific conceptualization of leadership. Two examples of widely-adopted models are the Social Change Model and the Relational Model of Leadership. These are commonly used because they fit well with outcomes associated with post-secondary education, can be assessed through specific instruments, and have been found to be effective.

Selected Research Findings

- A Kellogg Foundation study of 31 college leadership programs found that they produced significant improvement on leadership outcomes for participants. "Students who participate in leadership training have an increased likelihood of demonstrating growth in civic responsibility, leadership skills, multicultural awareness and community orientation, understanding of leadership theories, and personal and societal values" (Zimmerman-Oster & Burkhardt, 2000, p. 11).

- A study of 54 institutions and over 50,000 students revealed that "purposeful interventions" (i.e., leadership programs) produce moderate to large effects on students' perceptions of their leadership capacities, as measured with the Socially Responsible Leadership Scale (Dugan and Komives, 2007).

Suggested Further Reading

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics* 18, 19-31.

Bennis, W. (1994). *On becoming a leader*. Jackson, TN: Perseus Books.

Burns, J.M. (1978). *Leadership*. New York: Harper & Row.

Collins, J. (2001). *Good to great: Why some companies make the leap … and others don't.* New York: HarperBusiness.

Dugan, J. P., & Komives, S. R. (2007). *Developing leadership capacity in college students: Findings from a national study*. A Report from the multi-institutional study of leadership. College Park, MD: National Clearinghouse for Leadership Programs.

Komives, S., Lucas, N., & McMahon, T. (2007). *Exploring Leadership: For college students who want to make a difference* (2nd Ed.). San Francisco, CA: Jossey-Bass.

Northouse, P. (2011). *Leadership: Theory and practice* (5th ed). Thousand Oaks, CA: Sage.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco: Jossey-Bass.

Rost, J. C. (1993). *Leadership for the twenty-first century.* Westport, CT: Praeger.

Zimmerman-Oster, K., & Burkhardt, J. C. (2000). *Leadership in the making: Impact and insights from leadership development programs in U.S. colleges and universities.* Battle Creek, MI: W. K. Kellogg Foundation.

Purple Paper:
Pathways Critical Thinking Task Force
Truman State University—Summer 2011

Natalie Alexander (Philosophy and Religion), Don Bindner (Math and Computer Science), Marty Eisenberg (Associate Provost, New Student Programs), Keith Harrison (Accounting), Royce Kallerud (Task Force Chair, English and Linguistics)

Overview

As a "pioneer" member of the Higher Learning Commission's Pathways Project, Truman State University has adopted the "ability to understand and articulate well-reasoned arguments" as one of four task force themes. This "Purple Paper" summarizes current assessment data in order to present our current understanding of how students achieve this goal.

Working Definitions

Critical Thinking
- o The ability to understand and articulate well-reasoned arguments.
- o The skillful application of a repertoire of validated general techniques for deciding the level of confidence you should have in a proposition, in light of the available evidence.

The second definition, from philosopher Tim van Gelder, elaborates on the initial project definition. It is particularly useful as an overall definition that remains sensitive to disciplinary differences in techniques (methods), validation (epistemology), and (what counts as strong) evidence.

Convergent and Divergent Thinking
- o Convergent: moves toward a single clear conclusion; emphasizes clarity and consistency.
- o Divergent: moves toward multiple answers and meanings, tolerance of ambiguity.

Both are aspects of critical thinking, although different disciplines may emphasize one or other in all or parts of their thinking processes. Being clear on the distinction and on the roles of both may help faculty position their disciplines for students while helping students increase transfer of learning across disciplines and in their life-long learning.

Theory and Status of Critical Thinking in Higher Learning Institutions:
- According to 2009-2010 Collegiate Learning Assessment Institutional Report, few institutions report gains in critical thinking that significantly exceed those of peer institutions.
- Similarly, the claim that students' gains in critical thinking during college are incidental is increasingly widespread.
- Faculties' substantive, content-oriented education and students' mental models for education probably interfere with the abilities to teach and learn critical thinking and pattern recognition skills.
- One consistent finding of research is the real difficulty of teaching, learning, and assessing higher-order thinking.
- Research also shows that universities and colleges using a shared vocabulary, framework, and rubric for critical thinking have statistically significant gains in higher-order thinking, including places where faculty are encouraged to "teach against" the rubric.
- Further national data are presented in the next section focusing on Truman State University.

What We Know: Critical Thinking at Truman State University

We have multiple measures of critical thinking at Truman, and our own situation reflects the national trends.

Direct Measures
- o Truman students' Collegiate Learning Assessment scores are right at expected level.
- o Portfolio and various teaching and assessment instruments (see below) reveal the vestiges of Bloom's vocabulary, but no consistent terminology or concepts are used across our curriculum.
- o The Higher-Order Thinking Skills Committee review of syllabi and assignments reveal that skilled teaching of critical thinking is indeed occurring at Truman, but that we lack a shared framework and vocabulary for this work.
- o In the 2010 Truman Liberal Arts Portfolio, the median score for the Critical Thinking and Writing submission is 2 (Competent), the mean 1.82, with 67% of students demonstrating Competence or Strong Competence. By this measure, about one-third of our graduates did not provide evidence that they are competent critical thinkers.

Indirect Measures
- o Students' self-reported data indicate that they believe they are thinking critically; on the 2010 Graduating Student Questionnaire, 97.5% report that their major has adequate or very adequate teaching of critical thinking.
- o Both first-year students and seniors (National Survey of Student Engagement) report a greater emphasis on memorization than faculty (Faculty Survey of Student Engagement) report, suggesting less a lack of critical thinking than a lack of recognition and appreciation of critical thinking in their mental models of education.

These measures suggest that our students are learning how to think but that our results are more competent than extraordinary.

What We Lack: Critical Thinking at Truman State University

Our clearest "hole" is not in the data, but in our practice; we lack the consistent vocabulary, framework, and rubrics that have led to critical thinking gains at other institutions.

Recommendations
- • We recommend that Truman adopt a systematic and university-wide focus on producing graduates with the "ability to understand and articulate well-reasoned arguments," beginning with, but not limited to adopting a systematic vocabulary, framework, and rubric.
- • We call for the development of Pilot Projects including both faculty development (e.g., documenting the "validated general techniques" that unite and distinguish disciplines) and classroom practices (e.g., the use of argument mapping software), focusing on developing knowledge and application of these common elements, including, but not limited to, the suggestions found in the Higher-Order Thinking Skills Committee's Report to Undergraduate Council.
- • We recommend Truman adopt either the Washington State University or American Association of Colleges and Universities critical thinking rubrics (see Higher-Order Thinking Skills Committee report to Undergraduate Council) following their review in the above Pilot Projects.
- • We recommend adopting benchmarks listed in the Higher-Order Thinking Skill's Committee's Report as measures of our progress toward these goals.

Summary

The consistent finding that students' improvement in critical thinking does not differ significantly across institutions suggests that successful and even extraordinary teaching of critical thinking would distinguish Truman from other universities while directly fulfilling our liberal arts and sciences mission. Truman State University is well positioned to undertake a newly systematic development and emphasis on higher-order thinking and this work would help us to realize the core values of our mission.