**Teaching Tolerance for Ambiguity:
A Experiential Approach for Leadership Education**

Oblinger and Verville (1998), in their book titled *What Business Wants from Higher Education*, make a compelling case for how we, as educators, can assure graduates a foundation upon which to build success. According to the authors, the corporate sector needs people who can be effective in a business environment characterized by speed, agility and flexibility. They draw from Reich who characterizes what successful firms need as problem solvers, problem identifiers, and strategic brokers.

- Problem solving skills allow employees to put things together in unique ways (whether they are alloys, molecules, semiconductor chips, software codes, pension portfolios, or information). These people are involved in a continuing search for new applications, combinations, and refinements capable of solving emerging problems.
- Problem Identifiers help customers understand their needs and how those needs can best be met by customized products. In contrast to traditional marketing and sales, these problem identifiers must have an intimate knowledge of a customer's business.
- Strategic brokers link problem solvers with problem identifiers – they continuously engage in managing ideas. These people understand enough about technologies and markets to see the potential for new products, raise the money necessary to launch projects, and assemble the right teams to carry them out (Reich, as cited in Oblinger & Verville, 1998, p.4).

The American Council on Education claims "New hires have little understanding of the role of the corporation. They do not have the flexibility to function effectively in it. And they lack the critical skills: listening, communication, defining problems, leveraging the skills of others in teams, and functioning effectively in an ambiguous, complex, and rapidly changing environment (ACE, 1996, p. 8). The question arises as to whether business faculty are actively engaged in developing these skills in students and preparing them to deal effectively with issues and challenges that are rampant in current business contexts. In other words, will future graduates have the kind of intelligence needed to be successful?

Successful Intelligence
The notion of "successful intelligence" is described by Sternberg (1996) who posits that there are three types of thinking which contribute to being successfully intelligent – analytical, practical, and creative. This is not unlike the need for problem solving skills,

problem identifiers, and strategic brokers mentioned above. Higher education institutions are rarely faulted on their ability to foster analytical thinking skills. Indeed, the system places great value on its ability to instill facts, figures, and reasoning skill through tried and true teaching and research methods. In addition, opportunities are increasingly made available for students to apply what they learn through hands on exercises and, occasionally, in real world practical settings. However, it is argued here that creative thinking gets short shrift in college classrooms. Creativity is not easy to define and categorize which may explain why it is often not part of the curriculum, yet it is an ability that is easily recognizable.

Oblinger and Verville (1998) suggest that higher education must move beyond teaching problem solving skills to emphasize systems thinking, flexible thinking and a tolerance for ambiguity. These concepts are important elements of creativity and enhance the ability to look at problems and challenges from a broader perspective. The key may be in the extent to which business faculty are able to move from a teaching mode that is analytical with occasional practical applications to a more fluid and unpredictable learning environment – a context that perhaps more closely approximates the ambiguous and rapidly changing world of business.

A Tolerance for Ambiguity
Tolerance for ambiguity is an attribute that is increasing in value as the world grows smaller and globalization influences the business sector. Robert Rosen's research on business leaders and national cultures reveals time and again how successful corporations around the world recognize the need to be able to operate easily in ambiguous situations (Rosen, 2000). He talks of business literacy and the need to "suspend our beliefs about what is true because the facts of life alter daily. From simplicity to complexity, from clarity to ambiguity, from certainty to unpredictability, the chaos navigator quickly develops an entirely new mind set for change" (p. 137). He sites a number of international companies who are effective in this regard: First Pacific Company in China; KLM Royal Dutch Airlines headquartered in the Netherlands; the Italian energy company, ENI; and the multi-faceted Tractebel operating out of Belgium. Rosen makes a valid point as it becomes more commonplace for business school graduates to be employed by companies that operate internationally.

Teaching students to develop a tolerance for ambiguity is good for business in this country and around the world. However, it also suggests that faculty roles and institutional polices might need to be evaluated. How do we teach leadership principles and practice such that graduates are equipped to deal effectively with ambiguity? Are we standing in our own way when we employ traditional teaching and testing methods? How often do we simply give students tasks that require very little creative thinking?

In reality, it is argued here that large numbers of faculty continue to simply tell students what to do. They choose textbooks that provide concrete problems to solve. They give tests that ask questions that have only one right answer. And then faculty get frustrated as personified in the following excerpt:

Many faculty wish their students had a higher tolerance for ambiguity.
Few would not admit to being frustrated by questions about "Will this be
on the test?" or "How long does this paper have to be?" In business,
many employees are unfit for their positions because of their inability to
tolerate ambiguity. Few professionals have well-defined job descriptions.
Employees are asked to step outside a narrow position description and do
whatever is necessary to fix a problem or satisfy a customer's need.
There is no course offered in ambiguity tolerance. It is developed through
experience with complex, real-world situations. The combination of these
"messy" problems with coaching, mentoring, and team support helps
individuals develop these skills. Is tolerance for ambiguity a learning
objective in any course in one's curriculum? (Oblinger & Verville, p. 130).

Ambiguity and Leadership Knowledge
How can leadership knowledge be made eminently useful through application and
integration when the world seems chaotic? Deciding how to accomplish this is clearly
not an either-or situation, not research versus teaching, and not theory versus process.
Rather, it is an amalgamation of the four types of scholarship aptly described by Boyer
(1990) and the Carnegie Foundation for the Advancement of Teaching. As delineated
in their report, "...we conclude that the work of the professoriate might be thought of as
having four separate yet overlapping functions. These are the scholarship of *discovery*;
the scholarship of *integration*; the scholarship of *application*; and the scholarship of
teaching" (Boyer, p. 16). If leadership education on our campuses involves discovery,
integration, application and teaching as described above, then leadership development
in the private sector should demand nothing less. What might this look like in practice?

Discovery is that aspect of scholarship that contributes new knowledge and/or affirms
existing knowledge. In higher education, this is generally taken as traditional scientific
discovery in which one begins with an hypothesis and sets out to prove or disprove it
through amassing tangible, factual evidence. Quantitative research is the prevailing
methodology and carries a great deal of cache in the process of promotion and tenure
of faculty. Indeed, some of the more qualitative methods (ethnography, for example)
are under pressure to provide measures to buoy their discoveries. Still, in addition to
the deductive approach of scientific inquiry that begins with general theory and seeks to
prove a point, there is the alternative of carrying out inductive discovery. One might
thoroughly examine a situation or phenomenon and from these observations posit a
workable theory to explain what has been learned. Both methods are open to faculty
involved in leadership education and development. The latter tends to be a somewhat
circuitous and messy process while the first is usually more linear and eminently
cleaner. If our purpose is to nurture in students the creativity and flexibility leaders need
in an environment characterized by ambiguity, we must pay attention to multiple
avenues to discovery.

The scholarship of integration is employed to encourage students to be reflective
leaders. When a student is grounded in leadership concepts and theory and has had

ample opportunity to practice the myriad skills associated with leadership, the integration of that knowledge into a way of being is the path to success in the business world. Integration relies to some extent on the analysis and synthesis of what has been learned, but it must be tempered by interpretation and reflection – putting new knowledge in the larger context. Those ensconced in discovery ask questions about what they will find while those who are involved in the integration of new knowledge ask what the findings mean. It is when integrative learning opportunities are incorporated that students find useful links among ideas and relevant connections between concepts and the real world.

The scholarship of <u>application</u> enhances learning through practice. Students try out what they are learning by putting knowledge to work. This is experiential learning at its best – actually applying the skills and concepts learned within a meaningful context and reflecting on the experience. Susan Komives points out quite aptly that learning from experience does not occur without reflection (Komives, 2001). The learning that occurs in the application of knowledge is both practical and result oriented. The approach presented here takes the position that teaching leadership theory and skills without the application aspect falsely assumes that leadership is merely a set of skills – a toolbox – that can be acquired and then one is deemed a leader. It is important for students to know that they do not need to know everything about leadership before they can begin to apply leadership skills and concepts in a real-world setting. Again, the process may seem messy but is a valuable training ground to learn tolerance for ambiguity.

Implications for our role as educators are drawn from the three types of scholarship described above. "It is a dynamic endeavor involving all the analogies, metaphors, and images that build bridges between the teacher's understanding and the student's learning" (Boyer, 1990, p. 23). The scholarship of teaching incorporates discovery, integration, and application in such a way that students can become successfully intelligent – employing analytical thinking to solve problems, creative intelligence to formulate issues and ideas, and practical intelligence to explore ideas and analyses in the most effective way.

An Approach for Teaching Tolerance for Ambiguity
The approach for teaching tolerance for ambiguity described herein is grounded in three assumptions about leadership. First, everyone is potentially a leader. It is not the exclusive purview of the privileged, not is it dependent on title and position – it is about creating change. Second, whenever business students and/or faculty care enough about a situation to want to make a difference, they will exercise leadership. At its best, it is a collaborative venture. Leadership doesn't happen in a vacuum! It is "a shared responsibility for creating a better world in which to live and work which manifests in our passion to engage others in bringing about purposeful change" (Huber, 1999, p. 26). The third assumption is woven through the first two. Leadership and lifelong learning are inexorably intertwined. Each new leadership challenge or opportunity brings with it the need to learn – to analyze, synthesize and integrate ideas and information necessary to clear a path through chaos and ambiguity so to make a difference.

Incorporation of these assumptions about leadership in a class setting suggests that a meaningful context and a purpose for leadership need to be created. In a course offered at the University of Arizona, leadership development occurs as students learn and apply skills and concepts through a class project which becomes the primary learning activity (Huber, 2001). There are but two caveats for the project: (1) it must engage and enhance the campus community, and (2) everyone in the class will be involved. Within these parameters, students are free to choose any project they want. As the planning process evolves, however, they begin to discover they are, as one student has described it, 'burdened with too much freedom.' The ambiguity becomes a quagmire and planning becomes bogged down in the resulting chaos.

Essentially, the project is an exercise in action research. The approach is based on a research methodology that emphasizes knowledge creation rather than replication and verification. "Action research is a term for describing a spectrum of activities that focus on research, planning, theorizing, learning and development" (Cunningham, 1993, p. 4). Historically, Lewin's (1948) participatory action research, popular in the late 1940's and through the next decade, gave rise to this method of inquiry. It has since been used frequently in educational reform efforts (Hollingsworth, 1997). More recently, we see the application of action research in various organizational settings that are seeking to create changes and solve organizational issues.

Through the process of dealing with the ambiguity associated with self-directed learning projects, students at the University of Arizona have influenced some of the changes taking place on the campus. For example, a project that one class designed involved an attempt to determine how students perceived the idea of "student centeredness" on campus. The project was implemented, information gathered, data analyzed, and results shared, culminating in a change in the Strategic Planning and Budget Advisory Committee's vision of the University as a student centered research university. During the process, the students experienced ambiguity as they grappled with the design and implementation of their project. Their tolerance for the ambiguity inherent in addressing campus wide concerns increased as they learned how to be effective in the environment.

Teaching Tolerance for Ambiguity
The project approach described here employs the principles of experiential education and action research encompassed by Boyer's four types of scholarship. Additional experiential learning activities are incorporated into each week's lesson plan and range from small group problem solving exercises to interviewing, and from model building with Lego™ blocks to newsprint drawings to illustrate philosophical positions. In essence, the strategy builds from an expectation that students will learn to take responsibility for their own learning and thus will be better equipped to practice leadership in an environment of change and chaos. Discovering how to operate effectively in such a situation while learning how to gather and analyze data, how to develop creative ideas and solutions, and how to find practical applications for new discoveries is the framework for building tolerance for ambiguity. Encouraging students

to reflect on what they learned from their 'burden of freedom' and how that knowledge might be put to use in their future endeavors adds a unique element to the approach described and serves to provide closure to the class project.

Oblinger and Verville (1998) are specific in their exhortation that higher education has a significant role to play in developing the capacity for leadership in students who will enter a business world characterized by rapid change and global interactions:

> *"For business to be successful, learning must become the core value in education. This means that we must become more focused than ever on what students will need and how institutions can best provide it. Assuming that what worked today will be sufficient for tomorrow is a going-out-of-business strategy. The financial and human repercussions of allowing learning to be haphazard or to be second or third priority are not acceptable. Knowledge and learning represent one of the only sources of sustainable advantage in a fast-moving, highly competitive world"* (p. 136).

Those of us committed to preparing students to be successful where they work and to be effective as leaders in the world of business are called to move beyond the comfort of traditional teaching methods – to tolerate ambiguity and to teach tolerance. One way to do this is to integrate Boyer's four types of scholarship as suggested by the approach just presented. Are we up to the challenge?

References

American Council on Education (ACE) (1996). Higher education and work readiness: The view from the corporation. Task Force on High Performance Work and Workers: The Academic Connection, Washington.

Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate.* San Francisco: Jossey-Bass.

Cunningham, J. B. (1993). *Action research and organizational development.* Westport, CT: Praeger.

Hollingsworth, S. (1997). *International action research: A casebook for educational reform.* London: Falmer Press.

Huber, N. S. (2001). Learning and leading: A class project provides context. In Outcalt, C. L., Faris, S. K., and McMahon, K. N. (Eds.), *Developing non-hierarchical leadership on campus: Case studies and best practices in higher education* (pp. 119-128). Westport, CT: Greenwood Press.

Huber, N. S. (1999). *Leading from within: Developing personal direction.* Malabar, FL: Krieger Publishing.

Komives, S. R. (2001). Learning leadership: As individuals and in communities of practice. *Concepts and Connections, 9 (3)*, p. 11.

Lewin, K. (1948). *Resolving social conflicts.* New York: Harper-Collins.

Oblinger, D. G. & Verville, A. (1998). *What business wants from higher education.* Phoenix, AZ: Oryx Press.

Reich, R. (1991). *The work of nations: Preparing ourselves for 21st century capitalism.* New York: A. A. Knopf.

Rosen, R. (2000). *Global literacies: Lessons on business leadership and national cultures.* New York: Simon & Schuster.

Sternberg, R. J. (1996). *Successful intelligence.* New York: Simon & Schuster.