The Interactive Learning Model:

Intentional Learning Fosters Cultural Change

At Foothill College

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Real learning gets to the heart of what it means to be human.
Peter Senge

INTRODUCTION

Almost two decades ago Ernest Boyer (1987) challenged the nation's colleges and universities to raise hard questions about the quality of their own work. Boyer's report warned of a gap – a "disconnect" -- between the expectations and realities of student learning, curricular coherence and academic standards. It found that institutions were ignoring important information on student achievement and retention and failing to meet national expectations for higher education. Most importantly, it set forth the basic tenet that excellence in higher education was centered on student learning.

Education's response has been catalogued in several national longitudinal studies and scores of task reports on educational reform (Boyer Commission, 1998; Joint Task Force, 1998; Schneider and Schoenberg, 1998; Kellogg Commission, 1997; Wingspread Group in Higher Education, 1993). A number of these studies have added to an emerging body of data on learning in higher education which affirms the following: learners learn best by doing, by working on real problems in real environments; human ability is much more complex and diverse than one-

dimensional measures of intelligence could suggest; there are significant differences in the learning patterns of individuals; and the natural functioning of the brain provides the best road map for the learning enterprise.

Such insights on learning have helped researchers and policy makers to approach the most problematic of all the issues that Boyer raised: how to change higher education's state of endemic fragmentation by *intentionally* searching out connections, by finding a way to balance community and individualism. In the literature on learning organizations, learning communities and learning colleges, for example, the importance of the contextual group in enhancing student success has been clearly delineated (Shapiro & Levine, 1999; O'Banion, 1997; Cleveland and Plastrick, 1995; Matthews, 1994; Gabelnick, MacGregor, Matthews, and Smith, 1990). Similar findings, framed in terms of the cultural context of student learning, are mirrored in research on student retention (Tinto, 1993; Astin, 1993; Pascarella & Terenzini, 1991). Likewise, the literature on collaborative teaching and learning models demonstrates that student engagement with other students on meaningful academic tasks makes a critical difference in their involvement in college (MacGregor, Cooper, Smith & Robinson, 2000; Grubb, 1999; Svinicki, 1999; Barr & Tagg, 1995).

In *The Dance of Change*, a reflective fieldbook on organizational learning, Peter Senge reminds his readers that sustained learning is not just a matter of good intentions. It is, among other things, a matter of using intentionality in the development of learning capabilities. He defines learning capabilities as skills in individuals, teams, and organizations, which enable people to "consistently enhance their capacity to produce results that are truly important to them (Senge, 1999, p. 21)." Learning capabilities, then, enable us to learn and change. At the organizational level, successful learning occurs when individual learning capabilities are

grounded in, and supported by, a culture of learning. It requires intentionality to achieve facility with and mastery of Senge's five learning disciplines. Intentionality, in contrast to intentions, means the deliberately and reflectively thoughtful exploration of a given discipline. It is possible to teach intentionally, just as it is possible to learn intentionally (Barr & Tagg, 1995).

From multiple perspectives, then, contemporary research affords proofs that focusing on learning can have a positive impact both on course and program completion rates and on the development of a culture that supports student success. But where to begin? At Foothill College a group of faculty, staff and students started with the basics: using knowledge of who they were as learners - individually and collectively - to construct learning with intention.

DESCRIPTION OF THE STUDY

Foothill College is a community college with 17,000 students, 600 faculty members, and two campuses, located in Los Altos Hills, California. At Foothill degree completion and transfer readiness figure prominently in the institution's statement of goals. Yet the college's institutional data tell another story. In 1996-1997, for example, an average of 68% of students completed courses and 35% persisted from Fall quarter to Spring quarter. These figures may be consistent with national data (Astin, 1993; Tinto, 1993), but they are inconsistent with a mission statement that calls Foothill College a "learning organization best described as a large community classroom" (Foothill College 1998-1999 Course Catalogue, p. 7).

Facing the apparent disconnect between goals and reality, the college's leadership had to ask hard questions about the quality of education at Foothill. How strong and successful is a community of learners when only 68% of them remain enrolled in courses? How can learning be used with intention to create communities of students who persist and achieve? How can those successes be measured and improved upon? In 1998 the college's leaders decided to adopt the

Interactive Learning Model (ILM) as a tool for promoting student success. From 1999 to 2001, faculty, administration, students and a group of facilitators and researchers implemented a pilot project aimed at improving student persistence and retention rates at Foothill College through learner-centered instruction. They used the Let Me Learn ® Process to Launch the ILM.

The theoretical basis of the Let Me Learn Process is a set of constructs establishing cognition, conation, and affectation as the touchstones of the brain's synchronization of the learning process. The ILM suggests that how an individual learns manifests itself observably in four behavioral learning processes or patterns (Johnston, 1996). These patterns represent how the learner sees the world, takes in stimuli, integrates the stimuli and formulates a response to it. Using a 28 Likert-item self-report instrument, the Learning Combination Inventory, or LCI (Johnston and Dainton, 1997), individuals can record the degree to which they simultaneously use each of four mental processes (patterns) while learning. The ILM assumes that if an individual knows his/her set of integrated learning patterns, then he/she can intentionally use that knowledge (working alone or in groups) to attend to the learning task and to develop a sense of achievement about the learning task which propels the him/her into the next activity.

Johnston's model can be used to inform Gardner's work on multiple intelligences (Gardner, 1993, 1999), since it provides an explanation for the range and diversity with which all learners exercise those intelligences. Johnston's work also adds a significant component that is missing from most models of organizational learning. For example, while Senge (1994) places learning at the center of his model, he does not consider how learning takes place, or how an understanding of the process and patterns of learning can foster successful learning. Johnston's ILM affords

another dimension to Senge's work by providing the means by which his five learning disciplines can be launched.

Over the course of the first year, from 1999 to 2000, a group of twenty-six faculty members learned how to implement the ILM as part of their classroom instruction. All participants took the LCI. Facilitators used data on individual learning patterns to build collective class learning profiles and to construct teams if the specific course required group projects. Participants learned to decode assignments and to use knowledge of the learning patterns to approach and complete the work. Participants, then, developed individual and collective strategies to help them navigate course requirements with intention.

As the faculty engaged in discussions, workshops, classroom activities and learning circles focused on the retention/persistence project, a research team monitored and measured their interaction as faculty members. Likewise, the team monitored and measured the students' sense of self as learners and sense of belongingness in the pilot classrooms. At the end of each quarter, the researchers generated data on student course completion. Using both the framework and the dialectics of an ongoing discussion about metacognition, participants also focused on the process of facilitating reflective practice, intentional learning, and intentional teaching, with the goal of fostering the construction and practice of a learning community. The research intention, based on an action research approach, was to capture and record the change as it evolved and to use the data as part of a reflective feedback loop. These were the primary questions that the research addressed:

1. How does the implementation of the ILM affect student success?

2. To what extent can the implementation of the ILM support the creation of a learning community?

FINDINGS

While the ILM was implemented to promote student success, its successful integration in the classroom fostered a shift in the culture of teaching as well. Faculty success fed student success. And – just as frequently – student success fuelled faculty success. They represent inseparable components of change.

Year I of the ILM

During the first year of the project 50% of the original group of faculty members successfully implemented the model in the classroom. In those classes, 88% of the 469 students enrolled completed the courses; 89% of that group received a grade of A, B, or C. In addition, students reported an increased sense of self-efficacy (8% in the pre-survey, as compared to 60% in the exit survey claimed that sense of self as learner was critical to succeeding in the course). For example, in this quote from a pre-survey the locus of control for student success lies with the instructor: "A helpful instructor doesn't give up on me because of the way I learn." In the exit survey, the same student said: "Understanding patterns is an opportunity for growth, not an excuse for lack of performance." Here, the locus of control for student success lies with the student. Student surveys from Year I also demonstrated a shift in student sense of belongingness in the classroom (7% in the pre-survey, as compared to 26% in the exit survey claimed that being able to learn from others was critical to succeeding in the course). An example of this shift in student attachment to the learning community appears in the exit survey of one previously disinterested student: "Lately I have been studying with a partner, and that has been very helpful. I am able to learn more with the help of other people's patterns." Among students there was also a realization that the ILM had transferability, both to other courses and to work situations. In addition, the experience of the first year was useful for revising the second year's recruitment

and training processes, as well as for creating a core of 6 "veterans" who agreed to mentor new participants.

Year II of the ILM

During the second year of the pilot, fourteen additional faculty members, recommended or recruited by the first year faculty, joined the project. Nearly 70% of the faculty succeeded in implementing the model in the classroom. As in the previous year, students reported an increased sense of self-efficacy (12% in the pre-survey, as compared to 70% in the exit survey) and sense of belongingness in the classroom (6% in the pre-survey, as compared to 34% in the exit survey). Of the 769 students enrolled in the pilot, 87% completed their courses, and 92% received transfer-ready grades. Among students there was a realization that the ILM had transferability, both to other courses and to work and life situations. And there was recognition of the individual and collective benefits of several, cumulative, experiences with the ILM. In one notable case, student success could be measured in terms of national achievement. The cohort/learning community of Dental Hygiene students who had been using the ILM for two years with the same instructor ranked 2nd in the entire nation on National Board Exams. The instructor credited the ILM, among other factors, for the excellent outcomes:

> "I wanted you to know that the 2nd year just graduated. They took their National Board Exams & were ranked 2nd in the entire nation, including several dental hygiene programs that are based in Universities. This was the first class I introduced the ILM/LML model to. Of course the excellent outcomes were a result of many factors, including the ILM/LML. Thank you all for the opportunity to participate in this research project."

CONCLUSIONS AND RECOMMENDATIONS

The ILM process requires and promotes intentionality. While change and growth are shaped by the way in which both faculty and students achieve mastery in individual and organizational

learning, intentional faculty commitment to the process is crucial to the initial and the sustained success of the Interactive Learning Model. At Foothill College, the faculty learning curve moved from information accumulation to individual metacognition (thinking about the use of patterns in one's own learning) to organizational metalearning which engaged faculty and students in a dialogue about the use and meaning of the learning process in their classroom communities.

Yet, some significant challenges lie ahead - similar to the challenges that Ernst Boyer raised in 1987. These are the challenges of remaining intentional and reflective throughout a continuing change process, of balancing individualism and community. The challenge awaits to scale up the ILM as part of developing a larger culture of intentionality at Foothill College.

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