

**THE WHEEL OF LEARNING:
AN INTEGRATIVE BUSINESS CURRICULUM EXPERIMENT**

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ABSTRACT

By teaching business courses in separate, distinct courses, faculty and employers of graduates often find business students lack an integrated knowledge of functional business areas. In an effort to develop student abilities to apply business content in an integrated context, an integrated business curriculum experiment has been developed. This paper describes the process involved in the planning, development, and implementation of this innovative, integrative, and experiential wheel of learning environment.

INTRODUCTION

Traditionally, university business courses have been taught in separate, distinct courses. Within this approach, students typically complete a series of "core" business courses while majoring in a narrowly focused business area. Then, in their senior year, students take one integrative course, such as a strategic management or policy course, which emphasizes the integration of separately learned business concepts. There are, however, some perceived problems with this traditional business education model. First, faculty complain that students seem to carry little or no knowledge from one class to another, from one semester to another. This phenomenon is referred to variously as "mind-dump," "the silo effect" or "compartmentalization." No doubt this failure to recall material previously covered in other classes can be explained in many ways. One possible explanation is that the material from one class is not perceived by the students as relevant to another class, so the required neural connections are not made. Alternatively, the neural connections are not made because the subjects are not connected or associated in the class.

Second, presumably because the functional business areas, as well as ancillary subject areas, use a discipline-based teaching structure, students seldom gain an integrated view of business organizations. Students are not able to demonstrate an understanding of the interrelationships of the functional business areas (Porter and McKibben, 1988). Evidence of this is apparent to faculty teaching capstone courses as they witness students' inability to apply previous course concepts or skills effectively. Students' classroom performance indicates that in prior courses an emphasis may have been placed on memorization of isolated theories, concepts, and definitions without allusion to their application or interrelatedness in the whole enterprise. This phenomenon may exist because faculty seem to emphasize "teaching" as opposed to "facilitated learning" (Michaelsen, 1993). And there is increasing pressure to offer the latest knowledge before students have a real command of the basics.

Third, employers consistently say that graduates lack communication and problem-solving skills, regardless of their apparent grasp of a body of knowledge in one or more disciplinary areas. Employers usually add that they realize it is difficult to teach these skills, but they believe these skills are essential and should be taught. Additionally, employers have stated that business graduates are not prepared for the ever-changing demands of the workplace. As technology and global competition changes the demands of the workplace and downsizing and teamwork alter the work landscape, students will need skills and attitudes allowing them to cope with change and learn new skills. Moreover, new jobs require workers to understand how their specialties fit with others in the

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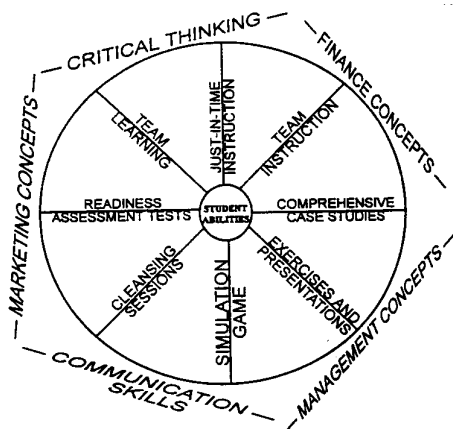
broader organization. Porter and McKibben (1988) noted in their important study that business schools must broaden their goals to prepare students for new professional challenges.

In essence, from several points of view, traditional business education is not working as well as it should or perhaps could. This has not gone unnoticed as several business schools have sought ways to better integrate their curricula (Jauch, 1997).

As one possible way to remedy the perceived problems with the traditional business education model, faculty in the College of Business Administration at The University of Louisiana at Monroe are experimenting with a seminar which emphasizes skills in team building, communication, leadership, and problem solving in a hands-on learning environment.

The seminar includes principles courses in management, marketing, finance, and business communication, as well as a specially designed decision-making segment. The subject areas are treated as an integrated whole (see Figure 1).

**FIGURE 1
WHEEL OF BUSINESS LEARNING**



The "Wheel of Business Learning" places the focus on developing student abilities to apply business content in an integrated context.

The learning processes of team learning, team instruction, just-in-time instruction, comprehensive case studies, exercises and presentations, simulation game, readiness assessment test, and cleansing sessions are aimed at skill development and

conceptual understanding. The knowledge base is confined to the basics of Marketing, Finance, Management, Communications, and Critical Thinking.

The wheel is strengthened as a unified whole. The loss of any spoke weakens the wheel. Any loss of rim components reduces breadth of student abilities and diminishes the understanding of integration. The intent is to create a new learning environment which matches the needs of the new workplace, while simultaneously focusing on fostering real understanding of basic knowledge and appropriate skill development to use that knowledge.

The implicit assumption is that merely changing the curriculum or putting the courses together in a new way is necessary but not sufficient. Based on research by Brown et al. (1989), it is nearly impossible to separate what is learned from how it is learned and used. As is done at Alverno College (Crossen, 1997), students in this seminar have to demonstrate what they know. In class, teachers ask questions, demand evidence, and challenge what students say. As a former student of this seminar method stated, "You can't help but understand it."

This paper describes the process involved in the planning, development, and implementation of this innovative, integrative, and experiential wheel of learning environment.

PLANNING

To achieve better understanding of the inter-relatedness of business disciplines, the seminar faculty decided early and unanimously to emphasize breadth and understanding over depth and exposure. That is, we believed fewer topics, fewer theories, and fewer facts should be covered than might ordinarily be covered in a regular lecture course in any of the subject areas. In this way, students would be able to spend more time on integrative activities, such as preparing case analyses, reviewing current issues of business periodicals, and playing a management simulation game. Moreover, we consciously created an environment of taking action under conditions of uncertainty. As Kimball (1993) notes

The ability ... to learn has a lot to do with capacity to tolerate uncertainty ... ambiguity and mistakes. Learning is intimately related to

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action. (p.9).

We wanted to ensure students participated in a dynamic learning environment in which "learning" and not "teaching" was central. In some ways this approach is similar to the Integrated Contextual Learning model at Ohio University (Stinson, 1990) and to the approach at Babson College (Schlesinger, 1996), though the latter is done at the MBA level rather than undergraduate. Furthermore, we subscribe to a report to President Reagan from the Business Higher Education Forum (1985) where it was noted that objectives should be focused not only on the acquisition of basic knowledge, but more importantly on the development of analytical and personal skills so that knowledge can be applied to detecting and solving managerial challenges. (p. 13).

Consistent with our desire to both integrate core areas and abandon a teaching model in favor of a learning model, the basic concept of experiential team learning was adapted (Michaelsen, 1993). This technique was consciously intended to alter student/faculty relationships and roles and to constantly reinforce content and process skills. This method stresses recognizing conceptual connections and part/whole relations in a team learning context. Similar to the approach at Regis College (Jutras, 1994), integration of disciplines through team "teachers" and learners increases the opportunities for cooperative learning. This method has corollaries to problem-based learning (Stevens and Wilkins, 1993). That is, holistic educational outcomes parallel the skills and abilities desired of future business leaders while fostering self-development to prepare students for a changing environment. The problem-based learning model uses an understanding of the characteristics of the learner to (1) construct opportunities for interactive and cooperative learning; (2) develop specific skills and competencies; and (3) create a realistic context within which new skills and abilities can be developed, implemented, reinforced, and refined.

The style of course delivery necessitates fewer lectures, more tutorials, more consistent student preparation and active involvement, more challenging, open-ended projects, consistent incorporation of communication modes, and a more resource-oriented teaching environment.

Since we were interested in finding a better way for all

students to learn business holistically, we decided not to select students by grade-point average. To qualify for the seminar, students must simply have completed the standard pre-professional courses in English, math, accounting, economics, and computer literacy.

IMPLEMENTATION

Participating faculty have had to make many adjustments, including meeting weekly to assess and modify various aspects of the seminar, and letting go of the notion that lecturing on a topic equates with "coverage" and student learning of the topic. Additionally, faculty have had to adjust to working with other faculty in the classroom. Throughout the semester as many as five faculty can be in the classroom, and can sometimes disagree with one another. Perhaps the biggest departure from standard operating procedure has been the bi-weekly "cleansing session", during which the students are encouraged to provide frank feedback to the faculty regarding any and all aspects of the seminar. Frank student reaction about their learning experience and how it could be improved is an unusual experience for most faculty.

Class is held from 8 a.m. to 1 p.m. on Mondays, Wednesdays, and Fridays, but specific subjects are not allocated to specific times within that block of time. On any given day, students might work on any combination of marketing, finance, management, communication, and problem solving issues. They might listen to a lecture if they or the faculty deem one necessary; but students are more likely to discuss a case, make simulation game decisions, arrive at a team position on an issue, or prepare a team presentation on some topic.

Team learning, as described by Michaelsen (1993), is the primary basis for the class pedagogy. Student teams are "fixed" for the entire semester, although some students have clearly wished for re-assignment in order to avoid carrying a less able or less motivated peer or to avoid a personality conflict. However, the faculty have stressed the importance of learning to cope with these kinds of situations which are often encountered in the workplace. Team teaching is also an interesting concept for faculty. Having another faculty openly disagree with "my position" during

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class can unnerve those faculty who are not secure in their own positions.

In-class time is largely used for group activities rather than for work which can be accomplished individually. Students are expected to prepare outside of class for class discussions by reading text and other assignments. Before teaching occurs, Readiness Assessment Tests (R.A.T.s) are given to individuals and to teams as reward/punishment for advance preparation. Immediate feedback from in-class scantron scoring of these R.A.T.s allows the faculty to know immediately whether to provide help on specific text material that is not understood by students.

During the semester, each student makes half a dozen formal presentations using Microsoft PowerPoint. Students present application summaries of textbook chapters and case analyses. Additionally, both business plans and performance results for a computer-based simulation game are presented to a Board of Directors composed of all five faculty members. In addition to developing presentation skills the game provides students an opportunity to apply functional skills, resolve decision conflicts, use analytical tools and make decisions under uncertainty.

Not surprisingly, grading has been the subject of much discussion during both the planning and implementation phases. Because of the integrated, holistic nature of the seminar, the faculty decided not to track "component course" grades. Initially, each student was awarded a single letter grade for the entire seminar (even though for administrative convenience students were, in fact, registered for a special section of each of the component courses). So, for example, a student who earned an overall score of 79% received a "C" in each of the five classes. Upon reflection (spurred on by heated but well-founded comments from some students), the faculty changed the grading process to award a mixture of letter grades that would more adequately reflect the overall score. For example, a student receiving an overall 79% average would be awarded four Bs and one C - five grades which better reflect grades a student might receive from five individual courses.

SUBJECTIVE OUTCOMES

Although the commitment of the IBS faculty may bias their perceptions, anecdotal evidence presented below still possesses some validity. The faculty in question have taught (and still teach) traditional sections of courses offered in the IBS and their impressions are based on a number of years of experience with student outcomes of the educational process. This section also reports some findings on student perceptions of outcomes, as well as faculty outcomes.

Faculty Perceptions of Student Outcomes

Perhaps the most endemic outcome of the IBS is a direct result of the conscious effort to use team-learning techniques. Despite the usual stresses and strains, it appears the majority of IBS students have learned the value of teamwork, and how to cope with its problems, under conditions where high expectations and time demands were in place. Nonetheless, we have found from experience that about one-fourth of the teams became dysfunctional, despite faculty efforts to help teams work through their difficulties. (However, students frequently commented that teamwork lessons are quite valuable).

Fortunately (and unfortunately) many of the teams become quite adept at delegating and allocating work assignments. The downside of this is that individuals can "get by" on the efforts of others in some skill development areas. For instance, not all students became proficient on spreadsheet analysis, since such tasks were frequently assigned to the group member with the greatest competence or interest in these tasks.

Due to repetition in the required use of Microsoft PowerPoint for making presentations, all students significantly improved their comfort levels and quality of oral presentations. Indeed, one faculty member noted that the achievement level of some of these students in a later semester exceeded the performance of some graduate students. On one occasion, a few IBS students made a presentation about the class to some visiting executives. The executives expressed a degree of surprise and satisfaction about the quality of the presentation. On another occasion, several students faced a semi-hostile group at a general college faculty meeting to explain why the approach should be supported. In these instances, the students who were presenting demonstrated considerable elan

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and poise beyond that which is typically expected. The IBS faculty were delighted with the students' performance skills.

Writing skills for many improved from abysmal to slightly satisfactory. All gained some facility in the use of e-mail, but the quality of message content varied substantially. In all forms of writing, the faculty had a sense of frustration about the general absence of critical thinking skills and tightly honed evidence-based arguments to support positions. (This led to substituting "The Art of Thinking" for a Computer Information systems component in the seminar.) Compared to standalone traditional sections, however, the quality of reports at least usually matched, if not exceeded, similar reports in senior level courses.

Leadership skills apparently evolved from this experience since anecdotes about former IBS students in subsequent courses began to emerge. Generally, the conclusion was that IBS students "took over" their groups in subsequent classes where they were required to perform case analysis or simulation exercises.

Faculty Outcomes

For the faculty, there is a concomitant time commitment to that of the students. One faculty member calculated that preparation and student contact time was double that of the "normal" or traditional classroom setting. This is due to the more intense student interaction, frequent team teaching, and coordination requirements necessary. Yet there was a sense of reward in both contributing to an innovative curriculum development and an observation that the methods seemed to be "making a difference" in the lives and minds of our students. Most faculty noted that they became significantly more attuned to the strengths and weaknesses of individuals in the class. The small class size and greater time for student interaction no doubt contributed to this effect. But there was personal satisfaction in getting to know the students better, and in having a better chance to have an impact on the students' intellectual and personal development.

The most junior member on the IBS faculty team noted that the experience allowed for personal teaching development. Other faculty involved in the

IBS have observed that participation in the IBS has made a lasting impression and some behavior changes.

Likewise, senior faculty began to realize method migration to other courses might yield enhanced outcomes in their more traditional classes. As one senior faculty member stated, "My teaching will never be the same again."

On a less positive note, the IBS faculty recognized some unwanted pressures from traditional core faculty. Perhaps there were suspicions (semi-accurate) that we couldn't possibly "cover all the material" expected in each core course while accomplishing other objectives. Also, use of different instructional materials caused consternation to some faculty. Several set out to sabotage the seminar by discouraging students from enrolling. (Perhaps they feared that its success would lead to adoption in a wider segment of the curriculum, forcing them to reexamine the tenets of the traditional, more comfortable approach?). On the other hand, the unique nature of the seminar brought forth much more favorable reception from others in the University and business communities.

IBS Student Reactions to the Seminar

As alluded to earlier, students are not universally enamored of the seminar. Indeed, enrollment demand was insufficient to offer the seminar for a fourth consecutive semester during the Spring=98 semester, though it was offered in the Fall, 1999. Speculation as to causes ranged from "overwork and high demands" to "not enough academic credit" (since in the fourth semester we proposed to only offer 12 credits instead of 15). And, some students who had taken the course said they would not do so again. Their reasons range from "my GPA would have been better in traditional classes" to "the workload is too great" or "I had a bad team."

Students report that the seminar involved a tremendous amount of work and effort compared to what they believed was required of their compatriots in traditional classes. Several resented a "lower" grade than they expected in return for their effort, properly concluding that faculty had set higher standards and expectations. Yet many report they think they learned more than if they had taken the five classes separately. Indeed, some believe that they are

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far better prepared for subsequent classes than their counterparts (despite the fact that we "covered" less material). A substantial portion of students believe the IBS experience was worthwhile. Selected comments from a few students are noted below:

- § "Time management is crucial in today's world. If you cannot manage your time, you will never do anything 100%. While in the seminar, a lot of pressure and time constraints were put on us, and at the time it seemed impossible to complete the task at hand, but as our team worked through it, we found everything could be completed on time. I think that it tremendously helped me in my future classes and groups. Now when everyone seems pressured by a project to do in my groups in other classes, I can handle the pressure and try to settle the group down by just explaining that everything can be finished on time and at 100%."
- § "I was so frightful before this class but I have overcome it. We had to do presentations repeatedly and I eventually found that there was nothing to it."
- § "It is important to be able to work in any environment you encounter during your career. You must be able to work well with others. I had a few conflicts with my group during the seminar. My ability to work with others was really tested. Although I felt overwhelmed by this type of responsibility, I believe it has prepared me for my future."
- § "All the critical analysis received from professors on the (written) cases helped me realize my strengths and weaknesses. After reading an evaluation of my writing I was able to correct mistakes and to do a better job."
- § "We will have to make decisions in the real world. We have to make decisions every day. We went over this concept (decision making) often and thoroughly. The fact that we had to go through this in every group meeting (helped us remember and understand the concept)".
- § "The game helped me to remember and understand concepts because it was hands-on experience in a somewhat real-like situation."
- § "Up until now I had an extremely hard time with uncertainty. Now, I realize that it is a major part of business. The cases were

developed so that you had to deal with uncertainty."

IBS students believe they are much better at applying knowledge, preparing letters, making presentations, and making decisions. And it is in these areas where employers appear to be seeking improvements in the performance of business students. Employers seem less likely to complain about technical knowledge and competence than they do about the absence of skills and attitudes they expect in a valued employee. Students report the most important concept learned in the IBS is teamwork concepts.

LESSONS LEARNED

To date, the faculty who participated in the Integrative Business Seminar have learned some interesting lessons of success and failure which might be heeded by anyone trying a similar change. In no particular order, a list of the "top ten" lessons would include the following.

1. Empowering a faculty team creates threats and opportunities. The team itself became a threat to some faculty who may fear additional work burdens will eventually befall them. However, the faculty team became more visible on campus as they shared their experiences with others and gained publicity. The Academic VP began to allude frequently in public about this innovation which inspired both praise and animosity from fellow faculty members.
2. Faculty and administrators can "move the system" more quickly than normal if they have a clear goal and can tie specific needs to achieving results important to key players.
3. High levels of commitment from involved and dedicated faculty are needed. The faculty committee evolved into a high performing work team, which can have a downside. The extraordinary effort by faculty leads to burn-out, and a strategy for faculty replacement is needed.
4. Intense interactions between the faculty team and student teams occurred. Faculty with autonomous styles and/or superiority complexes or other priority time commitments either modified their behavior or left the team.
5. The program has become a vehicle for improved interaction of the College with several local businesses. Executives from one firm visiting the

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class reported surprised delight at the poise and skill demonstrated by self-selected student presenters. Another firm conducted a special business oriented plant tour. The faculty met with local business leaders at the conclusion of the second semester to discuss improvements to be made.

6. The majority of students express extreme frustration about perceived heavy work loads and very high standards and expectations compared to their counterparts in traditional classes. Students met expectations early, but heavy work loads took their toll. However, students do report having learned more in one semester than the preceding two years of college work and believe they have a competitive edge over their cohorts.
7. Teaching approaches can be transferred to traditional courses. Also, by implementing this innovative approach other changes have occurred such as the combining of other related courses in other parts of the curriculum.
8. Team-learning approaches create problems for faculty, especially those used to a controlling and highly scheduled environment. High flexibility is needed by faculty. Faculty need to consciously deal with team-building skills to reduce (but not eliminate) dysfunctional group activity since group process understanding is an important outcome.
9. Faculty coordination needs to improve despite weekly meetings. Differential quality of feedback to students created some dissatisfaction. Lack of preparation by isolated faculty led to a few problems. Advance lead time on providing future assignments to the faculty helps.
10. Cross-disciplinary junior-senior faculty interaction on an intense basis usually enhances appreciation and understanding of each other's teaching approaches and disciplines.

In all candor, the authors must express a realistic concern to readers contemplating such an innovation. Such a change may threaten the existing faculty culture. A few students may be placed in jeopardy by engaging in such an experiment if other courses continue in the traditional vein. As Candy (1993) noted in another context, "there are severe limitations as to how much the teaching/learning transaction can be modified if the institutional culture remains unaffected." Nonetheless, it is our belief that this experiment contributes benefits to its participants

which far outweigh their costs.

Reference Available Upon Request