Introduction

The signature steps of significant learning are foundational knowledge, application, integration, human dimension, caring, and learning how to learn (Fink, 2007). The interdependency of the components reveals the post course applications and continued learning as shown in continued expressions of inquiry discovery, and reflection (Oblinger, 2012). It is in the post course era that we see continued learning and exploration.

The motivation for this study was to examine business student perceptions of significant learning in a project-driven course. Questions that helped to guide the research process were the following: (1) Do industry partners facilitate the learning process? (2) Does connecting students with industry partners assist in learning how to solve practical business problems? (3) Does the team-based structure of the course enhance networking and relationship-building between the students and industry partners? The six dimensions of Fink’s integrated course design were examined within an undergraduate business course (Fink, 2003). The course was analyzed by administering student surveys at the end of the semester.

An important part of this study was the consideration of the role of industry partners with student learning outcomes. As firms rely upon universities to support them in significant learning, one method for enhancing significant learning for both parties is developing exercises that enhance learning. Cope and Watts (2000) found learning is significant for firms that experience critical incidents for individuals within organizations.

Another key area was the consideration of team-based structures in student engagement and the learning process. Significant learning by definition seeks to move the student from foundational knowledge to a situation of learning to learn. Infused in this are cooperative engagements of application, integration, human dimen-
The Role of Industry and University Partnerships in Developing Significant Learning Outcomes Related to Business Concepts

Charles M. Coco & Jack Crumbly

The Role of Industry and University Partnerships in Developing Significant Learning Outcomes Related to Business Concepts

LITERATURE REVIEW
Background
According to the traditional view of student learning, foundational knowledge and higher order levels of learning needed to be attained in hierarchical form (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). Approaches to the learning process have expanded over time to include emotional and non-hierarchical components that considered the importance of life-long learning (Robinson, 2009). One of the contemporary approaches to learning is found within Fink's taxonomy of learning which makes integrated course design a focal point within the learning process. According to Fink (2003), significant learning occurs only when students are enthusiastic and the class displays high energy levels. The result is a significant and lasting change in student learning. Fink's integrated course design assures that all six significant learning objectives are included throughout the course. The design process is organized around three key phases with twelve individual steps: the first phase includes creating a course structure, selecting an effective teaching strategy, and creating the overall scheme of learning activities; finally, the third phase includes assembling the grading system, identifying what might go wrong, writing the syllabus, and planning the course and teaching evaluation system (Fink, 2004).

Fink's Taxonomy
Fink's (2003) taxonomy of significant learning includes the following six categories which are used for integrated course design:

1. Foundational knowledge contains the principles, concepts, and basic course information. This knowledge provides the base for understanding other forms of learning.
2. Application involves applying knowledge by developing skills and engaging in critical, creative, and practical thought processes.
3. Integration consists of understanding the connections between ideas, people, and different aspects of interdisciplinary learning and life.
4. Human dimension contains learning that occurs when students gain new insights about themselves and others.
5. Caring involves the change and development of new feelings, interests, or values toward something that students now regard as more important.
6. Learning how to learn transpires when students embrace the process of learning and become increasingly effective in future learning efforts.

INDUSTRY PARTNERSHIPS AND TEAM BASED LEARNING
As businesses focus on adapting to volatile environments, they rely upon their supply chains to develop value for customers to sustain a competitive advantage (Mentzer, Flint, & Hult, 2001). Some researchers have proposed that a firm's ability to learn in functional areas such as logistics can provide a sustainable competitive advantage. As businesses develop their learning capabilities within the supply chain, they look to relationships with partner organizations (Esper, Fugate, & Davis-Sharek, 2007). The beauty of team based learning is that it incorporates a healthy dose of individual work, teamwork and immediate feedback (Parmelee, Michaelsen, Cook, & Hude, 2012). These skills help to equip a high touch generation of learners with strategies to better engage them in the workplace. Industry partner feedback to colleagues echoes the need for new employees to have a solid technical skill set but also have critical thinking and interpersonal skills (Fink, 2004). Small group learning, particularly team-based learning when done correctly, accomplishes this task.

Immediate feedback is a strong component of team-based learning and a significant piece of the learning outcome. Immediate feedback allows the small group the chance to reflect on strong and developmental points, receive the immediate attention that current colleagues expect and give the group time to pass kudos to the high achieving team members. This instructional strategy and feedback suffices high performance learning teams. Feedback by itself is not a novel diagnostic tool. It is the immediacy of the feedback that lends itself to meaningful corrective action, integration, and caring. In short, immediate feedback promotes relevancy versus ‘what grade did I get’ syndrome.

Michaelson (2004) identifies four keys for successful team-based learning: 1) strategic team membership and management, 2) team member accountability for all work, 3) program activities that promote team bonding and knowledge transfer, and 4) immediate feedback. Regarding team work, Haller, Gallagher, Weldon, & Felder (2000) remind instructors to make the group work meaningful and worthwhile to elicit positive interactions among members and minimize conflict. Team members are more than capable of quickly identifying the contributions of their members. Allow them this opportunity as well as the chance to self correct deficient group member behavior. Active learning as demonstrated in team-based learning can lead to increased student success and retention (Bretz, Hecker, Vaughan, Fewell, & Stankow, 2004). Each focus has benefits and when used consistently, cooperative learning, and team-based learning (Fink, 2004). Small group learning, particularly team-based learning when done correctly, accomplishes this task.

The largest deliverable of team-based learning relative to significant learning is that team-based learning reaches the pinnacle of significant learning by developing skills and engaging in critical, creative, and practical thought processes.

Findings
The six categories of significant learning were incorporated into the survey items and summarized by using percentages (see Table 1). Students were asked to indicate whether they agreed or strongly disagreed with these two questions. Questions 5 and 8 were considered the importance of life-long learning (Robinson, 2009). The students seemed least connected to the caring component of foundational knowledge. The students mostly agreed that the business research project provided knowledge of the concepts. Questions 2 and 13 were given to gauge student perceptions of applications. The students generally agreed that the business research project provided knowledge of the concepts. Questions 2 and 13 were given to gauge student perceptions of applications. The students mostly agreed that the business research project provided knowledge of the concepts. Two and 13 were given to gauge student perceptions of applications. The students mostly agreed that the business research project provided knowledge of the concepts.
learning how to learn. The students seemed to agree that they learned how to learn by participating in the business research project. Question 9 was reversed due to the structure of the question and the last question allowed for comments from the students. Finally, in addition to the scaled responses mentioned above, a few anecdotal comments were provided by the students: a) the need for face-to-face communication with the industry partners; b) prior understanding of the collaborative corporation; c) more time to complete the business research project.

**SUMMARY**

In general, student perceptions were positive regarding the significant learning survey items. Students appeared to rate learning associated with foundational knowledge and application higher than human dimension and caring components. The students, in general, saw benefit in connecting with the industry partners to solve business problems. The industry partners were satisfied with the results of the research project and enjoyed the opportunity to interact with the students during the semester. Future research is needed to further examine the impact of industry partners on student learning outcomes and compare findings to other business courses.

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**Table 1 Survey Items and Course Percentages Student Perceptions of Significant Learning**

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>Category of Learning</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Foundational Knowledge</td>
<td>41.70%</td>
<td>50.00%</td>
<td>0.00%</td>
<td>8.30%</td>
<td>0.00%</td>
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<tr>
<td>11</td>
<td>Foundational Knowledge</td>
<td>8.30%</td>
<td>66.70%</td>
<td>25.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<tr>
<td>2</td>
<td>Application</td>
<td>50.00%</td>
<td>50.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>13</td>
<td>Application</td>
<td>25.00%</td>
<td>41.70%</td>
<td>16.70%</td>
<td>8.30%</td>
<td>8.30%</td>
</tr>
<tr>
<td>6</td>
<td>Integration</td>
<td>66.70%</td>
<td>16.70%</td>
<td>16.70%</td>
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<td>0.00%</td>
</tr>
<tr>
<td>10</td>
<td>Integration</td>
<td>33.30%</td>
<td>25.00%</td>
<td>25.00%</td>
<td>16.70%</td>
<td>0.00%</td>
</tr>
<tr>
<td>3</td>
<td>Human Dimension</td>
<td>33.30%</td>
<td>41.70%</td>
<td>25.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
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<td>4</td>
<td>Human Dimension</td>
<td>8.30%</td>
<td>58.30%</td>
<td>25.00%</td>
<td>8.30%</td>
<td>0.00%</td>
</tr>
<tr>
<td>12</td>
<td>Human Dimension</td>
<td>0.00%</td>
<td>50.00%</td>
<td>16.70%</td>
<td>25.00%</td>
<td>8.30%</td>
</tr>
<tr>
<td>5</td>
<td>Caring</td>
<td>8.30%</td>
<td>25.00%</td>
<td>16.70%</td>
<td>25.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>8</td>
<td>Caring</td>
<td>8.30%</td>
<td>16.70%</td>
<td>25.00%</td>
<td>25.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>7</td>
<td>Learning How to Learn</td>
<td>8.30%</td>
<td>66.70%</td>
<td>16.70%</td>
<td>8.30%</td>
<td>0.00%</td>
</tr>
<tr>
<td>9</td>
<td>Learning How to Learn</td>
<td>0.00%</td>
<td>8.30%</td>
<td>41.70%</td>
<td>41.70%</td>
<td>8.30%</td>
</tr>
</tbody>
</table>

*Survey item #9 was reversed due to the structure of the question.*

**REFERENCES**


