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# Transformational Mentoring: An Experimental Process for Aligning Student Learning with Business Realities

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# **Transformational Mentoring: An Experimental Process for Aligning Student Learning with Business Realities**

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### **ABSTRACT**

The purpose of this paper is to describe an experimental student learning process, document preliminary efforts to assess the learning outcomes, and suggest avenues for future research. The primary objective of the approach was to significantly increase student learning through the implementation of *transformational mentoring* techniques. These techniques were applied as students worked with an actual business in an effort to improve its market position and revenue.

# “IRON SHARPENS IRON, SO ONE MAN SHARPENS ANOTHER”

(PROVERBS 27:17)

## INTRODUCTION

Business professors are well aware of the challenges involved in seeking to stimulate higher levels of learning among undergraduate students within classroom contexts. When class projects are employed they often simulate business situations rather than have students wrestle with real business problems. Alternatively, when class projects are affiliated with real businesses, the learning experience is often limited by: (a) the narrow scope of the business problem (which can fail to sufficiently motivate student involvement), (b) the limited involvement, and at times, relative disinterest of the client business, (c) the involvement (often limited) of a faculty member who represents only one business discipline, and (d) the inherent tension between achieving narrower course objectives and enabling students to tackle the problem from an integrated business perspective. Some business programs have endeavored to address some of these limitations by integrating course offerings and building them around projects that cut across business disciplines. Still, such projects, while integrative, frequently do not capture the magnitude and complexity of many real-world business problems.

The authors' intent is not to criticize the aforementioned types of projects – indeed they can be very beneficial and the authors regularly use them when teaching their courses. Instead, the purpose of this paper is to describe an innovative type of non-classroom learning project, document preliminary efforts to assess the learning outcomes, and offer suggestions for future research efforts. The long-term goal is to facilitate the development of a set of *transformational mentoring* techniques that business faculty can use to effectively move business students through the highest stages of learning as defined by Bloom (1984) and Kellough (1990).

### **The business challenge**

The owners of an internet-based retailer (called “Client.Com” herein to conceal its identity) approached two of the authors to discuss their business problem and ask them to tackle it as a project in one of their classes. They characterized their situation as needing to identify how they could go about improving their online business practices in order to dramatically increase annual revenue and approach the performance levels of the two largest competitors in the industry. This was no small undertaking given the two largest competitors each had annual revenue streams of approximately \$50 million and Client.Com was producing revenue of slightly more than \$2 million. In effect, they were asking students to help them increase their annual revenue by roughly 2,400%.

### **The educational challenge**

Initial conversations with the owners of Client.Com revealed the business problem was of such complexity that it would need to be addressed from several different perspectives. Specifically, the

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students (and faculty) would need to apply significant skill in the areas of (1) business strategy, (2) marketing, (3) management information technology, (4) organizational management, and (5) financial assessment of proposed solutions. This meant that it could not be addressed within the context of any individual course, nor could a single faculty member from one of the business disciplines effectively oversee the entire project. Once the multi-functional nature of the project was clearly recognized the challenge to the faculty was to create a cross-functional learning process involving students and faculty from the respective disciplines, and to do it in a way that would produce the highest levels of learning (Bloom 1984; Kellough 1990). The resultant techniques, called *transformational mentoring*, were built on the learning model summarized in the next section.

### **THE LEARNING MODEL AND CORRESPONDING METHODS**

The primary objective of the approach proposed herein is to “transform” students’ perspectives and business skills by facilitating their development through the following stages in the same way transformational leadership focuses on the fundamental changes in followers: (1) working on a project with the self-focused motivation of enhancing one’s education, (2) working effectively with other students majoring in different areas of business to complete a team-oriented educational project and win a contest, (3) developing the knowledge, skills, ability, and confidence to perform truly professional and comprehensive consulting services to the client, and finally (4) taking “ownership” of the problem from the business owners’ perspective and developing an attitude and work ethic to do whatever is necessary, within the boundaries of Christian propriety, to solve the business problem. The proposed process for generating these outcomes is labeled “*transformational mentoring*” and is developed in this paper by adapting the Transformational Leadership literature (e.g., Bass and Avolio 1994) through a synthesis with other literature streams.

A central part of the process involves helping students to develop the ability to use “*Double-Loop Learning*” to re-examine previously held assumptions in the context of framing and solving real-world problems (e.g., Argyris, C. 1990; Senge, P.M. 1991). For the approach to have its full intended effect on students another important component is the development of a collective “market orientation” (e.g., Kohli and Jawarski 1990; Narver and Slater 1990) which will be discussed later in this section.

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### **Literature base**

According to Wilson (2003, p. 280), there is "...no stable or coherent philosophy of education...no well established tradition in regards to subject matter or methodology as there are in other branches of philosophy such as math, physics, morality etc..." There is generally a loose agreement in higher education about what the broad over-arching goals of higher education should be (i.e. the transformation of students into active and motivated life-long learners). However, there is much disagreement about the methods required to achieve those ends. Some argue that teaching is primarily a function of the instructor, while others contend it is a function of the learner and is driven by the readiness of the learner to actually learn. Some claim the key ingredient is the effectiveness of the context or environment in which that learning takes place.

There is similar disagreement regarding the measurement and assessment of learning outcomes. Some scholars argue that the learning experience can be measured using student "reactions" to the process (i.e., student "evaluations"), while others contend learning can only be measured by testing the change in knowledge, skills, abilities, or other characteristics, or assessing the absolute level of those indices, after the learning experience is completed. The latter viewpoint is the one adopted here and is based on specific evaluation literature (e.g., Rockwell and Kohn 1989) as well as some constructivist learning theories such as Vygotsky's (1979) social-culturally situated theory of learning and Atherton's (2002) combination cognitive and socially situated learning theory.

The current project is the first installment in a series of methodological tests to attempt to inform the conversation in the literature about *transformational learning* processes. The target outcomes of the proposed *transformational mentoring* process are enduring cognitive and behavioral changes in participating students, rather than their favorable verbal reactions, affective or otherwise, at the end of the project. Specifically, the objective is to produce in the students increased knowledge, skills, abilities and other characteristics that will enable them to identify and solve real world business problems throughout their careers.

The advocated project parameters, and the corresponding methods to be employed by mentors, are intended to move students from merely going through an out-of-class experience they believe will enhance their education to actually taking "ownership" of business problems as if they themselves are owners and attacking the problem with the same intensity and focus as if the client organization were their own. That transformational process cannot be described in terms of the "normal" types of outcomes targeted in classroom experiences or student consulting projects using common educational methods.

Consistent with the preceding discussion the focus of the proposed approach is on fundamental changes in the students themselves under the transformational leadership behaviors labeled "intellectual stimulation" (Bass, 1985; Bass and Avolio, 1994). Intellectual stimulation, according to this model, involves behaviors aimed at stimulating critical thinking and other important cognitive functions on the part of subordinates. In transformational mentoring projects, the mentors use these

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same techniques to stimulate students' critical thinking both on a group and individual basis. The relevant approaches and corresponding targeted behaviors from the transformational model are (Bass and Avolio, 1994, pp. 3-4):

- 1) questioning assumptions
- 2) reframing problems
- 3) suggesting approaches to old situations in new ways
- 4) encouraging creativity
- 5) soliciting new ideas and creative problem solutions from students
- 6) encouraging students to try new approaches
- 7) encouraging students to develop their own ideas, even when they do not agree with the mentor's ideas
- 8) encouraging followers to revisit problems
- 9) creating a "readiness" for changes in thinking
- 10) creating a "holistic" picture that incorporates different views of the problems
- 11) putting forth or listening to seemingly foolish ideas

Within the advocated *transformational mentoring* process, behaviors 1, 4-7, and 10-11 are exhibited by the team of mentors in regular (weekly) meetings with each student team, and more frequently in meetings between individual mentors and students. A central element of this approach is that mentors will not identify or define the problem at any point in the process. Students will likely experience anxiety and frustration in the early stages, due in large part to conditioned expectations of having projects pre-defined for them in previous classroom experiences. Nevertheless, mentors must resist the temptation to give too much direction to students if the transformational mentoring process is to have its intended effect of improving the cognitive skills of students. It is through overcoming these early anxieties and frustrations that students will learn the intricacies of problem identification and definition in a real world setting. By practicing these same behaviors throughout the term, in large group meetings, and meetings with an individual student or smaller groups of students, the transformational mentoring process should produce the highest levels of critical thinking and of higher levels of knowledge (Bloom, 1984).

Within the proposed framework, transformational leadership behaviors 2-3 and 8-9 listed above are exhibited when students present their plans or solutions to various parts of the problem (e.g., marketing, MIS, management) to the mentors at regular intervals throughout the term. The mentors should critique the solutions by suggesting new "frameworks" for looking at the issues the students are addressing and suggesting new approaches, in some cases, from what the students propose. The key part of this process is letting the students come up with their own ideas and letting that be the starting point (helping them learn the process of beginning with little direction or definition, other than that which existed in the natural situation) rather than let them start from some pre-existing set of solutions or directions.

This general approach is consistent with a combination of the cognitive and social-cultural constructivist learning theories. For example, Cobb (1996, p. 34-35) states "students actively construct

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their ways of knowing as they strive to be effective by restoring coherence to the worlds of their ...experience.” Requiring students to define the business problem instead of giving them a starting place or defining the problem for them, will force them to “restore coherence” in ways that results in defining the problems facing the client organization. The process of making sense of the seemingly fragmented information provided by the client organization is a significant part of the learning process according to Fosnot (1996).

The social learning side of the model is explained by Vygotsky’s (1979) notion of a “zone of proximal development.” This involves having students interact with more knowledgeable and competent others (the mentors) resulting in the development of systems of understanding based on those interactions, rather than purely cognitive and passive reception of information. Essentially, the proposed process involves exposing the students to Vygotsky’s “zone”, but in a mentoring style of interaction where the targeted outcomes are similar to those identified as intellectual stimulation in the transformational leadership model, hence the term “transformational mentoring.”

*Transformational mentoring* is a sharpening process (Proverbs 27:17) initiated and supervised by the mentors, but other individuals also play centrally important roles. Members of the client organization, current and prospective customers, and the other students should all serve to sharpen each student participant. This can occur most effectively when the mentors facilitate the development of a collective “market orientation.”

Lafferty and Hult (2001) reviewed and synthesized the market orientation literature that has emerged since the seminal articles by Kohli and Jawarski (1990) and Narver and Slater (1990) and identified four components of a market orientation. The central element is a strong **emphasis placed on customers**, which means the team must understand them so their needs and wants can be satisfied. In a transformational mentoring project of the type proposed herein, there are two layers of customer needs. The first layer represents the needs of the client organization and the second layer encompasses the needs of the client’s customers. Another key element of a market orientation is a group value that places tremendous **importance on sharing knowledge (or information)** about the various customer needs and how to satisfy them. Accordingly, each team member must actively collect relevant information about customer needs and disseminate it to all of the other team members. For this to occur there must be high levels of **inter-functional coordination**. This means each group must develop norms for working effectively across the business functional areas represented on the team. Finally, the inter-functional coordination must result in **being responsive to market activities by taking the appropriate action** in a manner designed to deliver value to the various customer constituencies. Hence, there must be a collective effort to adapt the team’s efforts to what is learned through the market intelligence.

A market orientation is essential to the transformational mentoring process for several reasons. First, it provides each team with a shared focus which is to solve the client organization’s problem by finding solutions for the needs of its customers. Second, distributing the responsibility for information acquisition and dissemination to each and every team member leads to improved communications



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based on external (and hopefully objective) data rather than actions based upon shared team assumptions. Third, emphasizing the internal-function coordination component leads to greater group cohesiveness and helps minimize the “functional silo” mentality. Fourth, it directs all of the group’s efforts to taking appropriate action based on what has been learned collectively.

### **METHOD**

The purpose of the preceding section was to articulate the theoretical underpinnings of the *transformational mentoring* approach. Emphasis was placed on highlighting the goals, structure, and procedures that should be present in any *transformational mentoring* project. The current section begins with a brief description of the specific methods used in the inaugural attempt to implement the *transformational mentoring* process. It concludes with a preliminary assessment of the learning outcomes that were achieved.

#### **Project Description**

The project was genuinely “real.” The client was a company that markets its products on a national level, but was currently facing a serious competitive challenge. Specifically, it was trying to close the gap on its competitors by increasing annual sales revenue from approximately \$2 million to over \$50 million. Because the business engages in electronic commerce, the problem and corresponding project was truly interdisciplinary and cutting edge, involving significant components in the areas of (1) business strategy, (2) marketing, (3) management information technology, (4) organizational management, and (5) financial assessment of proposed solutions.

The *transformational mentors* included a marketing professor, a management information systems professor, a management professor, and a representative of the client business who has extensive training in accounting and is a former CEO. As Christians, the four mentors endeavored to direct the development process from a perspective that is consistent with Scripture.

Students were recruited for the project through a selective process of submitting applications and interviewing with the three professors and client representative. Approximately 50 students applied and 16 were selected by consensus of the four mentors on the basis of: (a) motivation/work ethic, (b) willingness to invest large amounts of time, (c) disciplinary background, and (d) current skills and ability to learn in ways that would help solve the client’s problem.

The selected students were granted independent study credit for their participation in the project. This is an important element of the learning experience because there was not a specific course that colored students approaches to the client’s problem. Students were genuinely free, and strongly encouraged, to attack the problem from a variety of disciplinary perspectives. The 16 students were divided into two teams and competed, via their final presentation, for an all expenses paid recreational trip to Southern California.

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The teams competed head-to-head for the first several weeks through a series of discovery and presentation of results to all four mentors. Each team observed the others' progress resulting in a form of "raising the bar" of quality of approach. As teams began to formalize their approach they became reluctant to present in front of the other team. At this point the mentors knew they were ready to begin the discovery process and so separated their presentation times allowing independent and dedicated time with the faculty team and client.

Throughout the effort the mentors applied the transformational mentoring techniques described in the preceding section. These included temporary faculty insertion as team members, individualized mentoring sessions with teams or team members, and, very importantly, regular feedback from the client representative who participated (along with the faculty) in extensive weekly meetings with each team. A central element of the overall process was a requirement that each team define for itself the underlying business problem based on the challenge posed by the client. The mentors deliberately avoided providing either team with market information or guidance on how to define the business problem.

There were "real" deliverables. The students made a presentation of their recommendations, along with their supporting logic and research, to the client's executive team at the end of the project. The set of recommendations made by the team was the single criterion used to determine who won the trip and the competition between the teams. Like the popular "Apprentice" reality show, each team member won or lost with her/his team. Therefore, winning the competition was highly incentivized.

As the learning experience unfolded, students regularly encountered their strengths and limitations in the areas of: group process skills, oral communication skills, writing skills, creativity, thinking "outside the box," presentation skills, marketing skills, technical skills, interpersonal skills, and prioritizing their time.

### **Preliminary Assessment**

The authors did not set out to prove a theory supportive of Transformational Mentoring but rather to observe the results of it and, therefore, set a course of continued research and study. By employing the concepts of Transformational Mentoring within the context of students engaged in real world consulting efforts the mentors had hoped to bridge the gap of academic study and practical commerce. Results of the effort were derived through a series of observations. These included "in-stream" observations of individual and team performance as teams worked out the problem, "point" observations at specific presentations each team delivered, and "post" observations which occurred through team and individual interviews conducted by the authors at the end of the project. The post project interviews included team, peer, and self performance assessments from both the team and each individual.

Consistent with Tuckman's (1965) small group development model teams were observed to have gone through the forming, storming, norming, and performing stages. As teams were performing the

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mentors continued to apply the transformational mentoring techniques seeking to produce even higher levels of performance. As a result, the mentors observed members from both teams becoming increasingly dissatisfied and to some degree agitated with their individual and their team's results. Interestingly, the individuals felt their team's were performing yet were not satisfied that the solutions they were pursuing would actually solve the problem.

It was observed that a subset of members from each team entered a stage of "transforming" where their understanding of the problem and how to solve it became heightened and began to drive their conduct. These individuals became a team to themselves (subteam) focusing on achieving greater levels of problem resolution. Individuals moved into this transforming stage at different times and were readily accepted by the subteam as the team perceived they had reached a common understanding. The mentors observed a rapid transition where the transformed team members moved to accelerated activity within their subteam much like that described by the Punctuated-Equilibrium Model (Gersick 1989) as they focused on achieving alternate results within the swiftly approaching project deadline.

Team members who did not enter the transforming stage continued to perform to their original solution strategy. It was further observed that subteam members, while frustrated that not all team members had been transformed, were unwilling to expend time and energy to help them transform their understanding. The subteam viewed the problem they were focused on solving as too great to be detracted by transforming other team members. Rather the subteam members integrated the other team member's findings and tended to task them with work that supported both teams' efforts and thus utilized them as resources for the greater good. As a result, the authors observed through the individual post interviews that all team members felt they had reached the higher level of performance; including those not in the subteam. However, subteam members clearly identified which members had been transformed and which had not. Their observations were wholly consistent with the mentors' observations as to which students had entered the transforming stage and reached a higher level of performance and those who had not.

It was observed that the subteam members were the students who transformed on multiple fronts from their mentoring experience resulting in significant leaps in student learning, dramatic change of student behavior, increases in student productivity, and shaping of the students' view of the "real" business world. These learning results were manifested in such characteristics as:

1. Ownership - students moved from feeling ownership of a solution to ownership of the business problem.
2. Competition - Student's view of competition moved from winning for self and the prize to defining winning as finding a real solution to the business problem.
3. Solution - students went from having an idea to validating the ideas.
4. Communication - students moved from delegation and information dissemination to collaboration.

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5. Operational Model - student perception of business moved from a silo in their major field of study to an integrated whole.
6. Leadership – students transitioned from accepting what others did to challenging what they achieved.
7. Motivation - student motivation changed from “tell me what to do” to self direction and initiative based activities.
8. Success – students feeling of success changed from being approved by my professor and peers to being affirmed by the business results of their effort.

All of these observations were supportive of the notion that Transformational Mentoring concepts when applied to student teams focused on real world problems could produce marked beneficial results in student learning and preparedness for the workforce. The authors are encouraged by the findings and would seek to perform further quantitative research in this area exploring the methods by which Transformational Mentoring might lead to enhanced learning and team performance.

### **A Biblical interpretation of the observed outcomes**

In the process of being mentored in the way described here, any individual student can decide, on an ongoing basis, how they will react to the new information or mental models they encounter. On the one extreme they can accept everything the mentor says or teaches and so becomes more or less a copy of the teacher. On the other hand the student can reject virtually everything the teacher is trying to teach and come away from the experience learning little or nothing. The mentors observed some of the students involved in this project that “got it,” and some who did not, but according to their own descriptions of their experiences in the final interviews, emphatically claimed they did. This phenomenon reflects an idea found in several places in Scripture including James 1:22-25 where the writer uses a simile of looking at one’s face in a mirror, then walking away and forgetting what was seen as illustrative of being merely a “hearer” of the word and not a “doer”. James uses that mental picture to emphasize that experience is a vital part of the transformation process and that information (learning) alone is inadequate for that transformation. According to Moo (2000, pp. 90-91):

People who *merely listen to the word*, James says, are on dangerous ground: they *deceive* themselves. Paul uses this same verb in Col. 2:4 (its only other occurrence in the NT), where he warns the Colossian Christians about false teachers who “deceive” people “by fine-sounding arguments.” The idea of “deceive” in these contexts is clear: to be “deceived” is to be blinded to the reality of one’s true religious state. *People can think they are right with God when they really are not* (emphasis mine).

In the context of general learning, this passage from James would seem to imply that it is important to have some level of “readiness” or “receptivity” to learning, especially when it involves a change in one’s mental schema that requires one to abandon previously held mental models and replace them with ones that are not nearly as comfortable or affirming. The authors’ observations indicate that one

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key differentiating factor between those who “got it” and those who did not was the student’s *readiness to learn* and willingness to act on what was learned.

<sup>22</sup> But prove yourselves doers of the word, and not merely hearers who delude themselves. <sup>23</sup> For if anyone is a hearer of the word and not a doer, he is like a man who looks at his natural face in a mirror; <sup>24</sup> for *once* he has looked at himself and gone away, he has immediately forgotten what kind of person he was. <sup>25</sup> But one who looks intently at the perfect law, the *law* of liberty, and abides by it, not having become a forgetful hearer but an effectual doer, this man will be blessed in what he does.

James 1:22-25 (NASB)

### **FUTURE RESEARCH**

The authors believe that *transformational mentoring* concepts, when applied to student teams focused on practical business problems, have the potential to significantly enhance student learning and deliver business value. Several areas of potential research emerge from the current examination of this approach. Specifically, there is a need to perform further quantitative research in this area by replicating the current study and applying it to differing business problems to see if like results are achieved. Likewise future efforts should employ pre and post measurements of knowledge in addition to the types of qualitative observational methods used here order to add more quantitative data to the body of knowledge. Additionally, future research could measure the magnitude of change produced in student values via *transformational mentoring* methods. This research might also employ longitudinal analysis to assess how long such changes in values endure. It would be quite helpful to determine whether such changes are relatively short-term or long-term in nature.

Future studies might also include varying business domains to determine if the problem set might impact the level of transformation that occurs among students. It would also be valuable to measure the amount of mentoring required for transformation to occur. By increasing and decreasing the time spent with students, and/or the amount of mentoring they receive, would enable researchers to examine the relative levels of impact on movement into the transforming stage. This might include time compression studies via process changes or leadership assignment in order to determine if the

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time to transform can be controlled. All-in-all the authors believe a rich stream of research remains to be completed in the realm of *transformational mentoring*.

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