Implementing Mental Models: Extending Insight and Whole Person Learning

Robert Robinson
Texas Tech University
Robert.e.robinson@ttu.edu

Ronald K. Mitchell
Texas Tech University
Ronald.mitchell@ttu.edu

J. Duane Hoover
Texas Tech University
Duane.hoover@ttu.edu

ABSTRACT

We extend the concept of insight learning from Hoover, Mitchell, and Wu (2012), a form of experiential education that utilizes a process of multi-dimensional whole person learning (Hoover, 2007). The insight learning process seeks to engage students more fully in the learning process with the goal of changing or elevating mental frames. We include a further illustration of insight learning in the form of a simulation exercise that can be utilized to introduce concepts of a particular mental model (Transaction Cognition Theory) to students; this model has been tied to improving performance in a firm. We also inform the whole person learning model and the insight learning model by considering the importance of the order of the insight learning process in helping students to achieve the goal of changing existing mental frames.

INTRODUCTION

In this paper we extend the framework of insight learning from Hoover, Mitchell, and Wu (2012) as a particularly useful form of experiential learning for helping students to improve their mental frames. In addition, the concept of whole person learning (Hoover, 2007) is examined.

Insight learning has been proposed as a four-step process. The first step requires that the instructor and student agree upon the goal of changing a mental state. As Hoover and colleagues (2012, p. 280) suggest, "there can be no 'to' without a 'from' as a reference point" . Step two involves designing the intended alternative mental framework. This step requires an instructor to be open to including student feedback, as this feedback can improve the likelihood of successful change. These two steps lay the important groundwork for an experiential exercise to help students achieve the transcendent state (Hoover 2007) in whole person learning necessary to allow experiential learning to alter their current thinking processes, their current affect state, and to hone their behavioral skills.

This paper focuses on elements of the remaining two steps of the insight learning process: step 3) participation in a simulation or experiential exercise and step 4) integrating the new/enhanced mental frame into the student's intellectual and behavioral repertoire (Hoover et al., 2012) Specifically, we consider when and how the experiential exercise should be implemented in a class to most effectively achieve the goal of changing mental frameworks, as the process of insight learning intends. We propose that instead of placing an exercise after some component of lecture or reading, as traditional models might suggest, engaging students in the exercise before explaining the relevant material can leave them more open to consider multiple learning outcomes and potential solutions to problems in the process. Stated differently, we replace the more traditional approach of "learn-look-do" with a process of "do-look-learn." Once students have engaged in the exercise, they can use what they have observed to inform their learning of the material. Finally, they can develop a personal model that depicts how their new learning has become a part of their own mental framework.

Following a brief review of experiential learning scholarship, we provide a brief theoretical explanation of relevant concepts to the experiential exercise that follows. After explaining the exercise, we discuss the overall approach of insight learning as it contributes to the literature of experiential education.

EXPERIENTIAL LEARNING - OVERCOMING MENTAL BLOCKS

ABSEL scholars have consistently observed the inherent value of experiential learning over the last 40 years. While there are too many ABSEL references on this point to list here, the range of the approaches taken by ABSEL scholars is impressive. Recent approaches have ranged from an examination of simplicity (Cannon & Friesen, 2010) to an appreciation of complexity (Long, 2011). The potential impacts of narcissism has been

explored (Hoover, 2011), while Markulis, Murff and Strang (2011) have examined the impact of the millennial generation. All of these approaches are designed to enhance our understanding of the opportunities for the effective application of simulation and experiential learning processes, as well as the challenges inherent to the implementation of the ABSEL mission.

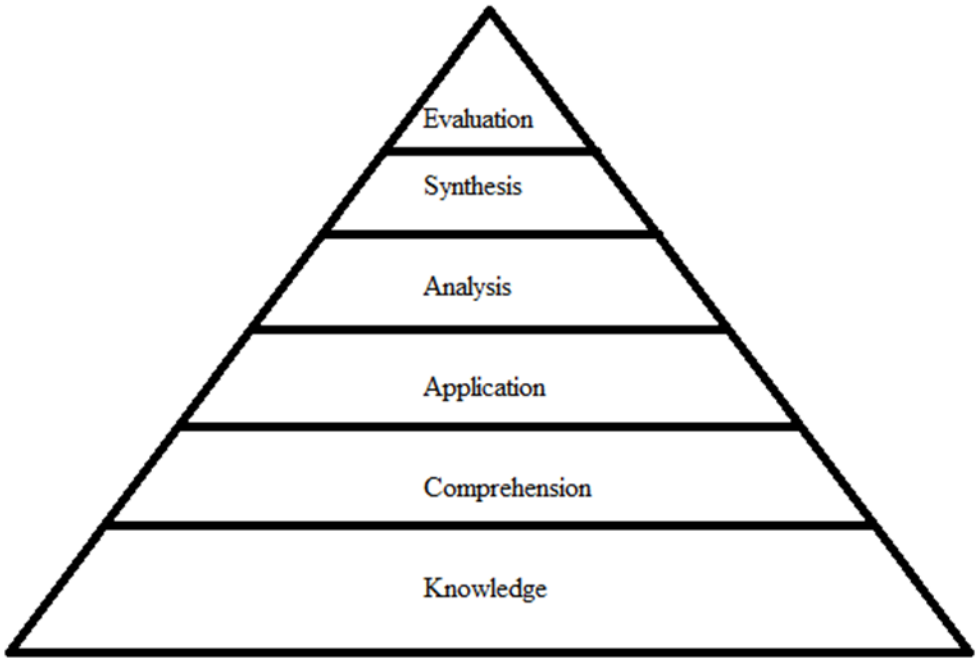
We begin our analysis with a brief overview of the concept of whole person learning. While all learning, at least to some extent, involves the dimensions of cognition, affect and behavior, all learning is, to some extent, a whole person learning challenge. However, recent research has illustrated that the immersive properties of high impact experiential learning can take whole person learning to higher levels than perhaps are commonly recognized (Hoover & Giambatista, 2009). Immersive elements of the whole person learning style allows participants to engage behavioral, cognitive, and affective dimensions of the person through immersive behavioral experiences that can be transformative (Hoover and Giambatista 2009). Hoover (2007) also suggests the need for experiential exercises to include a spiritual dimension to engage a whole-person learning process, where he defines spirituality as a mechanism that can facilitate transcendent experience. Students who become deeply engaged in a whole person learning exercise have a greater opportunity to "get it" and become more likely internalize the learning. Without such internalization, cognitive frames are less likely to change, affect remains in stasis, and meaningful behavioral change becomes improbable.

In reviewing the effectiveness of simulation exercises, Teach and Murff (2009) observe the difficulty some scholars have found in being able to reflect the effectiveness of experiential education. First, they consider the difficulty some participants face because their psychological and physical needs, as they relate to 'Maslow's (1943) hierarchy, have not been sufficiently met for them to begin to engage higher order needs. Students who come to class hungry or tired, for instance, are far less likely to reach the level of transcendence necessary for them to achieve whole-person learning. In addition, because classroom exercises are often related to a grade, students may not feel psychologically safe enough to experiment with the process. Connecting this possibility back to Bloom and colleagues' (1956) taxonomy (Exhibit 1), Teach and Murff (2009) suggest that learning is unlikely to rise above the level of knowledge and comprehension without these basic needs met.

Teach and Murff (2009) discuss further difficulties that arise from complex simulations. When simulations involve too many variables, participants may become too overwhelmed to understand their reasons for success or failure. When simulations approximate real world scenarios closely, prior experience and knowledge of the relevant subject may account for more of the variance in performance than learning from the exercise itself. Because of these difficulties, Teach and Murff (2009) suggest simplifying simulations may improve opportunities to learn.

Simulations that depart from prior experience can offer students an opportunity to consider different approaches to problem solving. We suggest a framework which departs from the more traditional process which might best be described as a pattern of "learn-look-do." That process suggests that students first learn relevant material, observe how it may be applied, then use the material in practice. Instead, we suggest a "do-look-learn" approach. By placing the experience first, students may be more open to learning

Exhibit 1
Bloom's Taxonomy



opportunities without the constraint of prior teaching to guide their expectations. Following the experience with a debrief which looks back on the exercise and then teaches particular concepts can then help students to understand what they experienced in light of specific objectives. Since it is important to connect the learning to the cognitive dimension, exercises can be used wherein students create a depiction of their own mental model related to the material, allowing them to specifically include what they have learned. Here we propose including these elements in the insight learning process. By placing the exercise first, students have less chance to allow prior experience to become a barrier to learning.

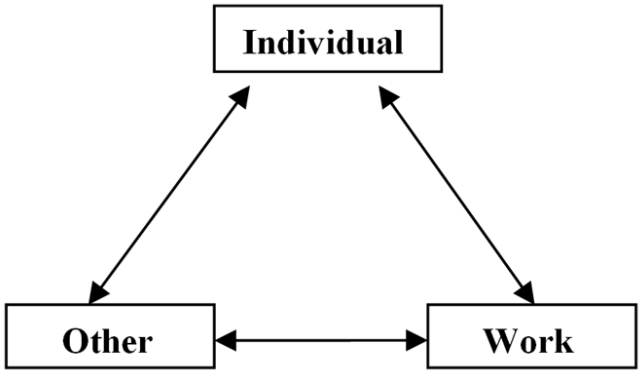
We next wish to present an example of an exercise, preceded by a brief review of the concepts the exercise is intended to introduce. '

TRANSACTION COGNITIONS

To help to explain how new value is created, Mitchell (2001) suggests that entrepreneurs bring into existence transactions (economic exchanges) that otherwise would not occur. Specifically, "Transaction Cognition Theory proposes that the existence of each element in the transaction is, in fact, the primary reason for the introduction of one of the sources of variability in human economic behavior" (Mitchell, 2001, p. 27). The transaction, then, becomes the unit of analysis that is most basic to understanding organizations. Mitchell (2001) explains the three components of a transaction, none of which are sufficient to create a transaction alone: 1) an actor who creates a 2) work for an 3) "other." This relationship is depicted in Exhibit 2, (adapted from Figure 1-1 in Mitchell 2001).

The interaction of these three can then be linked to the three sources of transaction costs (Williamson 1985): bounded rationality, opportunism, and specificity. Mitchell

Exhibit 2
Elements of a Transaction



(2001) argues that entrepreneurs "use transaction cognitions (planning, promise and competition), to organize exchange relationships (among individuals, others, and the work), that reduce the related transaction costs (from bounded rationality, opportunism, and specificity), to create new units of value (transactions). Bounded rationality reflects the idea that behavior is intendedly rational, but within limits related to lack of information or information processing capability (Simon 1979). Opportunism reflects the possibility that one of the parties to a transaction may be acting in a less than trustworthy manner, described as "self-interest seeking with guile" (Mitchell 2001 p. 26). Specificity considers the extent to which the work is redeployable (Williamson 1985). Extending these concepts to the realm of social cognition, Mitchell (2001) explains:

> *Transaction Cognition Theory suggests that each element of a transaction contributes to the nature of transacting, because transaction cognitions about the individual, the work, and other persons are impacted (respectively) by bounded rationality, opportunism, and the more general notion of "work"-specificity. That is, Transaction Cognition Theory suggests that the cognitions of an individual, about the work and others, are shaped primarily by bounded rationality. Correspondingly, Transaction Cognition Theory suggests that cognitions about other persons, in relationship to the individual and the work, are shaped primarily by opportunism; and that cognitions about the work, in relationship to the individual and others, are shaped primarily by work-specificity.* (p. 27).

The three transactions described above are termed planning cognitions, promise cognitions, and competition cognitions (respectively). Planning cognitions are thought to reduce transaction costs which come from individuals' bounded rationality. Promise cognitions are thought to reduce transaction costs that come from opportunism. Competition cognitions are thought to reduce transaction costs that come from the specificity of the work. It is helpful to note that these three cognitions are defined with a positive orientation in that they reduce transaction costs; and that they have three complementary negative-counterpart cognitions, drawn from the work of Gurnell (2000). Corresponding to planning, fatalism cognitions are thought to increase transaction costs that come from bounded rationality. Corresponding to promise cognitions, refusal cognitions are thought to increase transaction costs that come from opportunism . Corresponding to competition cognitions, dependency cognitions are thought to increase transaction costs that come from the specificity of the work.

The exercise below is designed to illustrate an application of this thinking model in the classroom, but will primarily focus on the positive cognitions: planning, promise, and competition. However, a complete debrief that includes the paired cognitions could help students more fully understand the concept of transaction cognitions. Positive transaction cognitions, as they are utilized to counteract the transaction costs that can prevent transactions from coming into existence, are associated with improving economic performance. As many courses in business schools have an orientation toward such

improvement, these cognitions can form a basis for discussion of many concepts, as the exercise below suggests.

EXAMPLE EXERCISE

A cooperative game is utilized to help students consider elements of teamwork, specifically trust, resource sharing, and goal accomplishment. The game used in this exercise is chosen as one not directly associated with business in order to reduce the focus on prior knowledge utilization and to increase the focus on the process of teamwork itself. In addition to the more general concept of teamwork, however, this exercise can be utilized to discuss elements of strategy and entrepreneurship, allowing it to be used in a variety of courses. In this example, we focus on elements of transaction cost economics that have been related to hindering opportunity creation.

The game utilized in this exercise is called PANDEMIC. The game can be played with two to four people. For the purposes of this exercise the students are broken into groups of four. Instead of competing against each other, however, these students have the joint goal of curing four diseases that spread across a map of the world as rounds of the game progress. The diseases are reflected by colored cubes being placed on cities as they are drawn from a deck according to the infection rate, with nine cities being infected at varying levels to start the game. Cures are only possible when one person possesses the right set of resources - five cards of the same color, which corresponds to cities in the same region on the board - in a specialized location called a research station. Initially each player receives two of these resources (in the form of cards from another deck), which may only be passed by both players being in the location on the card being passed. Each player receives two more resources at the end of a turn, but one person can only hold seven at any given time. Because the diseases continue to spread throughout the game, players must also treat cities before all the cubes of that color are depleted, before all of the resource deck is gone, or before eight outbreaks. An outbreak occurs when a city already has three cubes of a given color when it is infected, and it results in all the neighboring cities receiving a cube instead. These different goals of treatment and curing require players to allocate their four actions for each turn in a coordinated way for them to be able to win the game.

First time players are recommended to play the game where everyone has their hand exposed for all to see. With all the resources and special skills visible, players can more easily recognize how to get the necessary resources assembled in order to accomplish each cure. Once students have played the game once, they are responsible for turning in a short essay on what they experienced in the process of playing the game the first time. These essays can help the instructor to understand how the students perceive the exercise initially. They also provide a point of reference for students to compare to when they play the game a second time.

The second time the game is played, students will be expected to keep their hands up (cards not exposed), only communicating their cards to other players verbally. Removing the visibility of resources thus begins to reflect an environment closer to that of the real world, where team members may not always be aware of the capabilities and other resources of those around them. The other requirement of accomplishing the overall goal of curing four diseases remains the same. The expectation is that the environment of the classroom will immediately become more chaotic, as students vie for attention to make suggestions of strategy and share knowledge about their available resources and skills. Students then write a second essay explaining how differently the game worked with this added layer of complexity. The instructor can utilize this feedback to explain how this change relates to the concept of imperfect information and bounded rationality, which considers limitations on the information available to an individual and from limitations in the ability to process the information that is available (Simon, 1979; Williamson, 1985).

A second change to the game can offer another opportunity to learn, provided the instructor is willing and able to utilize more class time to play the game a third time. Adding individual goals to the game (e.g., a student will receive extra credit for the assignment if he or she is responsible for curing a particular disease) can offer students a chance to consider the impact of internal conflict within a team. If individual goals conflict with the team goal, or with each other (e.g., two players both have the goal of curing the same color), then the game dynamic can shift from one of cooperation toward more competitive behavior. Students then write a third essay on this experience, and the instructor could reflect on two other elements of transaction costs that impact organizations: competition and opportunism. While students might not use these specific terms to describe their experience, it is likely that they would use related terms that an instructor can tie back to the student, linking their experience to this element of organizational economics. A final debrief of the entire series of this exercise could further reflect on the impact these three have on organizations, and it could begin to help students to understand the three cognitions of planning, promise, and competition described above (cf. Mitchell, 2001). These cognitions have been linked to economic performance at the individual, group, firm, economy, and society level. The learning and debrief can therefore further reflect on team dynamics, as described in the start of the exercise, or on issues relevant to a variety of courses such as strategy, organizational behavior, business and society, or entrepreneurship. Finally, after students have learned the concepts, they are required to turn in a depiction of their own mental processes in relation to the material which should reflect how they have incorporated the learning into their own thinking. Utilizing the framework of insight learning (Hoover, et al., 2012), this outcome can then be related to the changing of a mental frame.

SUMMARY AND CONCLUSIONS

Experiential education focuses on involving the whole person in the learning process. Insight learning particularly focuses on reshaping the way students think by utilizing

this whole person methodology. By engaging students in a "do-look-learn" approach, students have the opportunity to first engage in behavior without knowing the expected learning outcome, then reflect back on that behavior and learn from it to better inform their understanding. Further, by starting the teaching process with a scenario foreign to many students, preconceived ideas of education and prior knowledge can have a reduced impact and help students to remain more open-minded to changing their mental frameworks.

It is important to note that insight learning does not require the "do-look-learn" approach for the process to work. Rather, this additional approach offers a specific technique which has been proved effective in the classroom. Insight learning can encompass a variety of techniques, but the main goal of the overall process is to elevate or advance the mental framework of the learner. When students can begin to find lessons from something as seemingly simple and basic as a board game, or from some similar technique, they can become more open to the idea of learning to improve instead of learning to accomplish an assignment and receive a grade. Insight learning therefore focuses around helping students to become stewards of their own education.

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