EXPERIENTIAL LEARNING IS NOT JUST EXPERIENTIAL TEACHING: MEASUREMENT OF STUDENT SKILL ACQUISITION VIA ASSESSMENT CENTERS

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ABSTRACT

This paper addresses a long running (1976 to 2007) debate in ABSEL questioning if experiential learning is possibly only a function of enthusiastic experiential teaching. Reacting to criticisms of ABSEL research designs lacking in the use of control groups and focused experimental designs, this study utilizes a pre-test/post-test design to assess MBA students' measured behavioral skills demonstrated in objectively scored assessment centers. The research design is based on a whole person experiential learning model that theorizes that learning occurs when students are cognitively, emotionally, and behaviorally involved in learning experiences. The study indicates that students are able to demonstrate both successful skill acquisition and skill retention at statistically significant levels.

INTRODUCTION

At the 2007 ABSEL meeting Gentry and McGinnis (2007) presented a paper entitled "Experiential Teaching May Lead to Experiential Learning." This paper raises an important question that has engendered an ongoing debate in ABSEL going all the way back to 1976 (Brenenstuhl and Catanello, 1976; Wolfe, 1976). The question is whether or not the positive research results we claim for experiential learning are simply nothing more than some sort of selffulfilling prophecy created by our enthusiastic use of the experiential and simulation methodologies. Gentry and McGinnis (2007) cite Jim Schreier's (also 1976) provocative assertion that we use experiential learning simply because it feels good to us as teachers. This position could be construed to imply that the benefits of our experiential and simulation methodologies may accrue to students not as a circumstance of an efficacious learning system design, but as a by-product of our enthusiasm for what we do as experiential and simulation educators.

Assessing this question is complicated by the fact that many (or some say most) of our research results come from research designs that lack rigor and may only be replicable by the person reporting the results or using the methodology. Gentry and McGinnis (2007, p.1) summarize this issue as follows: "Gentry (1990) and Gentry, et al (1998) noted that most of the work in ABSEL has dealt with discussions of new, modified, or existing pedagogical instruments ...as opposed to systematic investigation of the student learning that may or may not be taking place." They go on to note that many ABSEL presentations are also made from the instructor's point of view and the actual student "take away" is often secondary. Wolfe (1981, p.72) looked at the ABSEL Proceedings 1976 to 1980, and concluded "all of the studies appearing in the ABSEL Proceedings failed to meet the criteria of external validity and...very few met the criteria for internal validity." Anderson and Lawton (1996) called for the use of more objective dependent variables in ABSEL research. Gentry, et al (1998, p.63) called for "experimental designs (that) provide more credible comparisons than those that do not compare methodologies or use a control group."

The research described in this paper comes from a required MBA core course taught at a large state university. The course is called "Executive Skills", and is intended to infuse students (as future managers) with the skills needed to function at an executive level in modern organizations. This raises questions of external validity as previously noted by Wolfe (1981). In recent years the oft cited paper by Pfeffer and Fong (2002), as well as Bennis & O'Toole (2005) feel that business schools have made research and research methodology such a central part of business schools that not only do they do a poor job of teaching and reinforcing executive skills, but that business schools have, in essence, become irrelevant. Mintzberg (2004) echoes this position in his own distinctive fashion in his book Managers Not MBAs. As an illustration of the importance of this topic, the journal Academy of Management Learning and Education devoted most of an issue to reactions to Mintzberg's assertions of MBA program inadequacy (Nord, 2005).

This paper reflects a "can do" attitude about the power of experiential learning, and presents a "did do" set of results. I am asserting in this paper that behavioral skills and the emotional commitment needed to support such skills can be accomplished through the application of experiential methodologies to executive skill development in an MBA program. As I describe how such a program was designed and executed, I will also present compelling evidence that the experiential teaching manifested in this study led to experiential learning that was not only statistically significant, but also objectively measured. The use of an assessment center as a pretest and posttest measure of executive skills, through an experiential learning model based on the concept of whole person learning, was able to demonstrate the effectiveness of this approach.

EXPERIENTIAL LEARNING DIMENSIONS AND WHOLE PERSON LEARNING

Experiential learning is conceptualized here as a methodology of education which has a learning impact on the whole person, including emotion (affect) and behavior in addition to cognitive stimulation. Experiential learning is whole-person learning (Rogers, 1980). That is, it functions integratively, combining the emotional/affective and behavioral domains with the cognitive domain always found in educational processes. Boyatzis, et al (1995) utilized whole person learning one of the key design components in their MBA program design efforts at Case Western. But if whole person, experientially based learning is utilized in executive skill acquisition, the question arises as to the means of accomplishing the learning person involvement required to complete the learning cycle from cognitive awareness to demonstration of acquired skills.

Learning Person Involvement in Experiential Learning

A full understanding of the intellectual/cognitive, emotional/affective, and behavioral dimensions of experiential learning requires an examination of these learning domains as they function individually and as well in interactive combinations. From a whole person learning perspective, it makes sense to view the intellectual/cognitive, emotional/affective, and behavioral elements as occurring simultaneously since the learning individual, conscious and therefore perceiving his environment, has at least some level of involvement on all three dimensions (Rogers, 1980). Thus, when terms such as emotional learning or skill development are applied, these refer more to a technique or approach than to a pure psychological state of the learning individual. It should be noted, however, that it is useful pedagogically to look at these factors as having sequential and reciprocal relationships as well.

Addressing the question of experiential learning vs. experiential teaching forces us to look at the point where the learning actually takes place. If learning is sourced in the student and not the teacher, then learning does not occur until the learning person makes it happen. As Patricia Cranton states "...an educator can do nothing to ensure transformative learning. Learners must decide to undergo the process; otherwise educators indoctrinate and coerce rather than educate" (Cranton, 1994, p.166). Boyatzis, et al (1995) make a similar point, stating "you can lead students to an experience, but you cannot make them learn" (Boyatzis, et al, 1995, p.235). Thus, I submit that there is a "stage" which exists before the stage of acquiring knowledge. That stage is interest in having the knowledge. In another words, without interest there is no activation sufficient to even begin the process. One of the key strengths of the whole person learning model, combined

with individualized skill development, is that since the learning is about the person, then the person is more readily activated and thus ready to make the multi-dimensional changes required for executive skill acquisition (Hoover, 1999).

Experiential Learning as a Critical Mass Phenomenon

It should also be noted here that when it comes to cognitive/intellectual x emotional x behavioral learning dimension activation, that each of these dimensions functions in the sense of a critical mass phenomenon. Either the requisite collection of chemicals and perceptions exist to trigger what can be identified as an emotional response or they do not. A person does not have an emotional reaction to that which the person cannot detect or has no interest. This is why it is possible for a student to be in a classroom physically, but due to lack of learning intensity, not be in a learning environment. Extant forces and predispositions either trigger a particular behavior or they do not. Maximizing the impact of experiential learning is therefore a challenge of (1) producing behaviors that are as complete as possible (2) backed by an emotional commitment that is as stable as possible (3) backed by an intellectual perspective that is as encompassing as possible.

The answer lies not in low intensity learning situations, but in higher intensity learning situations. Lengnick-Hall and Sanders (1997) outline how this process can be accomplished. "To create a high-involvement learning system, student co-producers can be provided with information, knowledge, power, and rewards that enable them to more effectively manage learning transformations" (Lengnick-Hall and Sanders, 1997, p.1339). High intensity learning experiences can exist by combining the cognitive, emotional and behavioral dimensions in situations involving: 1) skill practice, 2) learning by doing---the traditional and simplistic definition of experiential learning, and 3) learning by observing (Bandura, 1977 and Manz and Sims, 1981)---a relatively untapped and quite powerful experiential learning medium.

Experiential Learning: A Definition

The experiential learning definition adopted for this paper comes from early ABSEL work by Hoover (1974) and Hoover and Whitehead (1976) that has been adopted by ABSEL authors such as Brenenstuhl and Catanello (1976) and Gentry, Commuri, Burns and Dickinson (1998). These applications cite the usefulness of viewing all learning processes involving, at least to some extent, the three dimensions of cognition, emotion and behavior, as well as experiential learning approaches essentially attempting to combine the processes of learning with the content of learning. Any level of environmental contact involves the reception and processing of information (cognitive), emotional reaction (affective), and a degree of awareness or action/reaction (behavioral). The primary role of the experiential teacher in this sense is described by Hoover (2007, p. 326): "Astute design and selection of experiential

learning methodologies is a question of how to efficaciously use these (multiple) learning dimensions."

Experiential learning is commonly defined as "learning by doing." I feel that this overly simplistic conceptualization of experiential learning is based on over simplifying and misunderstanding the Kolb experiential learning model (Kolb, 1984). As Kolb's model has become the management literature's gold standard that seems to have to be rolled out when the phrase "experiential learning" is used, experiential learning as "learning by doing" has come to be applied to everything from communication role plays to outdoor adventure challenges to MBA internships. This produces many poor characterizations of experiential learning, because simply learning by doing does not insure integration of experience across cognitive, emotional and behavioral components. The following (more ABSELcentric?) definition (Hoover, 1974), more specific to whole person learning, describes experiential learning as a process:

Experiential learning exists when a personally responsible participant (s) cognitively, emotionally, and behaviorally processes knowledge, skills and/or attitudes in a learning situation characterized by a high level of active involvement.

This definition ties together the previously introduced concepts, and introduces the prescriptive personally responsible/active involvement role of the learning individual - one of autonomy and self-direction (Brookefield, 1990). This autonomy, a situation wherein the student, and not the instructor, becomes responsible for designing and implementing the learning goals, is a key component in the executive skill class described in this paper. This is also a prime point to bring to focus the question "does experiential learning come just from experiential teaching?" As the student becomes more responsible for the learning process, it is taken more out of the hands of the experiential teacher. Of course, the experiential teacher plays a primary role in the design of the experiential learning experience the student is undergoing, and a poor design can produce poor results (although we don't publish very many, if any, papers on such occurrences). Thus, while a bad experiential teacher can impede experiential learning, it is not just the good experiential teacher that makes it happen. It is the whole person learning processes of experiential learning, as they manifest in the learning individual, where the "learning rubber meets the learning road." Thus, the basic hypothesis of the research described in this paper is:

Hypothesis 1: The pedagogy of experiential learning is positively related to observable managerial skill acquisition as measured by the dimensions of an assessment center.

METHODS AND RESULTS

I took the content of the Gentry and McGinnis (2007) paper personally. Not personally in an emotional sense, but personally in the sense that it challenged me to ask myself this question---"could I prove the case for experiential

learning vs. experiential teaching using my students, my data set, and my history as an experiential teacher?" Thus I focused on my Executive Skills class data and excluded data from other university instructors that have taught this course. This had the effect of adding a level of control to the experiment. The consistent element in all iterations was my role as an experiential teacher in the experimental sections and my role as lecturer in the control group. If I did not change and the assessment center measurement instrument utilized did not change, then the learning differentials produced, if any, would be attributable to the difference in methodologies being studied.

Samples. There are actually two different data samples and a control group; two sets of results will be presented. The control group consisted of 65 students from a senior course in Advanced Management. Since the Executive Skills course is a required course for all MBA students, it was not possible to establish a control group of graduate business school students. However, our MBA students skew younger than many universities, and there was only a 1.6 year difference in the average age of the MBA students and the control group members. Both groups also had similar work experience.

Sample one consisted of those students where I was the only experiential teacher the students had for all aspects of the MBA course. The sample size for this group was 218 students over a two year period. As the class grew in numbers, it was necessary to add a colleague to facilitate some of the experiential labs. In this configuration, I was still responsible for the course design. The class met twice a week---once in a large group setting and once in a smaller group setting (the labs). In this setup I personally handled the large group meetings and 25% of the labs. Thus, the second data sample of 452 students over four years consisted of all students where I had been the experiential teacher and class designer.

Design. The basic research design is an experiment that employed an assessment center as a pre-test baseline skills measure in the first or second class period. This was prior to and followed formal instruction. was anv bv skills experiential/behavioral teaching interventions spanning an average of 10 weeks. The experimental design concluded with a repeat administration of the assessment center as a post-test measure. Other activities and modules were also administered during this period of teaching, but at least one week was devoted to each assessment center component listed below.

The pretest/posttest format had the benefits of: 1) establishing a baseline of skill measurement, 2) focusing upon selected skill areas as learning targets (these were the assessment center components of active communication, teams and teamwork, organizing, decision-making, and leadership initiative), 3) establishing post treatment levels of skill measurement, and, 4) reinforcing student appreciation of the experiential learning experiences. The two assessment centers were similar in format but different in content. This allowed for consistent skill assessment while providing a differing set of performance challenges, and also minimized test-retest contamination with true skill acquisition.

The assessment center utilized measures the skill components of: 1) active communication (verbal and nonverbal), 2) teams and teamwork, 3) decision-making, 4) leadership initiative, and 5) planning/organizing. These skill measures are derived from a series of activities students completed as part of the assessment center. The behavioral activity components consisted of: 1) an in-basket, 2) a team meeting for an executive hiring decision, 3) a team meeting to discuss business expansion/new market opportunities, and, 4) an individual speech. All team meetings and the individual speech were video taped for subsequent blind scoring by trained assessors employed by the assessment center company. Similarly, the written content of the inbasket was mailed to outside scorers for content analysis. This blind scoring process resulted in objective measures of demonstrated skills and skill assessment scores completely independent of the experiential teacher.

This process yielded a score for each student (pretest and posttest) on the four behavioral activity components just mentioned, the target measures of active communication, teamwork, decision-making, planning/organizing and leadership initiative, and an overall performance score. All data reported here are percentile data compared to a national sample. The specific assessment center we employed has been validated and employed in other published studies (Rode et al., 2002; Rubin et al., 2005).

Each skill acquisition module was conducted in a comprehensive experiential learning format based on a model of whole person learning. This model combined: 1) cognitive frameworks, 2) skill component identification, 3) opportunity for skill internalization, 4) behavioral practice, and 5) collective and individualized feedback on process and outcomes of the behavioral exercise. Some exercises had both direct and vicarious/observational experiential components.

Results and analyses. Assessment center scores were provided for each student for both pretest and posttest and compared to an extensive database of students and professionals who had experienced the center. Raw scores for each activity and behavioral component were tallied. From these raw scores, percentiles were derived for overall performance as well as for each of the five dimensions (leadership, communication, planning/organizing, decisionmaking, and teamwork). Thus, the six *dependent variables* were the second assessment center administration (the posttest) for overall performance, and each of the five dimensions.

Our *independent variable* was a dummy variable for exposure to experiential/behavioral teaching pedagogy. In the control group, students were exposed to the assessment center pre-test and post-test spaced similarly apart in time, but were presented management concepts and principles in a traditional, lecture-based pedagogy. (Note: lest the reader lament the absence of experiential learning in the undergraduate control group sample, this class has an intensive four weeks following the posttest administration of the assessment that contained many experiential elements.) The *control variables* included the pretest scores for the corresponding dependent variable (overall or specific dimension), which was crucial in not only controlling for pre-existing differences but also for any possible regression to the mean effects. The data from both sample one and sample two (see below) indicate that the experiential learning teaching pedagogy was generally associated with increased improvement in assessment center scores, after controlling for pre-tests and incorporating the control group designed to detect test-retest effects. (Note: the author has the complete regression analyses results available; only summary results are presented here in the interest of saving space.)

For sample one (n = 218 over two years) the overall improvement for the sample attributable to experiential learning was 14.14 (p<.001) percentile points. Significant improvement was noted in three of the five dimensions: leadership, 13.72 (p<.001); decision-making, 17.92 (p<.001), and planning and organizing, 14.09 (p<.001).

For sample two (n = 452 over four years) the overall improvement score for the sample attributable to experiential learning was 9.38 (p<.001) percentile points. Significant improvement was noted in three of the five dimensions: leadership, 6.37 (p<.05), decision-making, 13.89 (p<.001), and planning and organizing, 10.53 (p<.001). Note: the overall performance score is the most robust measure in the assessment center results as the administration has a fixed time limit, and it is possible, and sometimes even necessary, to shift time allocations between areas of focus during the time performance window. Thus, it would be possible, but perhaps improbable that all five subcategory skill measures would improve in a pretest to posttest measure. In summary, excepting the areas of teamwork and communication, exposure to the pedagogy discussed in this study was associated with increased skill acquisition improvement and the research hypothesis is generally supported.

DISCUSSION

One of the most important points addressed by Gentry and McGinnis (2007, p. 1) was the question of what they labeled "the student's actual takeaway." If we are serious about the learning goals of our institutions of higher learning, we should not be adopting methodologies simply because they may be more enjoyable for us to use, or even if the students find them more enjoyable as well. The pedagogies we adopt should also produce the learning results important to the student and the student's own learning objectives.

At the start of this paper I stated that I have a "can do" attitude about the power of experiential learning. I also promised to show a "did do" set of results. The question addressed by this paper is---Were the positive results and levels of demonstrated student skill acquisition shown here a function of experiential learning processes or due to my skills as an enthusiastic experiential teacher?

Let's begin by assuming that I am, at the least with 20+ years of experience, a reasonably competent experiential teacher (I might vote higher, but this is an academic paper and decorum dictates otherwise). Thus it is reasonable to assume that the course design and my execution of the experiential pedagogy went beyond the failing point that could be created by poor design and poor execution (those papers we do not publish).

Were the results then just a function of some sort of self fulfilling prophecy slanted by a self report bias? Gentry and McGinnis (2007, p. 2) describe how this might work: "When one is sufficiently proud of one's own efforts to write about them in manuscript form, one is extremely involved. And one is predisposed to discuss the 'ideal,' the exercise as designed (and not necessarily as implemented) and its intended effects (and not necessarily what is actually learned)." Wolfe (1976, p. 291) puts this in a research perspective: "Very rarely are the supposed gaming benefits tested against quantifiably behavioral or objectively observed recorded measures." This factor was controlled for in this study by having the behavioral measures independently scored by outside professionals on an assessment instrument that the teacher was not part of creating.

Given this evidence that the experiential learning process is dynamic and powerful enough to produce objectively measured experiential learning, the role of the experiential teacher still requires examination. To do this, let's look at a definition of experiential learning as an educational methodology (Hoover, 1974; Hoover and Whitehead, 1976):

Experiential learning may be viewed as a methodology of education whereby structure and individual or group experiences are contrived to develop learning and perceptual capacities, to develop and reinforce cognitions, to impact on emotions and attitudes, and, importantly, to function in developing capacities to behave consistently with the insights of these processes and experiences.

Applying experiential learning as a methodology is the point where the real challenge begins for the experiential teacher. It is simply not enough to be "more enthusiastic in class, and that such enthusiasm will likely be contagious" (Gentry and McGinnis, 2007, p. 2). Experiential teachers need to be managers of the whole person experiential learning system described above, and that means hitting on all the cylinders of the whole person experiential learning engine---cognition, emotion and behavior. In the model adopted for this paper, even traditional methodologies grounded in the lecture format have an experiential component as a one dimensional low intensity learning environment on the cognitive/intellectual dimension. But the experiential teacher must do more. Butler, Markulis and Strang (1985) looking at "How Has ABSEL Fared?" concluded that our research needs more of a focus on the affective/emotional dimension. A case for the behavioral dimension has been made, I feel, in this paper. Only whole person learning can equip our organizational product, students, in all of their intellectual, emotional, and behavioral capacities, to function in the complex and challenging business world of today.

IMPLICATIONS FOR MANAGEMENT EDUCATION

The learning model described in this paper creates a learning system that is: 1) highly individualized and thus taps into learner autonomy and involvement, 2) allows for objective measurement of progress through out the experiential learning process, and, 3) takes advantage of the enthusiasm and skills of the experiential teacher.

Programs can be structured such that personalized learning and meaningful goal setting can be emphasized at every stage. Positive support mechanisms utilizing both instructor and peer group feedback can be utilized to affirm personal responsibility choices made during experiential learning exercises. Examples of mechanisms that can be utilized for this purpose include learning journals (Pavlovich and Collins, 2006) and focused exercise feedback (Blass and Carr, 2006). In any case, the general objective is to lessen any dysfunctional cognitive dissonance factors (Festinger, 1962 and Cooper and Fazio, 1984) that may have been generated by engaging in the processes inherent in dynamic individual change. Finally, generalized debriefing and end of course summaries focus on integration of the transfer of acquired skills from the classroom to post graduate endeavors (Dweck and Leggett, 1988).

CONCLUSION

This paper began by posing the question "Is experiential learning just a product of experiential teaching?" It concludes by restating the assertion that behavioral skills and the emotional commitment needed to support such skills can be accomplished through the application of experiential methodologies. But doing this requires three factors, all working efficaciously and all working in unison. These are: 1) establishing a dynamic experiential learning environment that taps into the power and the processes inherent in whole person learning, 2) astute design and selection of experiential learning methodologies to efficaciously use these (multiple) learning dimensions, and 3) a sufficiently skilled and sufficiently enthusiastic experiential teacher to pull the whole thing off.

Gentry and McGinnis conclude their 2007 paper (p.2) with the following statement: "Long live 'experiential teaching'." I conclude with---long live whole person experiential learning, long live astute learning system design, and long live experiential teaching as well.

RESEARCH RESULTS POSTSCRIPT

The research results I am adding here as a postscript are not robust enough due to a small sample size to include as data in the main thrust of this paper, but there are some interesting and provocative findings I'd like to add to the reader's perspective. The results reported in this paper for the 452 student subjects come with a 10 week or 10 learning module break between the pretest and posttest administrations of the assessment center. By utilizing a control group with a similar timeframe, the research design puts doubt on the positive results being due to a test/retest phenomenon. However, a question might still linger as to the question of whether or not the results (the demonstrated skill focused behaviors) could be attributable to something like a recency effect. In other words, would these results hold up after 6 months, or one year, or into the student's post graduate career?

Fortunately, this past summer 5 students who took the Executive Skills course signed up for an Individual Studies course with me, and thus were able to take the assessment center 12 months after their posttest results. If their postposttest results were even close to the posttest results or were significantly different from the pretest results one year earlier, then a case could possibly be made not only for behavioral skill demonstration during the course of the course, but also for behavioral skill retention over time after the course ended.

The results for the 5 students are encouraging. Note: all data are presented in a pretest/posttest/post-posttest flow. On overall performance the percentile scores (with 50% being the national sample average by definition) went from 46.6% to 78.6% to 76.0%. On the leadership dimension, the assessment center results went from 43.2% to 72.2% to 86.0%. On decision-making, the scores went from 57.4% to 86.8% to 72.2%. And, finally, the communication dimension scores went from 56.0% to 79.0% to 74.4%. My hope is to get this sample size up over time in order to do a further exploration of the impact on students of successful experiential learning and enthusiastic experiential teaching over time.

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