Developments in Business Simulation and Experiential Learning, Volume 28, 2001

ASSESSING THE EFFICACY OF EXPERIENTIAL LEARNING IN A MULTICULTURAL ENVIRONMENT

Ken Morse, University Of Waikato
kmorse@mngt.waikato.ac.nz

ABSTRACT

Experiential learning theory posits that it is through performance, reflection and repetition that skills are developed. But, does experiential learning "deliver" on its promise in an increasingly multicultural management environment? A test of this proposition, conducted over a one year period with fourth year (senior) undergraduate management students would seem to indicate that such is not the case. This paper describes that test in a multicultural environment where eighty percent of the participants are products of a western cultural background, but the remaining twenty percent bring a wide range of alternate cultural baggage to the learning process. Simple statistical analysis leads to the conclusion that, while critical analysis and problem solving training through experiential exercises are marginally effective in the western cultural context, such techniques are less effective without the traditional western cultural foundation.

BACKGROUND: EXPERIENTIAL LEARNING

Experiential learning has become a fashionable concept in business education over the past few decades as indicated by the growing body of knowledge relative to the subject (Weil & McGill, 1989; Gentry, 1991; Boyer, 1998). According to one expert, "Experiential learning is participative, interactive and applied. It allows contact with the environment, and exposure to processes that are highly variable and uncertain. It involves the whole-person; learning takes place on the affective and behavioral dimensions as well as the cognitive dimension" (Gentry, 1991, 20). This approach to knowledge acquisition has been touted as one of the major educational improvements of the last half century. But, are these accolades justified? Does experiential learning "deliver" on its promise of building a broader and stronger foundation for leaders who face a knowledge intensive future? And does it do so in an increasingly multicultural management environment?

After a discussion of the theoretical construct underlying experiential learning exercises, a simple hypothesis test is described. Based on this test, some discussion of the apparent effectiveness of experiential learning exercises in a multicultural environment is offered, suggesting some caution may be advised in the extensive use of experiential learning exercises in the multicultural undergraduate context.

THEORETICAL FOUNDATION

Building on early fundamentals from educational science proposed by John Dewey in 1928, the work of Kurt Lewin developed the foundation for what is considered the study of organisational behaviour. Along with a complementary effort in the area of learning dynamics by Jean Piaget, these works provide the theoretical underpinnings for the concept of experiential learning (Morse, 1997). Resting on this foundation of strong intellectual rigor, Kolb (1984) integrates not only these basics, but also sets out the fundamentals of what might be called the Experiential Learning Model. The model proposes that learning takes place in four successive stages: firstly, the learner completes a specific experience which tests existing abstract concepts in an attempt to validate those concepts; secondly, a feedback process is included which allows observation and reflection as a form of assessment of that experience, which leads to review, and perhaps modification of the learner's body of knowledge. Once completed, the learner moves on to a new (or repeat) experience, which perpetuates the learning cycle. As a result, this model suggests experience as learning, and incorporates feedback into the learning dynamic. Thus, successive experiences build a knowledge base where concepts are both validated and reinforced through real applications.

In perhaps an overly simplistic summary, Kolb (1984) also argues that learning styles vary with the individual based on a number of different factors: personality type, educational specialization, professional career, current job role and level of cultural and social development. Further, this variation occurs based on relative changes between these factors over time. A conclusion, therefore, is that while each individual has a single dominant learning style, such styles are adaptive, and are dependent on both individual (internal) and environmental (external) conditions. His argument is that continuing experience(s) provide the dynamic which facilitates further, cumulative learning.

Building on this foundation, Graham Gibbs (1988) suggests that the learning cycle is not a discrete set of events, but is a continuous cycle which expands as the

number of repetitions of an experience build on the previous foundation. Similar results from additional iterations (positive reinforcement) strengthens the value of the experience, as well as it's integration with other experiences in an "experience portfolio". Alternatively, contradictory results from additional iterations result in questioning and alternative theory building. In this vein, the initial iteration of the experiential learning cycle will result in development of an experience base which then becomes the foundation for a second iteration. The second iteration of this learning cycle, building on the experience base, results in an expansion of learning into an experience portfolio. Experiences, reflections and concepts developed from this experience portfolio then become the foundation for the third iteration, and so forth. As a result, the learner accumulates an ever larger portfolio of learning throughout their lifetime.

The decade of the '90's has seen an extensive broadening of the discussion of experiential learning, and the analysis of alternative learning styles. By the end of the decade, wide ranging acceptance of this approach can be found throughout the discussion of pedagogical issues in a wide range of different forum (Boyer, 1998, etc.), as evidenced by the importance placed on these issues in this and similar conferences, as well as a number of publications However, much of the discussion is based on polemic and intuition, but little in the way of supportive evaluation of these propositions has been published. Thus, a test of some of these propositions seems appropriate in the context of the increasing importance of knowledge in the new century. Given the extensive treatment of both the value and the process of experiential learning exercises in the development of a foundation for future learning, and by intimation for the development of the individual's decision making processes, the following question was developed.

H1 "In a controlled environment, an increase in learning will (necessarily) occur by repeating an exercise which embodies the major steps of the experiential learning process."

Using a single exercise which is repeated over some relatively short period of time would be expected to result in an increase in some measure of learning. After conduct of such a test, post experiment data should indicate that there was a net increase in that measure of learning which would accrue to a majority of participants.

In an era of increasing globalization, there has been a growing recognition that different societies (cultures) exhibit different behavior characteristics as a result of fundamental societal assumptions. An early effort to examine this difference was propounded by Geert Hofstede (1980) in his very influential Culture's Consequence: International Differences in Work-related Values. Based on his behavioral analysis, societies differ along four separate continua which characterize four differing basic social patterns of any culture. In a later work (Hofstede, 1991), his analysis was expanded to include a fifth continuum.

During the two decades since Hofstede's original proposition, a number of alternative schema have been developed to address societal differences. Ronen & Shenkar (1985) propose a set of clusters of societies based on a series of attitudinal characteristics. In later major research, Trompenaars (1994) suggests a series of attitudinal dimensions which characterize different societies. While there is some similarity between the work of Ronen & Shenkar and that of Trompenaars resulting in the ability to "cluster" countries on the basis of various societal characteristics, the differences warrant consideration as separate major contributions to the cultural influence debate.

The upshot of the increasingly rich multi-cultural research base is that behavior varies relative to the cultural background of the individual (Cavusgil, 1997; Lenartowicz, 1999). In light of this conclusion, if a test were to be amenable to collecting appropriate data, another hypothesis could also be tested, as follows:

H2 "In a controlled environment, an increase in learning will vary by cultural background of the learner."

Ethnicity, rather than nationality indicates cultural background (Triandis, 1989). For a given recurring exercise, post experiment data should thus indicate that there was a net increase in that measure of learning which would accrue to a majority of participants in each ethnic group. Discussion of such a test follows.

EXPERIMENT DESIGN

While proper scientific method would suggest that the purest form of test of the Experiential Learning Model would be one that isolates a single learning cycle, Gibbs' modification suggests that may not be either possible or even desirable, as all experiences (and therefore the interpretation of those experiences) are influenced by the sum of preceding experiences. In any evaluation of experiential learning, the existing portfolio provides the foundation upon which any test must be based. Thus, any test must be conducted "at the margin", that is, assuming the background of the participant(s) is a constant during that cycle. Therefore, a "before and after" test seems most appropriate, as such a test implicitly accepts the existing experience portfolio as foundation, and examines changes only "at the margin". This design is based on the "before and after" experimental design methodology commonly used in both education and the social sciences (May, 1993).

In developing such a test, an exercise was designed to allow students with no prior formal experience in "academic critique" to learn the procedure while building analytical skills. The test was conducted in a fourth year undergraduate course entitled "International Business Strategy", for which all students take a prerequisite course in "Strategic Management and Leadership". Early in the

term, students were assigned to read two articles selected by the lecturer from professional journals. While the subject matter was related, the style, approach, methodology and content were significantly different in each article. Students were then provided with four "analytical" questions which required them to synthesize their thoughts, and to draw definitive conclusions. Each of these questions were new and different from what students had up to that point understood as the focus of academic critique, in that the responses were not readily available within the assigned texts, but were to be the result of holistic student interpretation of the contextual meaning. The assignments were collected and evaluated, to provide a baseline for further analysis (the performance phase of the model).

During evaluation extensive written feedback was provided on each individual assignment. Once the assignment was evaluated and returned to the students, one lecture hour was spent providing extensive feedback on common errors observed in the assignment. At this time, the experiential learning cycle was explained as a prelude to a repeat of the academic critique assignment, with the expectation that feedback would be incorporated in any subsequent similar performance (the reflection phase of the model). Students were then asked to critique their own submission in light of the feedback provided, and suggest where their performance differed from that normally expected of an academic critique (the conceptualization phase of the model).

To measure improved performance, the exercise was repeated after the reflection/conceptualization process. This repetition allowed students to select two professional articles from a list of ten journals, with two key constraints: firstly, the articles must deal with international (as opposed to domestic) issues and secondly, both articles must deal with the same subject or issue, to allow comparison. As with the first exercise, the identical four "analytical" questions were provided, guiding students to synthesize their thoughts, and to draw definitive conclusions. Therefore, having completed this exercise previously, students would be expected to have an improved ability to present an holistic student interpretation of the contextual meaning, and thus an improved set of analytical answers to the assigned questions.

For consistency, no other alterations were made in the exercise parameters. Both exercises were evaluated using a pre-determined set of criteria, which was distributed to the students before the first assignment was collected. All students were provided identical "advice and guidelines" before the first assignment, as well as identical feedback between assignments. All evaluation was conducted by a single faculty member, and each submission of exercises was evaluated in a single time block, to remove any potential environmental biases. Data analysis was delayed until the term finished to avoid any potential for adjustment or modification during the course of the term.

The test population was limited to fourth year students enrolled in one of six available integrative courses, a requirement for degree completion. Of a total of 718 fourth year students during a single academic year, 128 provided useful comparative scores. For measurement purposes, only marks in the middle of a letter range were awarded, thus reducing the potential for data interpretation difficulties. Because only marks in the middle of a letter range were awarded, each increment would have a value of "1" (i.e., from B to B+ =1, while from A- to B+ = -1, etc). Through this measurement mechanism, the difference in scores between the first assignment and the second assignment would be representative of the "learning" achieved from this particular experiential learning cycle. The resultant data is presented below.

All (n=128)	Range: +6 to -5			Mean = +0.48
		60 increase	46.9%	
		29 no change	22.7%	
		39 decrease	30.4%	

Table 1. Performance Summary (aggregate)

DISCUSSION

Table 1, a summary of the aggregate results, presents the collective performance of the sample of 128 participants normally distributed about a mean The data indicate that the group gained from participation in this experiential exercise, as the average mean score increased by approximately 0.48 (equivalent to approximately one-half of one letter mark improvement). Score differentials ranged from a high of +6 (or six letter marks, i.e., from C+ to A+) to a low of – 5 (or six letter marks, i.e., from A- to C). Therefore, the first condition established for acceptance of the original hypothesis – that there is an overall improvement in learning, is satisfied.

It is useful to note, however, that fewer than one half (46.9%) of the participants actually account for all of the increase, a result which is statistically significant at the 0.95 level. On the other hand, more than half showed either no increase, or an actual decrease. Of real concern is the fact that nearly a third of all participants actually performed less well on the second iteration of this exercise than they had on the first iteration. Thus, given the statistically

significant result that a majority of participants *did not* show improvement as a result of repeating this exercise (and therefore did not learn from their previous experience), which was an additional criteria established for accepting the original hypothesis, the original hypothesis must be rejected as incorrect, and the alternative hypothesis – that an increase in learning will *not necessarily* result from repeating an experiential learning exercise – must be accepted.

This entirely unexpected result prompted a search for explanation. A written census of the participants was conducted to probe their reflective impressions of learning. One surprising result was that only three of the 128 respondents could recall having been asked to address similar questions in a previous class or tutorial session. Although this may in part reflect the selective memory of the participants, it nevertheless highlights a significant potential gap in an educational program which would allow students to reach the final semester of a four year program without addressing these issues. Another quite informative result of the reflective census was the indication that participants did, in fact learn from the exercise, but that the learning may not have been captured in the measurement based on grades. For example, 28.7% of respondents indicated that, as a result of this exercise, they have now modified the way they read academic articles, shifting from a "start at the beginning and read to the end approach" to a scanning/reading/questioning approach (a technique wherein the abstract, introduction, leading paragraphs and summary are first read, then the questions reviewed relative to the article content, followed by a beginning to end reading, searching for the external issues relative to the reading.)

Turning now to the second question, that is, whether there would be noticeable differences based on "culture" which was measured by identification of ethnicity. Given the identifiable difference between nationality and culture, both demographic characteristics were available. Data collected as part of the student registration process indicated racial background, while data collected as part of the exercise identified nationality or citizenship. Within the context of this data set, Table 2 disaggregates the composite data of Table 1. Panel #1 of Table 2 indicates the performance of those who identify their nationality as New Zealand. The first data subset of the panel indicates the performance of those participants from an essentially western (primarily English) cultural background, consistent with the cultural characteristics developed by Hofstede, Ronen & Shenkar, and Trompenaars. Among this group, there is a twenty percent increase as the mean performance improves to 0.60. However, although the proportion of increases is only slightly higher than for the collective data, it is sufficient to barely exceed the "majority" threshold in the first hypothesis.

Panel #1				
NZ Euro	Range: +6 to -5			Mean = +0.60
(n = 91)		46 increase	50.5%	
		17 no change	18.7%	
		28 decrease	30.8%	
NZ Maori	Range: +3 to -3			Mean = +0.31
(n = 11)		6 increase	54.5%	
		1 no change	9.1%	
		4 decrease	36.4%	
NZ (all)	Range: +6 to -5			Mean = +0.58
(n = 102)		52 increase	50.9%	
		18 no change	17.7%	
		32 decrease	31.4%	
Panel #2				
Foreign (all)	Range: +3 to -3			Mean = +0.12
(n = 26)		8 increase	30.8%	
		12 no change	46.2%	
		6 decrease	23.0%	
Non-Western	Range: +3 to -3			Mean = +0.29
(n = 19)		6 increase	31.7%	
		9 no change	47.3%	

		4 decrease	21.0%	
Chinese	Range:+3 to 0			Mean = +0.70
(n = 8)		4 increase	50.0%	
		3 no change	37.5%	
		1 decrease	12.5%	

Table 2. Performance Summary (disaggregated)

Turning to the second data subset of Panel #1, the performance of those participants who specifically identify themselves as members of the Maori (those descendants of that population group which were resident in Aotearoa/New Zealand at the arrival of European explorers) cultural group, a major sub-group in New Zealand society, is presented. While admittedly consisting of a small number of observations, the contrast between the two data subsets are immediately recognizable. Mean performance for this group is only one half that of it's complement at 0.31 vice the earlier 0.60. Because of the distinct difference in mean performance relative to the entire group which identifies itself as "New Zealander", using nationality as a surrogate for "culture" appears to be questionable, at best, which is consistent with earlier findings of Triandis (1989), Lenartowicz & Roth (1999) and others.

An immediate question which arises from this data is that of causality – why the significantly reduced performance of this sub-group within the context of a single nationality? It is sufficient to note that historically, Maori culture follows the development path of the Pacific Island cultures rather than that of the European cultural stream (Metge, 1976). In this context, learning is done passively in an oral and/or a group setting, rather than actively in an individual and performance-based tradition. While little definitive evidence exists, the Pacific Island cultural background would appear to be much more consistent with that of an Asian culture in the context identified by Hofstede, Ronen & Shenkar and Trompenaars (Bishop, 1999). In fact, three participants identified their ethnicity as Pacific Islander (Niue and Tonga). When these were added to the Maori observations, the mean performance only changes by +0.004 , with one additional increase, one no change, and one decrease.

Finally, the third line of panel #1 presents the cumulative "New Zealander" data, which exhibits those characteristics that would be expected in a western cultural context – a mean of 0.58 with a majority of participants showing an increase in performance in this exercise.

Turning to the issue of multicultural learning, approximately 20% of the subjects were of a nationality other than New Zealand, with a small number of representatives from each of the following: Chinese (People's Republic (1), Taiwan (2), Singapore (5)), Europe (3 Germany, 1 Swiss, 1 Croatia), Thailand (3), Japan (2), Tonga (2), Canada (1), India (1), Indonesia (1), Malaysia (1), and Niue (1). As indicated in the first line of Panel #3, the results are quite dissimilar to those of the group as a whole, and of the sub-group identified as "New Zealander" in that while there was a net increase in mean performance for this group, that increase is a minimal 0.12. Further, that minimal increase was accounted for by a very small component (31%) of the group. Additionally, the range of differences across this group was much smaller, being only half that of the total sample.

As with the New Zealand data, this group was also sub-divided by ethnicity rather than nationality. In doing so, two significant anomalies occurred. First, those students who were "foreign", but from a western culture (Canada, Germany, Switzerland and Croatia) were removed from the group with the unexpected result that the mean improvement of the remaining foreign student group increased dramatically – from a mean of 0.12 to a mean of 0.29, though this did not significantly affect the percentage who increased among the group. Second, one non-western ethnic group identifiable was that of the "Chinese" , including national Chinese (both People's Republic and Taiwan) and overseas Chinese. Again, recognizing the relatively small number represented by this group, it is instructive to note in the third data subset of Panel #2 that this group achieved a mean increase of 0.70 – greater than any other group including the European New Zealanders. Also noteworthy is the fact that at least half of the group registered an increase in performance. Thus, given the data above, it is plausible to conclude that experiential learning is equally effective in both the "Western" context and the "Chinese" context. This result would seem counter-intuitive given the breadth of literature indicating the opposite conclusion would be expected. Perhaps contributing to this result are two considerations. First, Chinese culture has always revered education, and education is seen as a means to social and philosophical improvement. (Naisbitt, 1997). Second, because of the cost involved, Chinese students studying abroad may be more highly motivated to excel in a foreign environment (and are perhaps more prepared to do so than the "average" Chinese person).

With the exception of the Chinese sub-group, the data clearly indicates that foreign students did not benefit as much from this exercise as their New Zealand counterparts. Recognizing that this is a relatively small sample, the significant difference provided by this data still indicates that the second hypothesis must be accepted, as the levels of performance difference do vary greatly between so-called Western and non-Western cultural groups.

The experiment outcome results documented above distinctly indicate that experiential learning is much less effective outside a traditional western cultural context. Further, the data indicate that there are significant differences by ethnic group, when ethnicity is defined as a cultural characteristic rather than using nationality. Thus, the second hypothesis must be accepted as the data clearly indicate that different cultural groups perform differently on the same experiential learning exercise.

LIMITATIONS:

No experiment is without its limitations, and this experiment is certainly not exempt. A number of considerations are raised in light of the results obtained. First, the size of the data set, especially the identified sub-groups, may be insufficient to be representative of the population. Certainly, additional replications of this test may reinforce the data, which is the near term intention. Alternatively, additional data collection may result in future acceptance of the hypothesis, as the data become more representative of the population as a whole.

Second, the test applied was certainly a very simple one. "Effectiveness" is an inherently difficult concept to operationalise, thus leading to inaccuracies in data collection. Perhaps clearer specification of the data collection process would result in a more informative demarcation of the effectiveness of the exercise. Further, the use of subjective grades as a measure of learning is called into question through the reflective exercises of the student participants. Both limitations demand further clarification in any furter test of either hypothesis.

Another concern, directly related to cultural differences, is the implicit assumption that performance differences across cultures are due to the nationality of the individual (as a surrogate for culture). Lenartowicz & Roth (1999) are quick to point out that nationality and culture may not be synonymous, and thus nationality may not be a sufficient proxy for culture. This contention is supported by the discrepancy in performance among those who identify their nationality as "New Zealand", as indicated in panel #1 of Table 2.

CONCLUSIONS AND IMPLICATIONS

From the analysis above, experiential learning *does not* clearly result in increased learning, requiring a rejection of the first hypothesis. Equally clearly, ethnicity impacts on the effectiveness of experiential learning exercises. However, that effect can be more or less positive, as in the case of both the European and Chinese traditions as opposed to the case of New Zealand Maori and non-Western foreigners. What is equally clear is that nationality is not necessarily an appropriate approximation of culture, but that culture is better represented by ethnicity, that is, an affinity for a racial/social bond rather than a geographic/administrative one.

Although this experiment may accede to the allegation of being somewhat superficial, the results carry important implications for training knowledge workers in an increasingly globalized world. One such conclusion, borne of the first, rejected hypothesis, is that experiential learning must be treated with caution. Both Kolb (1984) and Sims & Sims (1995) indicate that individuals learn "differently". These results imply that learning styles differ not only between individuals of a similar culture, but by culture as well. Given that only a minority of participants, both in the cumulative data and the data subsets, succeeded in this experiential environment provides support for this contention.

Obviously, further research is required to confirm this data – if for no other reason than to increase the number of subjects in some of the various subgroups. Should such added robustness support current preliminary results, the implication is clear.

REFERENCES

Bishop, R. & Glynn, T. (1999) "The development of the pattern of Dominance and Subordination." Chapter 1 in *Culture Counts: Changing Power Relations in Education*. Palmerston North, NZ: Dunmore Press.

Boyer Commission (1998). "REINVENTING UNDERGRADUATE EDUCATION: A Blueprint for America's Research Universities." *The Boyer Commission Report on Educating Undergraduates in the Research University*, Stony Brook, NY: State University of New York

Cavusgil, S. T. & Das, A. (1997) "Methodological Issues in Cross-cultural Research: A Survey of the Management Literature and a Framework." *Management International Review*, (37(1), 71-96.

Gentry, J. W., ed. (1991) *Guide to Business Gaming and Experiential Learning*, London, UK: Kogan Page.

Gibbs, G. (1988). *Learning by Doing: A Guide to Teaching & Learning Methods*. London, UK: Kogan Page.

Hofstede, G. (1980). *Culture's Consequence: International Differences in Work-related Values*. Newbury Park, CA: Sage.

----------, (1991). Cultures and Organizations: Software of the Mind. Maidenhead, U.K.: McGraw-Hill.

Kolb, David A. (1984) *Experiential Learning: Experience and the Source of Learning and Development*. Boston, MA: McBer and Company.

Lenartowicz, T & Roth, K. (1999). "A Framework for Culture Assessment". *Journal of International Business Studies*, 30(4), 781-798.

May, T. (1993). *Social Research: Issues, Methods and Process*. Buckingham, UK: Open University Press.

Metge, J. (1976). *The Maori of New Zealand*. London: Routledge.

Morse, K. & Malik, S. D. (1999). "Who's on First?": Exploring the Concepts of Problem Based Learning, Experiential Learning and Lifelong Learning *Developments in Business Simulation and Experiential Learning*, 26 (March), 303-310.

Naisbitt, J. (1997) *Megatrends Asia*. London: Nicholas Brealey Publishing.

Ronen, S & Shenkar, O. (1985) "Clustering Countries on Attitudinal Dimensions: a review and synthesis." *Academy of Management Review*, 10(3): 435-454.

Sims, R. R. and Sims, S. J. eds. (1995) *The Importance of Learning Styles*, Westport, CT: Greenwood Press.

Triandis, H. C. (1989). "The self and social behaviour in differing cultural contexts." Psychological Review, 96 (3), 506-520.

Trompenaars, F. (1994). *Riding the Waves of Culture*. New York, NY: Irwin.

Weil, S. & McGill, I., eds. (1989). *Making Sense of Experiential Learning: Diversity in Theory and Practice*. London: Open University Press.