An example of the use of research methods and findings as an experiential learning exercise in an accounting theory course

Bruce Bublitz
University of Michigan - Dearborn

Kirk Philipich
University of Michigan - Dearborn

Robert Blatz
University of Michigan - Dearborn

ABSTRACT

The purpose of this teaching note is to describe an experiential learning exercise used in a master's level financial accounting theory course. The experiential exercise illustrates how order effects can affect user's judgments, a long-standing research finding. This experiential exercise was used in an attempt to make students more cognizant of and accepting of behavioral accounting theories and/or concepts as they pertain to users of financial accounting information. This research-based experiential exercise was used in three separate yearly offerings of a financial accounting theory course. In-class use of this research-based experiential exercise resulted in greater student acceptance of behavioral accounting theories and concepts. While experiential exercises, in general, are more commonly used to illustrate practice-based methods and procedures, the purpose of this experiential exercise was to lend greater credence to the findings of accounting research to a student audience.

Keywords: Pedagogy, Experiential Learning, Behavioral Accounting

INTRODUCTION

This teaching note describes an experiential learning exercise that was developed based upon research findings and used in a graduate accounting theory class. The purpose of this exercise was two-fold. First, it demonstrated to students that interpreting the numerical information in GAAP-based financial statements is not as easy as many of them believed. In traditional financial accounting courses students tend to learn how to arrive at GAAP numbers, but they find interpreting these numbers and their use in a decision context to be a much higher level of intellectual achievement. Second, the exercise demonstrated to the students that important research-based behavioral aspects should be considered when reporting financial accounting information to financial statement users who then use this information to make judgments and/or decisions. The experiential exercise makes use of a simple case upon which students base their judgments. This experiential exercise contrasts to more complex behavioral experiments which may: (1) test several hypotheses, (2) make several comparisons across several subject groups, or (3) require many repeated trials.

This research-based experiential exercise required students to assess a firm as either a going concern or a non-going concern. Students were asked to make a going concern decision by using financial statements and two informational or footnote disclosures related to: (1) debt and financing (which raises doubts concerning the firm's ability to continue debt service, thus raising concerns of its ability to continue as a going concern), and (2) continuing operations (which relates optimistic projections of the firm's ability to generate future profits, thus to be able to continue as a going concern). The order of the two information disclosures was alternated in the financial information provided to the students. The result from this going concern decision experiential exercise, not surprisingly, revealed that the order in which the disclosures are presented is associated with the students' judgments. Those students whose information first related the debt and financing footnote disclosure tended to believe the firm would not continue as a going concern while those students receiving the continuing operations footnote disclosure before the debt and financing disclosure tended to believe the firm would continue to be a going concern. The importance of this in a classroom situation is not to reaffirm prior research; rather it is to illustrate to students, through an experiential exercise, that behavioral results found by accounting research should not be dismissed as they can and do alter the students' own decision-making processes.

Again, the potential behavioral importance of order effects is not the primary outcome from using of this experiential exercise. Rather, the in-class reporting of the results from this experiential exercise had two primary educational benefits: (1) the students became more accepting of the behavioral implications that may need to be considered with respect to the reporting of financial information, and (2) because all of the students received the exact same financial statements yet reached far different conclusions, they begin to realize that their conclusions based upon numerical financial statements may not be the same as those of other students; thus, perhaps the "numbers" are not as universally revealing as they once believed. Students often have great difficulty relating readings on accounting theory to the practice of accounting. Use of this experiential exercise and the subsequent discussion appear to increase student awareness of and appreciation for behavioral aspects of the use of accounting information.

THE COURSE AND ITS STUDENTS

Students pursuing their master's degree in accounting at a public metropolitan university are required to enroll in a graduate financial accounting theory course. These students previously completed undergraduate accounting courses including intermediate, cost, systems, and auditing. The vast majority of these students have completed internships at public accounting firms or private/public companies, work for public accounting firms, or have other current employment including working as loan officers. As might be expected, given their traditional undergraduate accounting training, these students have a greater understanding of accounting and the financial statements as "preparers" while lacking an appreciation for or understanding of the role of accounting information and financial statement information in a decision-making context.

One segment of the course briefly introduces behavioral aspects of the decision-making process and thus the need for the financial statement preparer to be cognizant of the behavioral implications which could impact the use of and/or the users of financial information. *The Statement on Accounting Theory and Theory Acceptance* (SATTA, American Accounting Association 1977) serves as background reading. Students are typically uninterested in and quite skeptical of behavioral accounting research and theories discussed in the SATTA monograph. In an attempt to broaden their perspective concerning behavioral accounting issues, implications, and research, the material in SATTA was supplemented with two additional readings: Moriarity (1979) and Stock and Watson (1984). Both of these articles were published in *Journal of Accounting Research* and were somewhat controversial when they appeared in a top accounting research journal. I chose these two articles because of their use of "faces" to convey information with respect to a bankruptcy decision and a change in corporate bond ratings decision. The articles report that decision makers in both instances make more accurate decisions when financial information (i.e., ratios) is conveyed in the form of Chernoff faces.

After reading and discussing these two papers, the students typically remained quite skeptical about the usefulness of behavioral theories with respect to accounting information. For example, one student lamented that these studies employed student subjects, not "real" accountants! Pointing out that both studies also used practicing professional accountants with similar results to those obtained with student subjects generally had little impact on the students' beliefs. The students' skeptical reaction to these behavioral readings and discussions led to a decision that these behavioral ideas needed to be addressed in a fashion other than the lecture/discussion format used to that point.

EXPERIENTIAL LEARNING

The merits and use of experiential learning activities have been espoused for many years. As far back as 1974, the Committee on the Relationship of Behavioral Science and Accounting (AAA, 1974) believed that behavioral issues should be observed, felt, or experienced by students of accounting. Uecker (1981) states:

> "The adaptation for classroom use of the research instruments and methodologies employed in these studies would greatly facilitate the integration of behavioral topics into the accounting curriculum……Such behavioral exercises can stimulate student interest in and understanding of the behavioral implications of accounting."

Experiential learning typically requires reflective exercises in which the learner has direct contact with the phenomenon being studied rather than merely thinking about or discussing the potential for such contact. It is believed that the learner's subjective experience(s) lead to more long-lasting and perhaps more meaningful learning (Borzak 1981, Brookfield 1983, and Jarvis 1995). As discussed by Reynolds (2009: pgs. 388-389), "In practice, experience-based methods are more likely to be used to reinforce ideas proscribed by a curriculum rather than encourage new ones—more *uncovery* than discovery learning."

An experiential going-concern exercise was designed to help the students "uncover" for themselves the appropriateness of behavioral theories, concepts, and ideas as they pertain to the dissemination and use of financial accounting information. Students were told the week before conducting the experiential exercise that an in-class exercise would be conducted the following week as part of the class and that this exercise would count as part of their in-class points (approximately 5% of their final course grade).

THE EXPERIENTIAL EXERCISE

The experiential exercise pertains to the auditing area and employs a going-concern setting. To illustrate to accounting theory students the importance of behavioral aspects of financial reporting, a simplified version of a going-concern decision empirical study, Asare (1992), was prepared using modified financial statements of a firm seeking bankruptcy protection. More specifically, the experiential exercise was undertaken to illustrate the behavioral implications of *order effects* in decision-making (Hogarth and Einhorn 1992).

Numerous authors have examined order effects and their importance on decision making within numerous accounting applications, including: Ashton and Ashton (1990), Asare (1992), and LaSalle (1997). Asare (1992) examined order effects within the decision making context in a most comprehensive fashion as it pertained to an auditor's going-concern decision. Because Asare's original materials were not available and in order to use an industry more familiar to the students, a simplified experiential case exercise was created for this exercise. The case materials, including the instructions, are shown in Appendix A.

The experiential exercise is based upon the 2005 financial statements of Northwest Airlines. The financial statements were modified in order to achieve two purposes: (1) eliminate account classifications or account titles that may be difficult for the students to understand and interpret, and (2) aggregate certain accounts in order for the statements to be less complex. Additionally, two supplemental disclosures were included. A *continuing operations* supplemental disclosure provides information related to future revenue streams, future operating expenses, and future profit projections. This supplemental disclosure is intended to make the hypothetical firm appear to be a going concern. Some of the wording followed Asare (1992). The second *debt and financing* supplemental disclosure provides additional information concerning the need to restructure debt and to find additional funding for future pension funding needs. This disclosure is meant to be pessimistic with respect to the firm being a going concern.

The instructions clearly point out that this exercise is based upon a real-world example, that the exercise had a correct response, and students were told that correct responses would receive more points than incorrect one. Students were randomly distributed the materials, one version has the projected future profitability disclosure reported first followed by the pessimistic debt disclosure (n=21) and the second version reverses the order of these disclosures (n=21). All of the students were able to make the required going-concern decision in approximately 20 minutes. While the students' responses were being tabulated by the instructor, the students read selected portions of Asare (1992). Once the students finish reading, they are informed that they received one of two versions of the exercise with the only difference being the order of the two supplemental disclosures.

RESULTS OF THE EXERCISE AND IMPLICATIONS

The results of the students' judgments from three offerings of this course (N = 13, 14, and 15) and three replications of this experiential exercise over a three-year time period are reported in Table 1. In total across all three semesters that the experiential exercise was used, fifteen of the twenty-one students receiving a case with the future profit projections disclosure being followed by the debt/cash flow disclosure predicted the firm would be a going concern. Thirteen of the twenty-one students receiving the debt/cash flow disclosure first, followed by the future profit projections disclosure, predicted the firm would not be a going concern. These results ($\chi^2 = 4.709$, significant at the .05 level) indicate a "main effect" consistent with a *primacy* effect (Hogarth and Einhorn 1992). The results of this experiential exercise in each semester were consistent with those reported for three semesters combined. However, for purposes of increasing student awareness of the behavioral aspects of financial reporting, either this *primacy* result or the competing *recency* effect could be used to increase student awareness of the behavioral implications of financial reporting.

Students were typically quite surprised by two outcomes based on their responses to this exercise. First, their responses varied even though the financial statements they used were identical. This result suggests that either their ability to make inferences from "numbers" is not as uniform as they previously believed and/or that any difference in their decisions may have been driven by supplemental information-- i.e. words not numbers. Second, the resulting difference in their responses to the going-concern question seemed to be because of something as simple and seemingly irrelevant as the order in which the supplemental disclosure materials were presented! A lively discussion typically ensues with many of the students offering examples of other instances for which the order in which information is disseminated to them could be used to potentially mislead users of financial or other types of information.

Because of their *uncovery* (as opposed to discovery) nature, experiential exercises, like the one presented here, tend to be more topic specific. Thus, using this specific experiential exercise in other settings may be difficult or even inappropriate. However, this specific experiential exercise may be useful in conjunction with the financial statement analysis section of an intermediate accounting text (i.e., Chapter 24 of *Intermediate Accounting* by Kieso, Weygant, & Warfield). The simplicity of this experiential exercise may make it useful with an undergraduate audience to emphasize the behavioral implications of *order effects* within the financial statement analysis context. Additionally, this particular experiential exercise might also be employed in an auditing course to highlight the difficulties faced by auditors in making a going-concern decision.

CONCLUSIONS

This paper describes a research-based experiential learning exercise used in a graduate accounting theory class to help students understand and appreciate behavioral theories/concepts which are introduced and discussed in the course. This exercise was created in reaction to student feedback on class readings. The hoped for outcome is not unlike the purpose for more traditional experiential exercises, however, instead of the focus being on practice-related methods/procedures, this experiential exercise focused on achieving student acceptance of behavioral accounting research findings. The exercise demonstrated to students how even seemingly innocuous changes in how information is reported can have a substantial impact on the decisions that rely on this information. The exercise had the desired outcome of making these students not only more aware of but also more accepting of the behavioral implications of how information, particularly accounting information, is presented to decision makers.

REFERENCES

American Accounting Association (1977). *Statement on accounting theory and theory acceptance*.

American Accounting Association (1974). Report of the committee on the relationship of behavioral science and accounting. *The Accounting Review*, Supplement to 49.

Asare, S. K. (1992). The auditor's going-concern opinion decision: interaction of task variables and the sequential processing of evidence. *The Accounting Review*, 67, 379-393.

Ashton, A. H., & Ashton, R. H. (1990). Evidence-responsiveness in professional judgment: effects of positive versus negative evidence and presentation mode. *Organizational Behavior and Human Decision Processes*, 46, 1-19.

Borzak, L. (1981). *Field study: a sourcebook for experiential learning*, Sage Publications.

Brookfield, S. (1983). *Adult learners, adult education and the community*, Open University Press.

Hogarth, R., & Einhorn, H. (1992). Order effect in belief updating: the belief-adjustment model. *Cognitive Psychology*, 24, 1-55.

Jarvis, P. (1995). *Adult and continuing education: theory and practice,* 2nd edition, Routledge.

Kieso, D. E., Weygandt, J. J., & Warfield, T. D. (2010). *Intermediate Accounting*, 13th edition, John Wiley & Sons, Incorporated.

LaSalle, R. (1997). Presentation order effects on accounting students' ethical judgments. *Journal of Accounting Education*, 15, 19-38.

Moriarity, S. (1979). Communicating financial information through multidimensional graphics. *Journal of Accounting Research*, 17, 205-224.

Reynolds, M. (2009). Wild Frontiers-Reflections on Experiential Learning. *Management Learning*, 40, 387-392.

Stock, D., & Watson, C. J. (1984). Human judgment accuracy, multidimensional graphics, and humans versus models. *Journal of Accounting Research*, 22, 192-206.

Uecker, W. C. (1981). Behavioral accounting research as a source for experiential teaching aids: an example. *The Accounting Review*, 55, 366-382.

APPENDIX A

In-Class Assignment

You are completing your annual audit of the Skyway Airline Company. You have had no material disagreements with Skyway management, have always found Skyway management to be above reproach, and have always had very cordial dealings with its audit committee. You have determined that Skyway's financial statements do fairly present the financial position of the company. You are now trying to determine if, in fact, Skyway will be able to maintain itself as a going-concern before issuing your final audit opinion and report.

You are to review the following information and decide if you think Skyway will be an ongoing concern and if so, an unqualified audit report will be issued. Obviously, if you decide Skyway will not be a going concern, it could have problems maintaining itself as a going-concern in 2007, then a modified audit opinion and audit report will be required.

The information on the following pages is for your use in reaching this decision. The data is for an actual company, but the years have been changed, and so there is a correct answer! This assignment is worth 10 points and so is in lieu of a written assignment. Again, there is a right answer!

Once you are finished reviewing the enclosed documentation, place an "X" by your choice below:

Skyway will be a going-concern throughout 2007_________________

Skyway will <u>not</u> be a going-concern throughout 2007______________

Consolidated Statements of Operations (in millions)

Operating Revenues:	**2006**	**2005**	**2004**
Passenger	9,515	8,492	8,512
Other	1,764	1,585	1,464
Total Operating Revenues	11,279	10,077	9,976
Operating Expenses:			
Salaries	3,796	3,905	3,878
Fuel	2,203	1,554	1,439
Depreciation and Amortization	731	586	903
Other Aircraft Expenses	2,119	1,522	1,523
Other	2,088	2,066	2,276
Marketing	847	709	803
Total Operating Expenses	11,784	10,342	10,822
Operating Loss	-505	-265	-846
Other Income and Expense			
Investment Income	59	61	83
Interest Expense	-535	-490	-427
Other	120	912	-30
Income Before Tax	-861	218	-1,220
Income Tax Benefit (Expense)	-1	30	422
Net Income (Loss)	-862	248	-798
Preferred Stock Requirements	-29	-12	
Net Income (Loss) Applicable to Common	-891	236	-798
Earnings per Share:			
Basic	-10.32	2.75	-9.32
Diluted	-10.32	2.62	-9.32

Consolidated Balance Sheets (in millions)

Current Assets:	**2006**	**2005**
Cash and Equivalents	707	1,146
Short-term Investments	1,904	1,737
Accounts Receivable	460	478
Spare Parts and Operating Supplies	217	254
Prepaid Expenses	290	221
Total Current Assets	3,578	3,836
Property and Equipment	8,270	7,673
Intangible Pension Asset	671	750
Other	1,523	1,749
Total Assets	14,042	14,008
Current Liabilities:		
Accounts and Other Payables	2,169	1,923
Other Accrued Liabilities	1,579	1,623
Current Maturities of Leases and Long-term Debt	6,749	3,733
Total Current Liabilities	10,497	7,279
Long-term Capital Leases and Debt	4,023	6,552
Deferred Credits and Other Liabilities	2,346	1,952
Redeemable Preferred Stock	263	236
Common Stockholders' Equity:		
Common Stock	1	1
Additional Paid-In Capital	1,471	1,460
Accumulated Deficit	-1,999	-1,083
Accumulated Other Comprehensive Loss	-1,547	-1,340
Treasury Stock	-1,013	-1,049
Total Liabilities and Stockholders' Equity	14,042	14,008

Other Pertinent Information:

Debt and Financing:

	2007	2008	2009	2010	2011	Beyond
Long-term Debt	$3,696	$2,963	$1,400	$ 525	$1,078	$3,749
Capital Leases	53	31	39	28	21	189
Operating Leases	788	794	803	767	744	5,837
Aircraft and Other Purchase Commitments	953	959	874	94	3	27
Totals	$5,490	$4,747	$3,118	$1,414	$1,846	$9,822

Long-term Debt:
The company has been unable to reach refinancing agreements with many of its creditors. The company is continuing to negotiate changes in credit terms and in its revolving credit arrangements. None the less, if agreements to refinance are not reached, the company will soon, perhaps as early as 2007, need an additional source of $4 billion in financing.

Pension Obligations:
As is evident by the reported intangible pension asset, the company will need to increase its pension funding in the near term. The company has managed to maintain required minimum pension funding amounts, but soon these amounts will be increasing substantially because of the age of its workforce and the ensuing retirements that are eminent. This could require as much as $500 million annually in new financing.

Continuing Operations:
Revenues:
In 2005, the slight decrease in passenger revenues was offset by an increase in other revenues, primarily cargo. Substantial increases in both passenger and cargo revenues were realized in 2006. Similar increases, in passenger and cargo revenues, are expected in 2007 and beyond.

Expenses:
The decrease in operating expenses in 2005 was due, to a large degree, to the drop in passenger revenues. This decrease in 2005 exaggerates, on a percentage basis, the increase in operating expenses that occurred in 2006. Due to an increase in passenger volume an increase in operating expenses should be expected. The company does not feel that additional fixed costs will be required to service the increase in expected revenues, thus the percentage increase should not be expected to increase.

Profitability:
Due to the forecasted increases in passenger and cargo revenues and the fact that additional fixed costs will not be required, the company believes that break-even could be reached in 2007. Longer-term forecasts have the company returning to profitability in 2009 and possibly by 2008.

Table 1
Student Judgments

	Number of Students Predicting		
Order of Presentation	**Going Concern**	**Non-Going Concern**	**Total**
Projected Future Profitability Disclosure First	15	6	21
Pessimistic Debt Disclosure First	8	13	21
Total	24	18	42

$\chi^2 = 4.709$, significant at the .05 level