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Learning Style Preferences and the Prospective Accountant: Are There Gender Differences?

By Elizabeth K. Jenkins and Joyce H. Holley

Introduction

A change in the demographics of the accounting profession is readily apparent. Professors across the country have observed an increasing number of seats in accounting classrooms filled by female students; and, naturally, these growing numbers have carried over into the accounting work force. This shift in the makeup of the accounting profession from "male exclusivity" to "male/female collegueship" has sparked researchers' interest in the examination of gender differences between both prospective and practicing accountants. Within this core of research, grade performance has emerged as a leading focus of inquiry.

A decade ago, investigation into the issue of gender differences and grade performance in accounting courses was first initiated, and the results were inconclusive. Early studies by Weston and Matoney [1976] and Hendricks [1978] substantiated superior performance of female (relative to male) accounting students. However, a longitudinal study by Fraser, Lytle and Stolle [1978] resulted in insignificant performance differentials.

The unanswered question of whether or not female undergraduate accounting students outperform their male counterparts has been more recently reexamined, again with conflicting conclusions. Results of several studies continue to indicate that performance differences between male and female accounting students are not significantly different [Hanks and Shivaswamy, 1985; Canlar and Bristol, 1988]. Whereas, the Mutchler, Turner, and Williams [1987] and Lipe [1989] studies found significant evidence of female accounting students

outperforming their male classmates.

The Lipe research design (1 institution, 1 semester, 1 course, 11 instructors) used a strictly coordinated grading policy and discovered that female students only performed better than males in female-instructed classrooms (and vice versa). Lipe posits that these results may be attributable to an underlying variable – learning style.

If gender is one determining factor of the learning style of students and the teaching style of instructors, matching students and instructors on gender may be helpful in the learning process for accounting. This is an area that merits further research [Lipe, 1989, p. 150.]

In order to shed light on potential reasons for gender performance differences in accounting, the authors' study investigates a potential root of the performance issue, that is, the learning process. Empirical evidence is sought as to whether or not gender differences occur in learning style preferences among accounting students. Implications are that these preferences may be carried over into practice. Before discussion of the study itself, the question, "What are learning style preferences?" must first be addressed.

Learning Style Preferences

An individual's learning style is part of a person's characteristic style of using and acquiring information in a problem-solving environment. Kolb [1985] has developed a model to help assess such a preference towards a particular learning style. His perception is one of a cyclical pattern of learning which begins with an immedi-

Figure 1
The Four Learning Style Types

Concrete Experience	
<p>Accommodator</p> <p>Strengths: Getting things done Leadership Risk Taking</p> <p>Too much: Trivial improvements Meaningless activity</p> <p>Too little: Work not completed on time Impractical plans Not directed to goals</p> <p>To develop your Accommodative learning skills, practice:</p> <ul style="list-style-type: none"> • Committing yourself to objectives • Seeking new opportunities • Influencing and leading others • Being personally involved • Dealing with people 	<p>Diverger</p> <p>Strengths: Imaginative ability Understanding people Recognizing problems Brainstorming</p> <p>Too much: Paralyzed by alternatives Can't make decisions</p> <p>Too little: No ideas Can't recognize problems and opportunities</p> <p>To develop your Divergent learning skills, practice:</p> <ul style="list-style-type: none"> • Being sensitive to people's feelings • Being sensitive to values • Listening with an open mind • Gathering information • Imagining the implications of uncertain situations
Active Experimentation	Reflective Observation
<p>Converger</p> <p>Strengths: Problem solving Decision making Deductive reasoning Defining problems</p> <p>Too much: Solving the wrong problem Hasty decision making</p> <p>Too little: Lack of focus No testing of ideas Scattered thoughts</p> <p>To develop your Convergent learning skills, practice:</p> <ul style="list-style-type: none"> • Creating new ways of thinking and doing • Experimenting with new ideas • Choosing the best solution • Setting goals • Making decisions 	<p>Assimilator</p> <p>Strengths: Planning Creating models Defining problems Developing theories</p> <p>Too much: Castles in the air No practical application</p> <p>Too little: Unable to learn from mistakes No sound basis for work No systematic approach</p> <p>To develop your Assimilative learning skills, practice:</p> <ul style="list-style-type: none"> • Organizing information • Building conceptual models • Testing theories and ideas • Designing experiments • Analyzing quantitative data
Abstract Conceptualization	

Source: McBer & Co.

ate concrete experience. An individual then proceeds to reflect upon his or her experience and consequently draw generalizations and abstract concepts related to a particular situation. Finally, an individual will experiment with the application of these newly learned concepts to newly encountered experiences. The four stage learning cycle consisting of (1) concrete experience (CE), (2) reflections and observations (RO), (3) formation of abstract concepts and generalizations (AC), (4) active experimentation (AE).

In the Kolb model, each of these dimensions are anchored to one end of a two dimensional axis. However,

the end points of each axis are of opposing nature. Consequently, an individual must find a learning style which balances the antithetic characteristics of concreteness versus abstraction and of reflective observation versus active experimentation. *A person's learning preference is categorized according to his placement in one of the four quadrants established by the relative emphasis along each of the two dimensions (CE-AC and AE-RO), which Kolb labels: Accommodator, Diverger, Assimilator, and Converger.*

With an *accommodator* learning style, reliance is placed on concrete experience and active experimen-

tion. Action in a given situation predominates over theory formation. Therefore, strengths identifiable with an accommodator include ability to implement plans, involvement in new experiences, and adaptability to immediate circumstances. The *assimilator* learning style has strengths opposite that of the accommodator. Emphasis is placed on *reflective observation and abstract conceptualization*; consequently, the assimilator is more comfortable with use of *inductive reasoning for purposes of theory building* (in lieu of practical application).

Persons who demonstrate the *diverger* style (relying on *concrete experience* and *reflective observation*)

Table 1
Observed Percentage of Subjects Falling in
Each of the Four Possible Learnign Style Categories

LEARNIGN STYLE	SEX	
	FEMALE	MALE
Accommodator	8%	11%
Diverger	27	15
Assimilator	40	39
Converger	25	35

[$x^2 = 2.63$, 3 df, $p > .05$]

are characteristically imaginative and take a multi-perspective approach toward viewing situations. The *converger* style has strengths opposite from that of the diverger. Relying primarily on abstract conceptualization and active experimentation abilities, the converger *tends to prefer working with technical tasks rather than people*. Strengths of this orientation include problem solving via the practical application of ideas. Each of these four learning styles are depicted and further described in Figure 1.

The Learning Style Inventory (LSI) questionnaire was first developed (and later revised) by Kolb to assess a person's learning-style pattern. By deriving two combination scores, AC minus CE and AE minus RO, the LSI instrument measures the emphasis that an individual places along each of the two dimensions. *These two scores once plotted on a grid can be represented as a single data point falling in one of the four learning style quadrants as previously described.*

Several researchers have used the LSI instrument to measure the learning style of professional accountants and accounting students [Baldwin and Reckers, 1984; Baker, Simon, and Bazeli, 1986; Collins and Milliron, 1987]. Evidence has supported the predominance of converger as the preferred learning style among upper division accounting students and among the accounting professionals. To our knowledge, none of these studies reported or analyzed gender differences.

The Study

The objective of this study was to investigate whether or not female accounting students differ from male accounting students in their learning

style preference. Evidence of differences or similarities should shed new light on the gender performance issue.

Male and female accounting students enrolled in Intermediate Accounting I at two major state universities (West coast, and South-west) served as the subjects for this study. The sample population (52 women, 46 men) was administered the Kolb LSI instrument at the end of the semester, which yielded categorical measurements for learning style preferences (Accommodator, Assimilator, Converger, Diverger).

Based on our observations, the predominant learning style preference for both male and female accounting students is the assimilator. Approximately 54% of the females, and 46% of the males, fell into this category. These findings are not necessarily inconsistent with learning theory and previous research in the accounting field. Recall that converger emerged as the preferred learning style among professional and upper division accounting students. A possible explanation for the selection of assimilator among Intermediate I students is that they are in an earlier stage in the learning cycle, and will reach the converger style as they move through the accounting program and into practice.

Interestingly, the observed learning style preferences were not significantly different for men and women accounting students. A chi-square analysis was performed investigating the effects of gender and learning style preferences, and the resulting observed differences were insignificant. *In other words, the probability of a male versus female student mapping into a learning style*

category was not significantly different. Table 1 summarizes the frequencies of observed learning style preferences among the male and female subjects.

However, this first impression of learning style homogeneity among men and women accounting students only holds true with respect to mapping into a particular learning style quadrant. Within the assimilator quadrant, significant gender differences were found when the mean scores of the coordinates on each of the two dimensions were further analyzed using analysis of variance.

The mean scores of both male and female accounting students on each of the two dimensions mapped into the assimilator quadrant. *A comparison of these mean scores indicates that females place a significantly greater emphasis on reflective observation ("watching") over active experimentation ("doing"); whereas, males place a significantly greater emphasis on abstract conceptualization ("thinking") over concrete experience ("feeling").*

Based on these results can we assess who is the "better, more efficient" learner? The answer is no. The Kolb LSI does not assess learning ability. What it does assess is learning style preferences. The closer the point is to the intersection of the 50th percentile lines, the more balanced the individual's learning style in terms of acquiring knowledge in a variety of environments. These findings suggest a slight tendency for female accounting students to rely on observation techniques and for males to rely on abstract techniques in their acquisition of knowledge.

Conclusions

The purpose of this research was to compare the learning style preferences of male and female accounting students and thereby, to provide further insight into gender performance differentials. What was discovered is that both men and women prospective accountants in Intermediate I class prefer the assimilator style. People with this learning style excel at inductive reasoning and assimilation of information into a concise, logical form.

Previous work in the accounting literature has found a dominant "converger" learning style among accounting practitioners and advanced accounting students. However, these prior works did not explore gender differences. Our finding of a dominant "assimilator" style among both male and female Intermediate I students appears inconsistent on the surface, but may be explained by the cyclical nature of the Kolb model. In other words, the more experienced practitioners may have progressed from the assimilator learning style (dominant among prospective accounting students) to the converger learning style. Another possible explanation for the inconsistency in results may be due to attrition. Perhaps, the tendency is for convergers to pursue an accounting career and for assimilators to drop out of that career path.

The current study also revealed an interesting insight into gender differences within the assimilator style among the sample population. Upon further analysis, significant gender differences were observed with respect to the relative emphasis placed on abstract conceptualization and reflective observation. *Male prospective accountants tended to place a greater reliance on the former dimension, that is learning by thinking. Female prospective accountants tended to place a greater reliance on the latter dimension, that is learning by watching.*

Implications of these results extend beyond the accounting student and impact practitioners as well. *Both male and female accountants can assess their own learning style and then take steps to improve their problem solving abilities. These steps include, association with persons of different learning styles in order to meld the strengths and overcome the weaknesses of the four types. A second strategy requires the individual to seek a better match between learning style and chosen career activities. Finally, the successful problem solver must become a flexible learner, and adapt his style to cope with different types of problems.*

These findings from a sample population may not be generalizable to all prospective accountants, but the results should spur future research into possible explanations of the how and why differences between the sexes arise. Eventually, the aggregate of studies on this issue will provide a broad base for better understanding of cognitive differences and similarities between male and female accountants.

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