INVESTIGATION OF LEARNING PREFERENCES OF STUDENTS IN ADVANCED ACCOUNTING AND OTHER EDUCATIONAL FIELDS USING VARK

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ABSTRACT

The VARK learning preference (LP) inventory was administered to advanced accounting (AA) classes at three universities (private, urban, and regional) in various regions of the country. The VARK results obtained at the research-study universities are compared. Also, these results are compared to VARK administered in three other fields of study at other universities. Basically, the AA students at the research-study universities had similar LPs. The AA students were significantly less multi-modal than the students in two other fields. There were significant differences between the use of the Visual LP by the AA students and the students in two other fields.

INTRODUCTION

The accounting profession has called for changes in the way accounting is taught. The Albrecht and Sack Committee suggested that there is a need to change the delivery method of accounting education in order to allow the students to develop critical skills. One way to change the delivery method is to consider the student's learning styles or preferences when teaching.

Fleming and Mills (1992) developed a short instrument (VARK) to determine sensory modality preferences when processing information (i.e., instructional preference). VARK is an acronym for Visual, Aural, Read/Write, and Kinesthetic sensory modalities that are utilized for learning information. According to Fleming and Mills, "Visual Preference" includes depiction in the form of charts, graphs, flowcharts, symbolic arrows, circles, hierarchies, and other methods that can be used to represent what could be presented in words. The "Aural Preference" involves learning from lectures, tutorial, and talking to other students. Students with the "Read/Write Preference" learn when the information is displayed as words. The "Kinesthetic Preference" involves learning through experience, examples, practice or simulation. It should be noted that students can have more than one learning preference.

The VARK instrument was administered to Advanced Accounting (AA) students at three universities (urban state, regional state, and private) located in different regions of the country (midwest, west, and east). First, the results of this instrument will be examined for these three universities. Also, the AA VARK results will be compared to the VARK results in other educational fields at other universities.

THEORY

Baltazar *et. al.* (2001) stated that because of individual learning differences, course designs should include instructional methods that cater to different learning preferences. Students' knowledge of their learning preferences should also help them in learning the topics being taught. Both Kolb's (1976, 1985) *Learning Style Inventory* (LSI) and Canfield's (1988) LSI were unsatisfactory for use in accounting

education. In addition both of these LSIs involve cash expenditures, which not all schools can afford. The VARK inventory instrument (VARK) [available upon request] can be utilized by all universities.

Because the universities utilized in our research involve three different types and are located in three different regions of the country, it is possible to measure whether there is any difference in the VARK learning styles of these diverse AA classes. The following hypotheses will be used to ascertain if the AA students at the private (east) university [P-E], the urban (midwest) university [U-M], and the regional (west) university [R-W] have similar learning preferences:

- Ho1: There is no difference in the learning preferences of the AA students at P-E and U-M (R-W).
- Ho2: There is no difference in the proportion of multi-modal students at P-E and the multi-modal students at U-M (R-W).
- Ho3: There is no difference in the learning preferences of the multi-modal (one-modal) students at P-E and the multi-modal (one-modal) students at U-M (R-W).

By using the results of learning preferences reported by Bonwell (2000) for the University of Arizona (general education class) [UA-GE], Ohio State University (agricultural economics majors $-2^{nd} \& 3^{rd}$ year) [OSU-AE], and St. Louis College of Pharmacy (Management and Organization Behavior) [StL-COP], it is possible to compare the AA students with students in these other fields of study at these universities. The following hypotheses will be used to determine if the AA students and the students at UA-GE, OSU-AE, and StL-COP have similar learning preferences:

- Ho4: There is no difference in the proportion of multi-modal AA students and the multi-modal students at UA-GE (OSU-AE) [StL-COP].
- Ho5: There is no difference in the learning preferences of the multi-modal (one-modal) AA students and the multi-modal (one-modal) students at US-GE (OSU-AE) [StL-COP].

RESEARCH METHODS

The VARK inventory was administered to AA students at three different types of universities (urban state, regional state, and private) on the first day of class. These three universities are located in different geographical areas of the country (midwest, west, and east). The researchers taught two of the courses and another instructor taught the third course. The VARK inventory takes about 10-15 minutes to administer. Later the instructors privately informed each student of their learning preferences.

VARK INVENTORY RESULTS

As expected there were no significant differences among the overall learning preferences of the students at the three research-study universities. This could imply that by the time the accounting students are seniors they have developed similar learning styles. How do these results compare to classes in other educational fields offered at other universities?

The one-modal student results compared to the students with multi-modal preferences at the three research-study universities (i.e., AA) and those reported by Bonwell (2000) for the AU-GE, OSU-AE, and StL-COP classes were analyzed. Overall the AA students were significantly not as strongly multi-modal as the students in the other educational fields [AU-GE (p = .001) and StL-COP (p = .001)].

How do the multi-modal AA students compare to the multi-modal students in the other academic areas? The only difference between the multi-modal AA students and the students in the other subject areas was with the multi-modal students at StL-COP (p = .05). This result may have occurred because the AA students used the Visual modal less often than the other learning preferences while the Visual modal was the strongest learning preference of the multi-modal students at StL-COP. Also, none of the one-modal students at the three research-study universities utilized the Visual Learning Preference. Basically, the learning preferences of the one-modal students were similar at these research-study universities.

Are there any differences between the one-modal AA students and the one-modal students in other educational areas? It appears that the one-modal AA students have stronger preferences for the Kinesthetic and the Read/Write learning styles than the one-modal students in other areas of study [OSU-AG (p = .05) and StL-COP (p = .05)]. Also, the multi-modal AA students appear to prefer the Kinesthetic or the Read/Write learning styles.

Are there specific learning styles that are different for AA students and the students in the other study areas? Overall the AA students significantly tend to utilize the Visual Learning Preference (VLP) less often than the students in the other fields of study [AU-GE (p = .001), StL-COP (p = .001), and OSU-AE (p = .10)].

SUMMARY

Basically, the AA students had similar learning preferences. It was also found that the AA students as a whole were significantly (p = .001) less multi-modal than the students at AU-GE and StL-COP. When examining the learning styles of the multi-modal students, it was found that the AA student-learning preferences were significantly different (p = .05) from the students at StL-COP. The largest difference related to the portion of the multi-modal students that used the Visual Learning Preference (VLP) between the two subject areas.

It was found that there were significant differences between the use of the VLP by the AA students as a whole and the students at AU-GE (p = .001), StL-COP (p = .001), and OSU-AE (p = .10). Also, none of the one-modal AA students utilized the VLP. In addition, only a few of the one-modal AA students used the Aural Learning Preference.

The use of the VARK inventory should help instructors become aware of the different learning styles in their classes. When there are diverse student learning preferences in a class, instructors should employ various teaching techniques to make learning easier for the students with different learning preferences. Further research, however, should be conducted using the VARK inventory to determine whether there are common national results in other accounting subject areas.

REFERENCES

References are available upon request.