MATCHING TEACHING METHODS TO STUDENT LEARNING STYLES

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ABSTRACT

Researching the match between learning styles and teaching methods is especially important given today's diverse college students and the public attention given to teaching effectiveness. The purposes of our study were to 1) explore the link between learning styles and business students' preferred teaching methods and 2) determine whether gender, age, and college major are related to learning styles and students' preferred teaching methods. Students preferring teaching methods that match their dominant learning style is partially supported. We also found differences in preferred teaching methods for learning styles, gender, age groups, and major.

LEARNING STYLE MODELS AND INSTRUMENTS

Several learning style inventories address Visual, Auditory, and Tactile learning styles including the Productivity Environmental Preference Survey [11] and Barsch/Haynie Learning Style Inventory. While these inventories are popular, the Barsch/Haynie Learning Style Inventory is used by several institutes of higher education and recommended to their students. An adaptation of the Barsch/Haynie Learning Style Inventory was used in this study because of its use in higher education, ease of use, brevity, and identification of dominant learning styles to which instructors and students can relate.

HYPOTHESES

Hypothesis 1a: Visual learners will identify taking notes, in-class quizzes, reading materials (e.g. text, handouts, cases), and videos as more helpful learning techniques.

Hypothesis 1b: Auditory learners will identify *lectures, taking notes, group discussions, guest speakers, student presentations, and whole-class discussions (including discussions of current events)* as more useful learning techniques.

Hypothesis 1c: Tactile learners will identify *in-class activities*, *group projects*, *experiential exercises/assignments, taking notes, computer simulations*, and *case studies* as more helpful learning techniques.

Hypothesis 2a: Male students will tend to be more visual or tactile learners while Female students will tend to be more auditory learners.

Hypothesis 2b: Males will identify *taking notes*, r*eading materials (e.g. text, handouts, cases), group*

activities (e.g., study groups), experiential exercises/assignments, computer simulations, and *videos* as helpful learning techniques; while Females will identify *lectures, case studies, small group activities (e.g., in-class group activities)* and *whole-class discussions (including discussions of current events*) as preferred learning techniques.

Hypotheses 3a: Generations Y and X will tend to be more tactile learners; while Baby Boomers and Matures will be more likely to be visual and auditory learners.

Hypotheses 3b: Generations Y and X will prefer *computer simulations, experiential exercises, group activities (e.g., in-class group activities, study groups*) and *videos*; while Boomers and Matures will rate *lecture, taking notes,* and *reading course materials (e.g., texts*) as more useful in learning course information.

Hypothesis 4a: Business students majoring in Accounting, Finance, or Computer Information Systems will tend to be more visual or tactile learners than students majoring in Management or Marketing

Hypothesis 4b: Business students majoring in Accounting, Finance, or Computer Information Systems will prefer more traditional instructional methods (e.g.., *lecture, reading text)* and *computer simulations*; while students majoring in Management or Marketing will prefer *Case Studies, Group Activities, Guest Speakers*, and *whole-class discussions*.

METHOD

Survey

Participants rated how well each of 17 popular teaching techniques helps them learn course material using a 5-point scale (5="Strongly Agree" to 1="Strong Disagree"). Participants also rated how they prefer to learn and process information for 24 items. (The scale consisted of 5="Often," 2="Sometimes," 0="Seldom.") The eight Visual Learning Style items included preferences for viewing information (e.g., chalkboard, visual aid, assigned readings) and taking notes for visual review. The eight Auditory Learning Style items included preferring oral over written directions and listening to a lecture and/or tapes. The eight Tactile Learning Style items included questions about preferences for making things; chewing gum or snacking while studying, and playing with coins in pockets. Finally, participants answered questions regarding their age, gender, college major, and race or ethnic background. Participants also indicated whether they primarily attended day or night classes, and their work status (full-time, part-time, or not employed).

Subjects

Two hundred one senior business majors enrolled in the capstone business strategy course at a large Western U.S. college completed the survey on a voluntary basis. Of the 194 usable responses, participants were business students majoring in Accounting (14.4%; N=28), Finance (10.3%; N=20), Computer Information Systems (28.2%; N=55), Management (26.2%; N=51), or Marketing (21%; N=41).

DISCUSSION

The purposes of our study were to 1) explore the link between learning styles and business students'

preferred teaching methods and 2) determine whether gender, age, and college major are related to learning styles and students' preferred teaching methods. We found limited support for our hypotheses.

Hypotheses 1a, 1b, and 1c addressed preferences of visual, auditory, and tactile learners for various teaching methods. Although taking notes is believed to benefit all three learning styles, only the visual and auditory learners indicated a preference for *Taking Notes*. Visual learners also stated a preference for *Quizzes*. This is consistent with the literature; in-class quizzes may provide a visual learning tool. This could be said of multiple choice and true/false quizzes that only require the student to circle or somehow identify the answer versus having to write out the answer. Previous research indicates we should expect students with higher Visual Learning Style scores to rate *In-class Quizzes* and *Taking Notes* as more helpful in learning the course material than those with lower Visual scores [11]. Both of these techniques allow the students to see the material.

Hypothesis 1b was more extensively supported by the correlation and MANOVA analyses. Research also supports the significant correlations between Auditory Learning Style scores rated *Taking Notes*, *Whole Class Discussions*, *Discussions Of Current Events*, and *Guest Speakers*. Our results indicated that Auditory Learners also prefer out-of-class group projects. This may indicate that these students learn from hearing comments/analyses regarding course content from their peers. All of these are associated with the spoken word.

Two of the teaching methods identified in Hypothesis 1c were supported: *In-Class Activities* And *Experiential Exercises*. Therefore, our findings provide partial support for students preferring teaching methods that match their learning styles.

Although we found partial support for a link between some teaching techniques and Visual Learning Styles and/or Auditory Learning Styles, previous research indicates there should be more teaching techniques that are related to each Learning Style. In addition, researchers report Tactile Learners have identified certain teaching techniques as helpful in learning course material (e.g., taking notes, experiential exercises).

Our results were consistent with those found by Ouellette [27], in that most Business students are visual learners (57%). However, the most common teaching method, Lecture, is less effective for this group of learners. It is imperative for professors who use lecture as teaching method to incorporate visual effects into their lectures. Use of power point presentations or overhead transparencies will help in this endeavor.