

Refereed Article

Learning Style Preferences of the Cohorts: Generation X, Baby Boomers, and the Silent Generation

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Abstract

The purpose of the study was to compare the similarities and differences in learning style among three age cohorts: Generation X, Baby Boomers, and the Silent generation. The sample population consisted of 133 graduate students. Learning style preferences were determined using the Productivity Environmental Preference Survey[®] (PEPS). The PEPS was administered in the spring, 1999, semester. The analyses of adult learning style preferences indicated a significant generational age cohort and gender interaction for the *warmth* preference. Generational age cohort was found to be statistically significant for three learning style preferences: *tactile*, *evening/morning*, and *structure*. The results indicated that two learning style preferences were significant for the gender variable: *authority-oriented* and *kinesthetic*.

Introduction

Demographics of adults in American educational institutions are changing, and the college classroom is becoming more diverse. Professors are no longer encountering primarily one age group, one ethnic group, or one learning style. They are teaching three diverse adult generations: the Silent Generation, the Baby Boomer Generation, and Generation X (Strauss & Howe, 1991). Many educators in higher education are asking

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the question: How do the adults in Generation X compare to the other two age cohorts, Baby Boomers and the Silent Generation, when it comes to teaching and learning strategies? Enrollment in higher education of adults who are more than 25 years of age has increased from 28% in 1971 to 45% in 1991 (Choy & Premo, 1995). It is a fact that adult students make up almost one-half of the enrollment in American institutions of higher education (Choy & Premo, 1995; MacKinnon-Slaney, 1994).

“We all have unique fingerprints and tongue prints; we all sign our names in different ways. We don’t expect people with high blood pressure to take the same medicine. Neither should we expect all students to learn the same way nor all teachers to teach the same way” (Reiff, 1992, p. 5). It is important to understand that every individual has a unique learning style. Individual learning styles are shaped by an inborn inclination toward a way of learning. Whether or not individuals have a predisposition to one style, learning styles can be influenced by culture, experiences, growth, and the development of each individual (Dunn, Gemake, Jali, & Zenhausern, 1990). “If students and teachers alike are aware of differences in teaching and learning styles, and if both try to make allowances for differences, both will benefit” (Thompson, 1997, p. 127).

Changing adult demographics in today’s society are having an impact on American educational institutions. These demographic changes bring uncertainty. It is important that educators utilize a variety of teaching methods and techniques to ensure that all students learn to their fullest capacity.

The Problem Addressed

In recent years there has been a meaningful shift in the emphasis of educational values, especially in adult and higher education. There is a move from an emphasis on how the information is being transmitted to how learning is encouraged in the classroom (Sims, 1995). Learning may not occur if the delivery of information is not conducive to the adult students’ learning styles (Sims, 1995). According to DeBello (1990), the concept of individual learning preferences is perhaps the most vital development in American education today. Learning takes place in many forms; it may occur when ideas are being discussed, when data are being analyzed, when ideas are being restructured, or simply when a change is developing (Hewitt, 1995). The changing demographics of today’s college and university classroom environment justify reassessing how and why adults learn.

The intent of this paper is to alleviate some of the uncertainty associated with the different learning styles of three age cohorts: Generation X, Baby Boomers, and the Silent Generation. The results of the research provide an awareness of the differences and similarities among these age cohorts. The insights and new awareness thus gained will enable educators to understand, and adjust the curricula to fit the needs of, adult learners in higher education.

Theoretical Framework

Although interest in learning styles goes as far back as 334 BC when Aristotle stated that “each child possessed specific talents and skills and discussed the concept of individual differences in children” (Reiff, 1992, p. 7), little attention was given to this concept until psychologists began to examine the importance of human personality traits. During the early 1900s researchers were interested in IQ and achievement tests rather than learning. However, as they approach the 21st century, educators and researchers are renewing their interest in research into learning styles (Reiff, 1992).

Most of the past research into learning styles has been conducted with children. Now educators in American colleges and universities are starting to examine how learning styles affect adult learning. Cross (1981) states that adults are not one-dimensional in their approach to learning and that adults engage in learning for more than one reason. The adult is motivated internally to apply the skills learned. Adults draw from a vast array of experiences that have shaped their personalities and perspectives. According to Knowles (1973), the experiences of adults have a great impact on their abilities to learn. These experiences shape adults’ personalities and perspectives, yet research indicates that adults continue to learn throughout their entire lifespan (Knowles, 1980; Thorndike, Bergman, Tilton, & Woodyard, 1928). Thorndike et al. (1928), who were among the first researchers to examine adult learning, found that adults do continue to learn throughout life, with only a slight decline in learning abilities after the age of 20. Lorge (1936), who conducted a follow-up study, found that the slight decline was in speed of learning, not in the decline of abilities to learn.

According to Sims (1995), looking at the environmental and physiological component of adult learning (e.g., sound, motivation, temperature, lighting, etc.) provides the most inclusive, overall picture of how

individuals prefer to learn. Price (1996) has developed an instrument, the Productivity Environmental Preference Survey® (PEPS) to analyze these environmental and physiological conditions. The PEPS inventory examines five components that affect the learning situation: (a) environmental, (b) emotional, (c) psychological, (d) sociological, and (e) physical. The inventory does not examine why an individual is engaged in the learning process. It considers only how the individual prefers to learn (Sims, 1995) and patterns in which the learners have the highest potential to be productive in the learning environment (Price, 1996).

Methodology

The purpose of the study was to compare the similarities and differences among the age cohorts Generation X, Baby Boomers, and the Silent Generation pertaining to adult learning styles. Outcomes of the study were determined from the analysis of the PEPS. The PEPS was administered to the students enrolled at a Midwestern university in the spring, 1999, semester.

Target Population

Data were gathered at a midwestern university that was founded in 1846 and is the second oldest institution of higher education west of the Mississippi River. The university offers a Doctor of Optometry degree, 13 masters' degrees, and 64 bachelors' degrees. The university had a total of 8,503 students enrolled at four locations, of which 5,875 students were enrolled on the main campus. The total population consisted of 39% male and 61% female students. Seventy percent were Caucasian, 23% were American Indian, 4% were African American, 1% was Hispanic, 1% was international, and .46% was Asian. The faculty-student ratio was 1:26.

Participants

The participants in the study were chosen from the graduate student population enrolled in graduate core courses during the spring, 1999, semester. The courses were selected randomly from all graduate core courses offered in all academic areas. The adult student sample was categorized into three age cohorts based on year of birth: (a) Generation X (born between 1961 and 1981), (b) Baby Boomers (born between 1943 and 1960), and (c) the Silent Generation (born between 1925 and 1942).

Instrumentation

The instrument used to gather the data was the PEPS, which was developed by Gary Price (1996). The PEPS measures 20 adult learning style preferences. The PEPS identifies, on a Likert-based scale, how an adult prefers to learn, function, concentrate, and perform in an educational activity. The items on the inventory are designed to assess individual preferences in four areas: (a) immediate environment (sound, temperature, light, and design), (b) emotion (motivation, responsibility, persistence, and the need for structure or flexibility), (c) social needs (self oriented, peer oriented, authority oriented, or learn in several ways), and (d) physical needs (perceptual preferences, time of day, intake, and mobility).

Reliability and Validity

According to Price (1996), 90% of the items on the PEPS demonstrate reliability equal to or greater than .60. The average standard error was 1.34 for the 20 items. The highest reliability was found in the areas of noise level, light, temperature, informal/formal design, persistence, responsibility, structure, learning alone/peer oriented, several ways, auditory, visual, kinesthetic, intake, learning/working in the evening/morning, late morning, afternoon, and mobility. The areas of lowest reliability were authority-oriented learner and tactile preference learner. Price revised the inventory based on the findings and review of each item.

Data Collection

The PEPS was administered to the graduate students enrolled in core courses at a Midwestern university in the spring semester of 1999. After the courses were selected randomly from all graduate core courses offered in that semester, the PEPS was administered to all the students in that class willing to participate in the study. The inventory was administered to the students in a classroom setting. Participants were informed of the intent and confidentiality of the research and that participation was voluntary.

Data Analysis

One-way ANOVAs were conducted on the variables generational age cohorts and gender. To determine where the differences among the cohorts lay, the Tukey HSD was used. Using the statistical program SAS,

several factorial ANOVAs with two between-groups factors were conducted relating to the criterion variable learning style and the independent variables age cohorts and gender. Descriptive statistics were also determined.

Findings

The sample consisted of 133 graduate students (79 females and 54 males) with a mean age of 37 years. Based on age of birth, 81 students were Generation X, 30 were Baby Boomers, and 22 were in the Silent Generation. One-way ANOVAs were utilized to determine if the independent variables, generational age cohort and gender, had a significant impact on learning style preference. The independent variable, generational age cohorts, was found to be statistically significant for three learning style preferences ($p = 0.05$). The analysis revealed a significant effect for the tactile preference, $F(2, 130) = 3.57, p = .03$; a significant effect for the evening/morning preference, $F(2, 130) = 3.27, p = .04$; and a significant effect for the structure preference, $F(2, 130) = 2.96, p = .04$.

Tukey's HSD test indicated that participants in the Generation X were significantly different from those subjects in the Silent Generation on structured and morning/evening preferences. There was not a significant difference between the Baby Boomer Generation and the other two cohorts, Generation X and the Silent Generation ($p < .05$). Tukey's HSD test indicated that participants in the Baby Boomer Generation were significantly different from those subjects in the Silent Generation and Generation X on tactile preferences. There was not a significant difference between the cohorts Generation X and the Silent Generation ($p < .05$).

A one-way ANOVA was utilized to determine if the independent variable gender had a significant impact on learning style preference. It was found that there were two learning style preferences that were statistically significant ($p = 0.05$). The analysis revealed a significant effect for the authority-oriented preference, $F(2, 130) = 3.67, p = .04$, and a significant effect for the kinesthetic preference, $F(2, 130) = 3.64, p = .04$.

Results were analyzed utilizing a 2×3 factorial ANOVA for the variables generational cohort and gender. The analysis indicated a significant generational cohort and gender interaction for warmth preferences, $F(2, 127) = 3.18, p = .04$. Further analysis indicated that there was a significant main effect for generational age cohort on tactile preference, $F(2, 127) =$

3.33, $p = .03$. Tukey's HSD indicated that the participants in the Baby Boomer category were significantly different from both Generation X and the Silent Generation pertaining to tactile learning preferences. It was also indicated by Tukey's HSD that the participants in the Baby Boomer Generation were significantly different from Generation X on warmth preferences ($p < .05$).

Importance of the Findings

The findings of the study warrant the following recommendations for lifelong learning when teaching the different generational cohorts:

Generation X

- In order to maintain a prime learning environment for Generation X, instructors should maintain a very *structured* environment. Generation X needs carefully laid out plans of what is expected of them in the learning situation, including knowing assignments that are due in the future, the parameters of each lesson, and the sequential steps involved in all assignments, with the instructor leaving nothing to interpretation.
- Adult educators need to understand that the prime learning time for Generation X is in the *evening*. Flexibility in scheduling should be considered.

Baby Boomers

- When instructing Baby Boomers, it is important to keep in mind their preference for a physically *warm* learning environment. Bringing sweaters, being able to adjust the room temperature, and having warm coffee available would be a few considerations.
- Also, Baby Boomers have indicated that they prefer *tactile* learning. This finding indicates that Baby Boomers expressed a need for hands-on learning activities using three-dimensional and manipulative materials, i.e., touchable and moveable materials.

Silent Generation

- The Silent Generation prefers to learn in the *morning*. This preference needs to be considered while scheduling in order to tap into the Silent Generation's highest energy levels.

These findings also warrant recommendations based on gender:

Female

- Females prefer to have an *authoritarian* figure present when learning new information. They want feedback, personal contact, and reassurance.

Male

- According to the data, males indicated a preference for *kines-
thetic* learning. Males prefer real-life experiences, opportunities to move around, and occasions to become physically involved.

Summary

It was determined that there was a statistical difference between Generation X and the Silent Generation on the learning style preferences *evening/morning* and *structure*. It was also determined that there was a significant difference between the Baby Boomer Generation and the Silent Generation on *tactile* preferences. There was a significant interaction between Generation X and the Baby Boomer Generation on the learning style preference *warmth*. According to the data, Generation X indicated a strong preference for a structured environment. Males and females were found to differ on the learning styles *authority-oriented* and *kinesthetic* preferences. An abundance of research supports the use of instruction that matches individual learning preferences, as style-responsive instruction results in increased academic achievement and positive attitudes toward learning (Given, 1997).

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