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Learning Styles among International and American Business Students

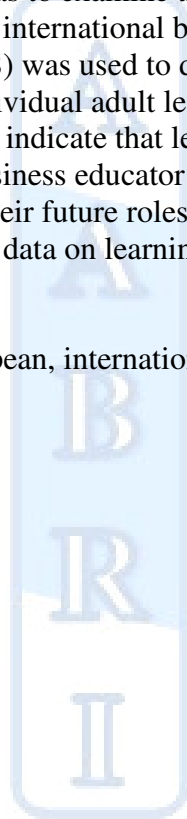
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Abstract

The objective of this the study was to examine the range of business learning styles in a population consistency of American and international business students. The Productivity Environmental Preference Survey (PEPS) was used to determine learning styles. This instrument is effective in identifying individual adult learning style preferences in both working and learning environments. The findings indicate that learning styles are uniquely related to geographic locations. The perceptive business educator can utilize these findings to enhance curricula to better prepare students for their future roles in the global marketplace. The results of this study will provide educators with data on learning styles that needs to be further examined and considered.

Keywords: learning styles, PEPS, European, international, business, students



Introduction

No longer can employees, managers, and others in the business community ignore the fact that the workplace is changing. Professionals come to the workplace with a variety of personalities, skill sets, aptitudes, abilities, and learning styles. People of these various backgrounds, educational levels, and qualifications are coming together to work in the marketplace. As the workplace continues to become more and more complex, managers need to know that all workers cannot be trained, taught, or educated in the same routine manner. For example, differences exist in communication skills, cultural values, negotiating styles, and personal ethics codes, just to name a few. A knowledgeable manager must be able to recognize these differences in skill sets and take steps to ensure that differences are encouraged and appreciated within the workplace.

One area that a manager needs to pay close attention to is in the way employees learn based on their wide range of overall education and ability. The topic of how people learn in the workplace has become paramount in recent years. "Workplace learning has developed as a field of both practice and of research over the past decade" (Smith, 2005). Through immigration, increased opportunities for education and advancement, and the upsurge of women and minorities in the workplace, the U.S workforce is no longer a homogeneous group of people who look, think, and behave in the same way (Tuleja, 2005). "Instead of using, "Do unto as you would have them do unto you," as the Golden Rule of Training, it may be more appropriate to say, "Present information to others as they will best learn"" (Learning Activity, n.d.). These quotes offer an introduction to understanding the importance on the impact of knowing employee learning styles. Employees come to work with different learning styles. As stated by Dollins (2008) "every person is born with inherent preferences in how they learn. Some may learn by hands-on training and visual images, while others learn from studying the written steps themselves." Effective managers must understand the importance of varied learning styles in the workplace to make workers more productive and less frustrated. The ability of managers to adapt strategies, modalities, and methods to provide training that matches employees learning is crucial to success in an organization. This can be completed through an analysis of learning styles.

Additionally, because of the cultural diversity of workers, many come to work with learning strategies that may be quite different from American workers. America's growing ethnic diversity is having a profound impact on business (Gitman & McDaniel, 2008). Studies support the idea that training which is centered on fostering and enhancing personal learning styles tends to help people learn faster and improve retention of information. This method can also increase morale and reduce frustration in the process of learning (Dollins, 2008). Though many trainers recognize that country-specific approaches can be a deterrent to successful outcomes across borders, there have been few opportunities (until recently) for them to prepare for working in cross-cultural settings.

This brief introduction sets the stage for much needed research on understanding the importance of learning styles, but also how they differ among cultures. America's workplace changed in terms of diversity and that there exists a requisite need to train future managers in the importance of learning styles in an organization. As stated by Boyle (2005), "Neither all employees nor all managers think or produce similarly." For success in the workplace, current business students need to determine their own learning styles and an appreciation for styles that may be different from their own. Conner (n.d.) argues that by appreciating your own style of

learning, you can also begin to look from other's perspectives and more easily help others learn. As we learn to hone our strengths and preferential styles, we remember more of what we learn. This gives us the opportunity to utilize this learning in helping others to learn, and results in making learning and meeting with others more efficient, effective, and enjoyable. With this understanding, they will be successful when they are charged with designing seminars, instruction, workshops and training to enhance a variety of learning strategies to reach all employees. The present study was driven by this critical need.

Literature has supported that a critical part of a managements' role will be to ascertain their own and others' learning styles. It was within this context this research study was conducted. The study was designed to assess the learning styles in a population of college business students enrolled in American and International universities.

Review of Literature

U.S. managers are saddled with many job responsibilities. One aspect of their function must be the analysis, examination, and application of understanding workers' learning styles. The leaders in corporate training must be able to diversify their strategies so that all of their managers can achieve the highest return on their training initiatives. Never before has business spanned the globe the way it does today (Collins, 2008). There is a dearth of literature that specifically addresses comparing undergraduate business students' learning styles from foreign and domestic universities. As stated in the article, *Developing effective employee learning experiences: One size does not fit all* (2003), when an employee needs to learn something new, the tendency is to follow a fairly predictable model or oft-tested procedure. Experience shows, however, that this one-size-fits-all solution often does not result in the change in behavior or performance that we seek.

Research studies and writings exist on the Productivity Environmental Preferences' Survey (PEPS). There is a plethora of research that profiles and examines on learning styles. Published literature currently exists on the critical importance of determining and understanding employee learning strategies and achieving success. To better support the tenets of this research, a review of literature reviewed many of the above mentioned topics.

Communication problems arise from differences in language behaviors, thinking, assumptions, values, and learning styles between the U.S. and those from other countries with whom they associate. The authors certainly have made the case that our future global managers have to be prepared and educated in acknowledging and understanding the importance of distinct learning styles. The successful global manager must take into account differences in workers' learning styles to enhance training and job performance.

To compete in the global and U.S. markets, today's managers must recognize individual learning styles that provide a range of training options for employees with varying background and styles. With the current workforce being so culturally diverse, it is critical that there is an understanding and appreciation of employees with a variety of learning styles and different needs. Acceptance of the critical need for acknowledging a range of learning styles must be a topic on any manager's mind as an important first step in achieving a workplace that will be motivated and more productive.

In the pursuit of discovering effective ways to prepare students for work in the global workplace and challenging economy, literature has suggested that it would be beneficial to highlight the impact that learning styles plays in achieving corporate success. If instructors or

trainers can communicate to future managers that there is noticeable value in acknowledging and understanding learning styles, they have prepared them well. An essential tool will be the ability to determine the strengths and weaknesses of workers' learning styles. In addition, recognizing that people from different countries possess different learning styles will ensure that frustration levels will be reduced and training enhanced by introducing new procedures, creating meaningful workshops, organizing on the job training and designing dynamic seminars. This study will also provide information to enable faculty to teach students about the need for recognizing the relevance of different learning styles. Business students who have an understanding of the range of learning styles and the importance of addressing them will make the workplace more efficient, more industrious, more vigorous, and much less frustrating.

Within this context, the following questions were addressed:

- A. What are the leaning styles of undergraduate business students enrolled in American universities?
- B. What are the learning styles of undergraduate business students enrolled in International universities?
- C. Are there differences and/or similarities in the learning styles of business students enrolled in American vs. International universities?

This study specifically analyzed domestic and international undergraduate business students' learning styles.

The following primary null hypothesis guided the study:

H0. There will be no tested differences of learning styles between undergraduate business students enrolled in American and International universities.

H1. There will be tested differences of learning styles between undergraduate business students enrolled in American and International universities.

Methodology

The instrument used in this study was the Productivity Environmental Preferences Survey (PEPS). "The PEPS identifies an adult's personal preference for each of the twenty different elements and was developed through a content and factor analysis" (Price, 1996). This instrument was administered to determine business students' learning styles relational to the basic concept of learning styles, grounded in the classification of psychological types. The learning styles theory is based on research demonstrating that-different individuals have a tendency to both perceive and process information differently. (Funderstanding, 2008).

The Dunns' Learning-Style Model is quite detailed and incorporates several strands of these twenty elements. Each affects individual's learning. Some of these elements are biological and others are developmental (Church, 2002). A summary of these elements is provided below (Dunn, 2000).

1. *Environmental*. The environmental strand refers to these elements: lighting, sound, temperature, and seating arrangement. For example, some people need to study in a cool and quiet room, and others cannot focus unless they have music playing and it is warm (sound and temperature elements).
2. *Emotionality*. This strand includes the following elements: motivation, persistence, responsibility, and structure. For example, some people must complete a project

- before they start a new one, and others work best on multiple tasks at the same time (persistence element).
3. *Sociological*. The sociological strand represents elements related to how individuals learn in association with other people: (a) alone or with peers, (b) an authoritative adult or with a collegial colleague, and (c) learning in a variety of ways or routine patterns. For example, a number of people need to work alone when tackling a new and difficult subject, while others learn best when working with colleagues (learning alone or with peers element).
 4. *Physiological*. The elements in this strand are: perceptual (auditory, visual, tactual and kinesthetic), time-of-day energy levels, intake (eating or not while studying) and mobility (sitting still or moving around). For example, many people refer to themselves as night owls and early birds because they function best at night or in the morning (time-of-day element).
 5. *Psychological*. The elements in this strand correspond to the following types of psychological processing: hemispheric, impulsive or reflective, and global versus analytic. The hemispheric element refers to left and right brain processing modes; the impulsive versus reflective style describes how some people leap before thinking and others scrutinize the situation before moving an inch. Global and analytic elements are unique in comparison to other elements because these two elements are made up of distinct clusters of elements found in the other four strands. The elements that determine global and analytic processing styles are: sound, light, seating arrangement, persistence, sociological preference, and intake.

The PEPS is a comprehensive approach in the identification of how adults learn, concentrate, and perform in their occupational or educational activities in the several areas to include: (a) immediate environment (sound, temperature, light and design); (b) emotionality (motivation, responsibility, persistence and the need for structure or flexibility); (c) sociological needs (self-oriented, peer-oriented, authority-oriented, or learn in several ways i.e. sometimes alone, with peers and/or with authority figures); and (d) physical needs (perceptual preference(s), time of day, intake and mobility) Price (1996). After completing the PEPS, participants are provided with a numerical score on each element:

The raw score of is the sum of an individuals responses to each of the items within an area. The standard score ranges from 20-80 with a mean of 50. Individuals having a standard score of 40 or less or 60 or more find that the variable important when they study or work. Individuals having scores that fall between 40 and 60 are varied with respect to how much that variable is important to them. Other learning style preferences are usually more important. (PEPS, 1996).

To provide an example: addressing the element of sound with an individual that has standard score of 60 or more, the facilitator should provide soft music, earphones, conversation areas, or an open-work environment. With an individual that has standard score of 40 or less, the facilitator should establish silent areas; provide individual office alcoves with sound proofreading, or provide ear plugs to block sound if necessary.

Sacchanand (2000) states that the means, processes, and activities by which employees learn in the workplace, from basic skills to high technology and management practices can be formal, non-formal, incidental, or experiential, with an emphasis on self-directed learning. The manager who is considering on-the-job training, off-the-job training, job simulations, vestibule training, or traditional training in a classroom environment should consider learning style to

ensure maximum learning takes place to enhance productivity. People have different preferences for learning—understanding that—the perspicacious business professional should consider the above mentioned elements when designing training to create the best learning conditions and outcomes.

Study Population and Demographics

A total of eleven hundred and twenty students participated in this study. This yielded seven hundred and twenty-one usable responses which resulted in a 64% response rate. All subjects were enrolled business courses in American and European universities located in: California, Georgia, Idaho, Massachusetts, Pennsylvania, Texas, Wisconsin, Belgium, Denmark, England, Finland, and Poland.

Participation was voluntary and the study site at each university agreed to participate. This study followed a descriptive research design using survey methods with statistical treatments. The design was a cross-sectional survey. Babbie (1990) stated that the cross-sectional design is the most frequent used study design.

The data in this descriptive study were collected using survey procedures as described by Dillman (1978).

Each of the potential participants received a survey packet containing the following items:

1. Informed Consent. Cover letter describing the study to the potential participant and outlining the procedures to be followed in completing the forms in the survey packet.
2. The survey with a section on demographics (brief questions asking for biographical and demographic information).
3. The PEPS.

Findings

The goal of the research was to ascertain the preferred elements learning style of European and American business students. Sims and Sims (1995) stated that learning styles can be categorized into cognitive, affective, and psychological behaviors that offer indicators of how learners perceive, interact with, and respond to the learning environment. Based on the findings, significance was achieved on many areas of the PEPS thus rejecting the null hypothesis.

The PEPS measures 20 various learning style elements. Table 1 indicates the environmental thread which includes the elements of noise, light, temperature and design. In addition, significance was achieved on the elements of noise (0.000), light (0.010), and temperature (0.001).

< Insert Table 1 >

Table 2 indicates the emotional thread which includes the elements of motivation, persistence, responsibility, and structure. In addition, significance was achieved on the elements of motivation (0.001), persistence (0.001), and structure (0.000).

<Insert Table 2>

Table 3 indicates the sociological thread which includes the elements of learning alone, learning with authority and learning with several ways. In addition, significance was achieved on the elements of learning alone (0.000), learning with authority (0.000) and learning with several ways (0.012).

<Insert Table 3>

Table 4 indicates the physiological thread which includes the elements of auditory, visual, tactile, kinesthetic, intake, evenings/morning, late morning, afternoon, and need mobility. In addition, significance was achieved on the elements of auditory (0.000), visual (0.021), tactile (0.000), kinesthetic (0.000), intake (0.000), late morning (0.015), afternoon (0.000), and need mobility (0.000).

<Insert Table 4>

Discussion

When the PEPS is administered to students, they gain insight into their learning styles in elements relating to environmental, emotionality, sociological, and physiological threads. The PEPS provides students with a barometer of where their preferences lie when learning.

To review, a sizable response rate was achieved. Significance was achieved in many areas:

- noise, light, and temperature (environmental)
- motivation, persistence, structure (emotionality)
- learning with authority, alone, several ways (sociological)
- auditory, tactile, kinesthetic, intake, late morning, afternoon, and mobility (physiological)

In discussing the findings cited in the table the following themes were evident:

- European students prefer quieter settings. American students demonstrate no preference. (Noise)
- European students prefer dimmer lighting surroundings. American students no preference. (Light)
- European students prefer cooler environments. (Temperature)
- American students strongly prefer to know every aspect of an assignment, permit no options, list, itemize and leave nothing for interpretation. European students prefer to have objectives but permit choice of resources, procedures, time lines, etc. (Structure)
- Design did not achieve significance, but European students prefer more of a formal climate than their American counterparts. (Design)
- European students prefer short simple uncomplicated assignments as opposed to the American students who preferred self designed objectives. (Motivation)
- European students prefer praise during the process. American students prefer praise at the end. (Persistence)

- American students learn better with authority figures nearby. European students should be permitted isolated achievements. (Authority)
- American students prefer teams. European students work well alone. (Alone)
- Both American and European students utilize patterns, routines, and permit options. (Several)
- American students utilize tapes, videos, TV, and precise oral directions. European students should read and take notes before listening. (Auditory)
- European students use several multi-sensory resources. American students use touchable, movable, as well as readable. (Tactile)
- European students need opportunities for real and active experiences. (Kinesthetic)
- American students need frequent opportunities for food, beverages at desks, and snacks. (Intake)
- Both American and European students prefer difficult tasks to be completed in late morning. (Late morning)
- American students prefer afternoon. (Afternoon)
- European students prefer work stations where most of the responsibilities can be completed. (Mobility)

Trainers, managers, and educators must be cognizant of the difference of learning styles when working with employees that might be of European cultures. “As trainers, it's our job to find a way to incorporate the learning styles of each group. We tend to teach from the generation we came from and become frustrated with those outside our generation.” (Murphy, 2006). Given this information, in a perfect world, one should create successful training seminars or learning environments for future American and European managers that should include the following:

- Arrange mid-level to quieter settings.
- Create dim to soft lighting surroundings.
- Set up cool environments.
- Organize detailed assignments, prioritized lists, and some objectives that are open ended objectives permitting different avenues to achieve the goal.
- Prepare traditional methods of task accomplishments-completing one task at a time or providing multiple tasks that allow engagement and completion at one's pace.
- Design activities that are designed to be achieved by short uncomplicated tasks or self designed objectives—either choice so the achievement of the goal is the same.
- Develop effective coaching during the process and at the end when the task is accomplished.
- Cultivate environments where the authority figure is present, but acts in a non-participatory manner.
- Provide choices to the accomplishment of the task by individual or by teams. Balance of activities that allow for both situations in the learning environment.
- Create patterns, routines, and permit options within the organization, delivery and transfer of information.
- Provide audio-visual materials with the option of written previews.
- Develop a variety of hands-on-activities that provide for real or active experiences.

- Have available the option for self-initiated breaks and provide or permit refreshments and snacks with the training environment or at workstations.
- Arrange for the learning to take place mid to late morning or afternoon.
- Seek to provide experiences where the learning can take place in a seminar setting and allow for practice or the refinement of the learning to be permitted at individual work places.

The perceptive business teacher will use this knowledge to devise their own classroom strategies to ensure that the greatest amount of learning takes place, but also provides evidence to future managers that people learn differently. A person's culture or geographic location does impact learning styles. Students who will be managers, trainers, facilitators, life coaches or instructors will benefit from the knowledge that one needs to develop seminars, prepare training programs, or organize conferences that incorporate a variety of learning strategies. "People are different, and learn in different ways" (Hilliard, 2001). The use of diversified learning strategy is even more important as the workplace is expanding globally. Many organizations will have significant representation beyond the U.S. From the study results, it is apparent that American and European students prefer different learning methods. To make students successful in the workplace, proficiency and competence in creating environments for workers to learn best is crucial.

Summary

Today's business educators can use this information to write prescriptive lesson plans, develop detailed lesson plans, create tactical unit plans, and implement approaches that design a variety of learning experiences, allowing for the greatest opportunity for learning to take place.

For those educators with a diverse student population or for those who plan to teach abroad need to be cognizant that national origin and/or international education systems can impact the learning of their students. People who interact with individuals from other cultures may not get the reactions and reinforcement they are accustomed to. Aarons (2008) stated, "American students need to learn a new set of skills, including innovation and cultural competency, to be competitive in a global economy." Included in this list should be knowledge of learning styles. Both groups of students will evolve to become future managers in the global workplace and most likely will be instructing, educating tutoring, training, or teaching candidates beyond American and European borders. Given this fact, to optimize employees' efficiency in the workplace, considering a range of learning styles will be paramount when setting up seminars, colloquiums, workshops, training environments or designing tutorials. An appreciation, knowledge, and comprehension of understanding and catering to unique learning styles will be critical to the success of achieving and efficient learning process.

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Table 1

Environmental

Noise	European Valid Percentage	American Valid Percentage
20-39	28.8	6.7
40-59	63.5	80.0
60-79	7.7	13.3
	100.0	100.0
Light	European Valid Percentage	American Valid Percentage
20-39	38.5	21.0
40-59	51.9	70.8
60-79	5	8.2
	100.0	100.0
Temperature	European Valid Percentage	American Valid Percentage
20-39	28.8	13.6
40-59	51.9	74.5
60-79	19.2	11.8
	100.0	100.0
Design	European Valid Percentage	American Valid Percentage
20-39	34.6	25.0
40-59	63.5	70.4
60-79	1.9	4.6
	100.0	100.0

Table 2

Emotional

Motivation	European Valid Percentage	American Valid Percentage
10-19		0.1
20-39	36.5	16.3
40-59	61.5	73.5
60-79	1.9	10.0
	100.0	100.0
Persistence	European Valid Percentage	American Valid Percentage
20-39	28.8	10.8
40-59	63.5	78.9
60-79	7.7	10.3
	100.0	100.0
Responsibility	European Valid Percentage	American Valid Percentage
10-19		0.1
20-39	42.3	25.4
40-59	51.9	68.1
60-79	5.8	6.3
	100.0	100.0
Structure	European Valid Percentage	American Valid Percentage
20-39	28.8	7.0
40-59	46.2	38.7
60-79	25	54.3
	100.0	100.0

Table 3

Sociological

Learning Alone	European Valid Percentage	American Valid Percentage
10-19		0.1
20-39	32.7	10.9
40-59	51.9	60.3
60-79	15.4	28.0
80-89		0.6
	100.0	100.0
Learning with Authority	European Valid Percentage	American Valid Percentage
10-19		0.1
20-39	34.6	8.8
40-59	50	61.2
60-79	15.4	29.8
	100.0	100.0
Learning with Several Ways	European Valid Percentage	American Valid Percentage
20-39	48.1	29.6
40-59	51.9	66.8
60-79		3.6
	100.0	100.0

Table 4

Physiological

Auditory	European Valid Percentage	American Valid Percentage
10-19		0.3
20-39	32.7	9.9
40-59	51.9	63.5
60-79	15.4	26.3
	100.0	100.0
Visual	European Valid Percentage	American Valid Percentage
20-39	34.6	19.1
40-59	63.5	75.6
60-79	1.9	5.2
	100.0	100.0
Tactile	European Valid Percentage	American Valid Percentage
20-39	42.3	13.5
40-59	51.9	66.6
60-79	5.8	19.8
80-89		0.1
	100.0	100.0
Kinesthetic	European Valid Percentage	American Valid Percentage
20-39	28.8	9.6
40-59	67.3	79.0
60-79	3.8	11.4
	100.0	100.0
Intake	European Valid Percentage	American Valid Percentage
20-39	30.8	7.8
40-59	57.7	59.6
60-79	11.5	32.6
	100.0	100.0
Evenings/Morning	European Valid Percentage	American Valid Percentage
10-19		0.1
20-39	42.3	32.0
40-59	57.7	64.0
60-79		3.9
	100.0	100.0

Late Morning	European Valid Percentage	American Valid Percentage
20-39	30.8	18.2
40-59	55.8	74.3
60-79	13.5	7.5
	100.0	100.0
Afternoon	European Valid Percentage	American Valid Percentage
20-39	32.7	7.2
40-59	40.4	40.6
60-79	26.9	52.0
80-89		0.2
	100.0	100.0
Need Mobility	European Valid Percentage	American Valid Percentage
20-39	32.7	8.8
40-59	61.5	70.7
60-79	5.8	20.5
	100.0	100.0