Article

Experiential Learning Theory: Application for Understanding Learning Styles of Postgraduate Students

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Abstract

The article examines the learning style of MBA students and looks into how gender effects the learning styles. Data was collected from a management Institute in Mumbai, and survey questionnaires were adapted from the Kolb Learning Style Inventory to investigate the four learning styles—active experimentation (AE), concrete experience (CE), abstract conceptualisation (AC) and reflective observation (RO). The data were analysed for the frequencies and percentages, and Chi-square for comparison of gender and specialisation. Major learning styles were for both gender and specialisation. Major learning styles were AE and CE, followed by AC for both gender and specialisation. It was seen that for all the students, the two major learning modes were convergent and accommodative, which were also the two major dominant learning modes observed across the genders and all specialisations. ESTJ and ESFJ were the two dominant personality types that emerged. A Chi-square test that revealed learning styles and learning modes did not vary based on different gender and specialisation.

Keywords

Experiential learning theory, Kolb learning styles, active experimentation, concrete experience, convergent and accommodative modes

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Introduction

Learning has always been an essential point of discussion amongst psychological researchers because of its complexity. Learning styles are generally more focused on 'how' the learner prefers to learn rather than 'what' the learner learns, and hence it becomes an essential factor for the students for their academic excellence and attitude. Every individual or leaner has their way of perceiving and retaining the information. Hence, these learning styles become the key factors for the learner's way of perceiving, interacting and also responding to the learning environment. It is seen that each have different styles of learning, and they learn differently from each other.

Learning styles can be defined as a particular way of behaviour and communication, affecting how students' learning takes place. 'Learning style' basically explains a students' natural pattern of getting and processing information in the learning environment. Many authors have researched this concept, but yet there is no consensus about the same; however, the core theme that emerged is that each individual has differed in the way they learn (James & Gardner, 1995). Sims and Sims (1995) have mentioned learning style inventories that mainly focus on the instructional preference or the individual's choice of the environment by using Kolb's Learning Style Inventory (KLSI).

In the twenty-first century, where information is accessible through computer networks and whereby knowledge becomes obsolete very quickly, the need for learning lifelong is required. Knowledge transmission models of teaching will be essential and storage has been losing their functionality. Education systems need to change. If they are fixed in norms, students may not be able to acquire the knowledge or skill that is required; hence, we need to shift and develop new delivery modes that tend to develop students' ability to update knowledge. To understand the learner's ability to absorb, assimilate and transfer learning, more focus is given on pedagogy, which suites the learning style preference as facilitated by the environment. A study was conducted to understand which styles of learning are used by the management students registered for the master's program of management affiliated with Mumbai University in India. Further, the study tried to see if the learning style differs across gender and specialisation chosen by the students.

Review of Literature

Experiential Learning Theory

Experiential Learning Theory (ELT) has its foundation in the twentieth-century research done by the various researchers who emphasise learning through experience as an essential part of individual learning and development.

Basically in ELT, learning is looked as constructive, as knowledge created by the learner again and again by the learner as per their knowledge. It is different from the traditional form of learning in which already prefixed ideas of knowledge are

transmitted to the learner. If we see today's educational system based on the traditional mode of learning, ELT can be defined as learning 'the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience' (Kolb, 1984). ELT model has two different modes of gaining experience—concrete experience (CE) and abstract conceptualisation (AC)—and two different modes of transferring experience—reflective observation (RO) and active experimentation (AE).

The concept of learning style based on ELT focuses on learners' different learning preferences for using different phases of the learning cycle. As per our nature and experiences, we may prefer to choose among four learning modes. We may try to balance between concrete or abstract, or it could be between active or reflective for a certain pattern way of learning. ELT, suggested by Kolb, says that learning decides the development cycle for human beings and that there way do which shapes their personal development later in their lives.

Learning Style and Gender & Discipline

For many years, researchers in ELT have explored learning and Learning Style Inventory (LSI) to study preferred learning among students. Many researchers have also shown keen interest in finding out the how gender affects the learning styles of a learner. Some of the studies do show that there are gender differences in the learning and use of learning styles (Heffler, 2001; Tindall & Hamil, 2003). Then the question arises whether the traditional curriculum addresses this difference among gender. According to Philbin et al. (1995), traditional curriculum support learning styles more favourable to men than women. But for a contemporary discipline such as management education, the need for an application-based curriculum has increased, which has led to a more holistic approach that is catering to all learning styles (Kolb & Kolb, 2005). The researchers agree that the preferred learning style of both genders can be included in the four approaches to learning. But it has been seen that men score high on AC while women score high on concrete learning mode.

Learning styles can be understood as a process in which the learners know and process information (Cano et al., 1992). Each Individual had his necessary ability to learn, but they may unable to learn effectively way (Gregorc, 1979). Garger and Guild (1984) explained learning styles as the characteristics of individuals that are stable and pervasive that can be express by interacting one's behaviour and personality when they start learning task. Many researchers are in opinion that learning is a continuous process of acquiring knowledge which lead to the meaningful behaviour of each individual.

Yet another area of interest is the learning style and its implication to performance of students. Some studies have shown a relationship between performance scores and converging type of learning style. Many researchers have focussed on the chosen learning style and student performance and their evaluation technique used. Every student learns in different ways, and the faculty has different methods of instruction. Both have the same objective of optimal learning.

Using the Kolbe instrument, Loo (2002), in his study, has categorised students into 'hard' and 'soft' major's course learning in business school. The result has found out that hard major's students were in learning styles of assimilators while soft majors core learning students were more towards accommodator learning style.

Learning Style and Personality

Beder (1990) believed that the purposes of adult learning are as follows: facilitate learning, provide support to the learner, increase productivity and improve personal growth. An individual has a unique learning style, and people differ in receiving the information, processing it and applying the gained knowledge for problem-solving. This leads to different personality types and learning styles. Harrington and Loffred (2010) also showed that students preferred online mode for learning more than classroom learning (Komarraju et al., 2011).

Many studies suggested that big five personality traits, if combined with learning styles, lead to higher academic performance and are also able to motivate to influence the academic achievement (De Feyter et al., 2012). It observed that extraversion, agreeableness, openness to experience and conscientiousness leads to intrinsic motivation, while neuroticism leads to extrinsic motivation and core self-evaluation has positive relatedness to intrinsic motivation and negative relatedness to extrinsic motivation

Felder et al. (2002) has studied MBTI personality types to identify the academic performance of an engineering students. It is observed that experimental instructional approach has become important to improve the performance of MBTI types personality (extraverts, sensors and feelers). While in other research, it has not emerged as a factor of learning styles to improve the academic performance (Felder et al., 2002; Matangi et al., 2013). Extrovert and openness as two dominant personality types were found in women working in education. Higher scores were observed for agreeableness, conscientiousness and emotional stability for business administration were observed when compared to those in communication arts. Findings showed significant differences between genders in their learning styles (Pornsakulvanich et al., 2012).

Wu and Lai (2010) conducted study with respondents as medical students of Taiwan and the United States for learning styles and personality styles and administrated KLSI and personal style inventory (PSI). It was found that there is a difference in learning styles in both the countries' students. The Taiwanese respondents were more assimilators and fewer accommodators than the S respondents. Yanardöner et al. (2014) study has suggested that gender and department does not effect the leaning style (Zimmerman et al., 2006). Researchers investigated that there is a difference in learning styles under Group Embedded Figures Test (GEFT test) and personality (MBTI) among different department's students such as engineering, agriculture and system management. These three groups have high values for field-independent learning styles under GEFT test. On other hand, there was no significant difference seen for MBTI among the

engineering department students. Students of agriculture systems management has students differ from engineering, concerning Sensing. This study has contributed basically to understanding the difference in learning styles of two groups of students (Zimmerman et al., 2006).

EL approach is most look for the learning styles but nevertheless it has its demerits and shortcomings to implement. Many educators has apprehensions to incorporate it fully due to various different purpose (Fowler, 2008; Groves et al., 2013) as it requires more time and expert to plan and implement experiential learning (EL) in their routine tight schedule (Pegg et al., 2012). The EL can also lead to uncertainties and unpredictable situations, and academician requires to be flexible and should be able to connect to with different external stakeholders to manage further to evaluate and presentations for EL applications (Frank, 2010). The academician role could be to design assessment tools and evaluation criteria for ensuring the EL successful launch. There may be issues to student who may face potential problems such as feeling doubtful about complex topics in front of experts (Frank, 2010).

Yanardoner et al. (2014) has conducted a study in which they have investigate the relationship between dominant learning styles and personality traits among students. It is found out that that 'the majority of the students had an assimilator learning style and the most frequent personality trait was agreeableness'.

Kolb's Learning Theory

Kolb's ELT focuses on the importance of the learning process of an individual. According to Kolb, ELT works as a combined effect on perception, cognition, and behaviour that leads to a more holistic approach to learning by an individual.

Kolb has proposed a model with a four-stage cycle shown as follows:

1. Concrete Experience
2. Reflective Observation
3. Abstract Conceptualisation
4. Active Experimentation

Kolb (1984) has suggested that the learning style of an individual should be a combination of various different abilities, which can increase the effectiveness of learning styles. There are four types of learning styles that combine two or more abilities under each style:

1. Diverging Styles (CE/RO)
2. Assimilating (AC/RO)
3. Converging (AC/AE)
4. Accommodating (CE/AE)

Diverging learning style (CE/RO): This style is a combination of feeling and watching. Generally, learners under this styles are sensitive, and they also prefer to watch instead of doing and have the ability to imagination to solution the problems.

Assimilating learning style (AC/RO): this is the combination of the ability to watch and think. Under this learning style, individuals generally prefer a brief and logical approach. This learning style is seen as motivation toward answering the question 'What is there to know?' Hence, it looks for accuracy, being more organised and also respecting the knowledge of the expert.

Converging learning style (AC/AE): This style is the combination of the ability of a learner to think and act. Learners under this category have excellent skills to provide solutions to the problem. They create new ideas and experiment and give solutions.

Accommodating learning style (CE/AE): This style is the combination of the ability of a learner to act and feel. Learners generally believe more in intuition rather than in logic. This style of learners prefer to solve problems by using their own experience. They also prefer other views while learning.

The Objective of the Study

The objective of this study is to analyse the various learning styles of management students across different gender and specialisation.

Research Questions

Many studies conducted to date focus on the EL style in management education. The research questions are as follows:

1. What is learning style among postgraduate management students with their specialisation (business analytics, finance, human resources, marketing and operation)?
2. Are there any significant differences among learning styles concerning gender and specialisation and personality?

Research Methodology

The KLSI scale has been used to measure learning styles. The study was conducted by collecting data from management students from various specialisations across different age groups, genders, qualifications, work experiences and family income. A learning style and MBTI questionnaire was administered to them. A total of 300 questionnaires were sent out to postgraduates students, and a total of 227 responses were received. Hence the response rate was 75.7%.

Results and Discussion

From the data collected through the survey, it was found out that 90.7% of students were from the age group 22–24 years, 8.4% were from 25–27 years and only 0.4% were from the other two categories. It shows that students are more from group age of 22–24 and are freshers who just completed their graduation and joined the postgraduate's course. Of the total 227 data collected from the enrolled management postgraduates, females (16) are found to be more than male (101). This depicts that 55.5% of the participants were female and 44.5% were male.

From Table 1, it was found out that 19.8% had a Bachelor of Engineering (BE), 42.3% a Bachelor of Commerce (BCom), 19.4% a Bachelor of Management Studies/Bachelor of Mass Media (BMS/BMM), 6.6% a Bachelor of Science (BSc) and 11.9% had others educational qualifications. It is observed that more commerce graduate enrolled in a management course compared to other backgrounds

From Table 2 it is seen that around 75.3% of students did not have previous work experience while 22.0% had 1–3 years of experience and 2.2% had 4–6 years of experience. It is observed that maximum students in the course are freshers, while some students have 1–3 years work experience.

Table 3 represents the specialisations chosen by the MBA students, and it was observed that 47.1% of students opted for finance, 22.9% for marketing, 17.2% for human resources, 6.6% for operation and 6.2% for business analytics. It shows that many of them prefer the finance specialisation as more students being from commerce background.

Table 1. Qualification.

	Frequency	%	Valid %	Cumulative %
BE	45	19.8	19.8	19.8
BCom	96	42.3	42.3	62.1
MBS/BMM	44	19.4	19.4	81.5
BSc	15	6.6	6.6	88.1
Other	27	11.9	11.9	100
Total	227	100	100	

Table 2. Work Experience.

		Frequency	%	Valid %	Cumulative %
Valid	1–3 years	50	22.0	22.0	22.0
	4–6 years	5	2.2	2.2	24.2
	Above 7 years	1	.4	.4	24.7
	Nil	171	75.3	75.3	100.0
	Total	227	100.0	100.0	

It is observed in Table 4 that the learning style of the students is 35.2% having AE and 24.7% having CE, and that the preferred learning styles are AE, where postgraduates students are applying the new ideas so as to view and understand their surroundings by going through a project or assignment to see if this real life experiment can help them in enhancing their experiences, and concrete learning, where they learn through real life application of the concept.

As seen in Table 5, the major dominant learning modes are accommodative (33.9%) and convergent (33.0%). Postgraduates students with an accommodative learning style try to learn by doing things practically. They use their to solve the problems as these are CE and AE. Whereas convergent learners always like to solve issues and involve their learning to practical problems.

Table 3. Specialisation Chosen.

	Frequency	%	Valid %	Cumulative %
BE	14	6.2	6.2	6.2
BCom	107	47.1	47.1	53.3
MBS/BMM	39	17.2	17.2	70.5
BSc	52	22.9	22.9	93.4
Other	15	6.6	6.6	100
Total	227	100	100	

Table 4. Learning Model.

	Frequency	%	Valid %	Cumulative %
	15	6.6	6.6	6.6
Abstract conceptualisation	39	17.2	17.2	23.8
Active experimentation	80	35.2	**35.2**	59
Concrete experience	56	24.7	**24.7**	83.7
Reflective observation	37	16.3	16.3	100
Total	227	100	100	

Note: Bold provided two highest values for the style.

Table 5. Dominant Learning Style.

		Frequency	%	Valid %	Cumulative %
Valid		14	6.2	6.2	6.2
	Accommodative	77	33.9	**33.9**	40.1
	Assimilative	28	12.3	12.3	52.4
	Convergent	75	33.0	**33.0**	85.5
	Divergent	33	14.5	14.5	100.0
	Total	227	100.0	100.0	

Note: Bold provided two highest values for the style.

As seen in Table 6, for students opting for all specialisations, AE and CE are the preferred learning styles. The chi-square test shows no significant difference. This proves that there are the same learning modes among postgraduates from different specialisations.

For both males and females, AE and CE have emerged as major learning modes. The chi-square test shows no significant difference, which proves that there is no difference in the learning modes among males and females as seen in Table 7.

Table 6. Specialisation Chosen: Learning Modes—Cross Tabulation.

Count	Learning Modes				
Specialisation Chosen	Abstract Conceptualisation	Active Experimentation	Concrete Experience	Reflective Observation	Total
Business analytics	1	2	7	3	1	14
Finance	8	20	33	25	21	107
Human resource	5	4	12	7	11	39
Marketing	1	10	22	15	4	52
Operations	0	3	6	6	0	15
Total	15	39	80	56	37	227

Table 7. Gender: Learning Modes—Cross Tabulation.

Count	Learning Modes				
Gender	Abstract Conceptualisation	Active Experimentation	Concrete Experience	Reflective Observation	Totals
Female	11	17	45	29	24	126
Male	4	22	35	27	13	101
Total	15	39	**80**	**56**	37	227

Note: Bold provided two highest values for the style.

Table 8. Specialisation Chosen: Learning Style—Cross-Tabulation.

Count	Dominant Learning Style				
Specialisation Chosen	Accommodative	Assimilative	Convergent	Divergent	Total
Business analytics	2	5	1	5	1	14
Finance	4	31	15	37	18	107
Human resource	6	13	7	11	4	39
Marketing	2	25	2	15	8	52
Operations	0	3	3	7	2	15
Total	14	**77**	28	**75**	33	227

Note: Bold provided two highest values for the style.

Table 9. Gender: Learning Style—Cross-Tabulation.

Count		Dominant Learning Style				
Gender		Accommodative	Assimilative	Convergent	Divergent	Totals
Female	12	39	16	40	19	126
Male	2	38	12	35	14	101
Total	14	**77**	28	**75**	33	227

Note: Bold provided two highest values for the style.

As observed in Table 8, convergent and accommodative are two major dominant learning styles observed across all the specialisation. The chi-square test shows no significant difference, which proves that there is no difference in the learning styles among students from different specialisations.

Convergent and accommodative are two major dominant learning styles observed across the two genders, male and female as shown in Table 9. The chi-square test shows no significant difference. This shows that the two groups, male and female, have the same learning styles. For students with AE and CE, the MBTI personality types ESTJ and ESFJ were dominant. The chi-square test shows a significant difference.

Conclusion

The current research is focusing on finding out various aspects of the learning style among the management students and on trying to relate to the gender and specialisation opted amongst them. The data was collected from 227 management students for finding out their learning styles by collecting data from them using LSI based on Kolb (1984).The study had identifies the major learning styles, which are AE and CE followed by AC. AE mode explains those individuals who believe in taking an active role in changing the situation and individuals around them. This kind of individual enjoys learning through real-life application in comparison to reflection; hence, these individuals are like to actively participate rather than observe.

The research showed that the significant learning modes were convergent and accommodative. Convergent and accommodative were also the two major dominant learning modes observed across all the specialisations. It was also observed that convergent and accommodative learning modes were also dominant across the two genders, male and female. Convergent (AC/active experimenter) think through before actually taking up anything and then try it out. They will always ask why before trying anything and they try to understand how things work in practice. They are independent workers. and they use facts and implement small changes. Accommodators (concrete experiencer/active experimenter) believe in doing things and practical application rather than wasting time on thinking. They dislike routine jobs and would take a risk and use creativity to solve the problem. They learn on their own rather than from others. The Chi-square test was not significant, which showed that the two learning modes, like convergent and accommodative, did not vary across the different specialisations.

Managerial Implications

Findings imply that an individual learner can identify their learning behaviour, as well as faculty can help the students understand their learning style. It becomes more comfortable for the students to learn by knowing more about their strengths and weaknesses as learners, which will motivate further learning of the individuals. Even faculty can adopt flexible learning strategies that may interest the learner. Students who can understand their learning strategies and problem-solving skills will be adaptable in their jobs (Allinson & Hayes, 1990). As faculty, if they can understand the learning style of the student, it becomes easy to deliver accordingly to encourage the learner. This will also enhance the awareness of learning styles among the faculty, which leads them to be flexible for teaching styles and will lead to better communication between faculty and management students.

Students enter the higher education system with a mindset of their previous learning experience that their role would be a passive learner in the whole learning process. Providing flexibility to the students to learn on their own and taking responsibility for the learning process will surely lead to a better learning experience (Baxter-Magolda, 1999; Kegan, 1994; King, 2003).

EL can be delivered through different activities such as guest lectures, role plays, simulations and field trips. Study tours and international trips may also be included, which may help in providing transformative experiences. The EL may also include workplace experience, which will connect theory taught in the classroom to the real workplace and will require to have an active liaison between the educational institution and future employer. Students' learning will also depend upon what kind of task given to them while working at the workplace and not only assigning the office task (e.g., photocopying).

According to other scholars, this will also lead to a better capability of students for self-direction (Boyatzis, 1994; Robertson, 1988). The management development and assessment courses would help in self-direction by assessing and providing feedback on learning skills and competencies and by developing a learning plan or goal for each student's career path (Boyatzis, 1994). As per Bransford et al. (2002), there is a need for developing meta-cognitive skills for increasing active learning. According to Keeton et al. (2002), when we are developing them to be active learners, students can be taught to take responsibility for their learning by evaluating themselves in the area where they are uncomfortable. Workshops on EL and learning styles can be organised to develop their metacognitive learning skills.

Limitations and Future Research

The present study has certain limitations. The current study is only based on students who are in postgraduate management programmes at a particular institute. Cultural differences also affect the learning styles, which was not considered. The study may be required to examine the change in the learning styles of the students in the following years and in their professional life.

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