

**LEARNING STYLE ORIENTATION AMONG MARKETING AND
ENTREPRENEURSHIP UNDERGRADUATES WITH SPECIAL REFERENCE
TO UNIVERSITY OF RUHUNA, SRI LANKA**

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Abstract

Recent efforts to improve higher education have focused on improving the learning process in education. Although researchers have recognized the importance of designing tailor made learning programmes to individuals there have being limited attention paid to identify individual's preferences in learning. The implications for faculties are significant since otherwise those faculties are likely to reach only some of the students in a given course if they assume that all students learn the same way or that one teaching approach will connect with all students. The situation is more evident in Sri Lankan context where there are very few formal studies in this area. Therefore the objective of this research is to find out learning style orientation of Management graduates in order to try to fill the above knowledge gap. In fact learning style orientation is bridging the gap between personality and cognition thus the learning would be more effective as well as enduring. In order to measure learning style orientation research employed Learning Style Orientation Inventory (LSOI). Sample consists of 50 undergraduates belonging to Marketing and Entrepreneurship specialization area. The study was conducted as a survey. It was observed that across all learning styles respondents who are following Entrepreneurship specialization area has recorded higher mean scores. Moreover research accepted the alternative hypothesis which stated that there are significant differences among learning styles when it come to Marketing & Entrepreneurship undergraduates.

Keywords: Discovery based learning, Group based learning, Experiential learning, Structured learning, Observational learning

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Introduction:

There is a growing trend in the higher education sector to improve learning process of the students. In order to improve learning process it is need to design tailor made learning programmes for individuals as their preferences. However, early studies found that each individual has a different preferred style of learning and understanding of it can influence students' learning in a positive way (Lisele,2007). Moreover understanding of one's learning style can lead to enhanced learning and helps the learner focus on improving weaker points. Furthermore, it may be the most important link to learning new material or changing unwanted behaviours (Woodring, 2000). In addition, a number of empirical studies also suggested that learning styles may significantly influence learners' learning strategy choices in spite of the different research instruments and contexts concerned (e.g. Carson and Longhini 2002, Littlemore 2001). Learning styles embody unconscious individual learner traits while learning strategies are specific behaviours selected by the learner to make learning more efficient (Jie,L. and Xiaoqing,2006). In fact, recognition of students' learning styles is not only important for the learners but also importance for the teachers, course designers in order to apply effective teaching strategy. Moreover it can be used as a tool to enhance achievement and inclusion. There is extensive literature linking academic success with learning style-based teaching (Burke & Dunn, 2002; Loo, 2002). Learning styles vary as a result of cultural influences and preferences for gathering information as well as variations due to age, achievement level, and gender (Honigsfeld & Dunn, 2003). Others have shown a difference of learning styles that may be influenced by language, culture, and heritage (Dunn & Griggs, 1995; Pewewardy, 2002). Moreover, it is depend on the various academic disciplines and academic performance as measured by grade point average (Dunn & Griggs, 1998; Jones, et al. 2003). Therefore, considerations of learning styles are important in the educational process of Management professionals. A common problem in higher education is that students can learn a factual explanation but be unable to conceptualize the information in its application (Klionsky, 1998). This is especially true in management education. It has been suggested that this problem could be addressed by alternate teaching strategies that are developed from an assessment of learning styles. In the most education institutes design and teaching their causes by assuming that all students learn the same way or that one teaching approach

will connect with all students. The situation is more evident in Sri Lankan context where there are very few formal studies in this area. Therefore the objective of this research is to find out learning style orientation of Management graduates in order to try to fill the above knowledge gap.

Objective of the research:

The objective is to find out learning style orientation of Management graduates. Further it will investigate whether there are significant differences between Marketing and Entrepreneurship undergraduates. Thus study will try to test the following hypothesis.

H0: There are no significant differences among learning styles when it comes to Marketing & Entrepreneurship undergraduates.

H1: There are significant differences among learning styles when it comes to Marketing & Entrepreneurship undergraduates.

Literature review:

Recognition of students' learning styles is regarded by many educators as a vital part of an effective teaching strategy. The concept of learning style describes individual differences in learning based on the learner's preference for employing different phases of the learning cycle (Kolb and Kolb). Moreover, learning style is a component of the wider concept of personality (Hawk and Shah, 2007).

Furthermore, experiential learning theory (ELT) defines learning as "the process whereby knowledge is created through the transformation of experience. Furthermore, "knowledge is results from the combination of grasping and transforming experience" (Kolb 1984: 41). However, a 'high quality learner' is normally defined as an individual with self-motivation for attaining and acting on knowledge, and who is able to expand this knowledge via his analytical approach (Valiente, 2008). Moreover, McAdams and Pals (2006) offer a five-principle model of the whole person that encompasses evolutionary design for human nature, dispositional traits, characteristic adaptations, self-defining life narratives, and culture/social contexts. However, learning style orientation is typically seen as bridging the gap between personality and cognition (Sternberg & Grigorenko, 1997) and has been described as the "way in which each learner begins to concentrate on,

process, and retain new and difficult information” (Dunn et al, 1995, p. 353). After reviewing of 17 studies, Hayes and Allinson (1993) concluded that learning style orientation can moderate the effectiveness of instructional methods on trainee learning. An individual’s learning style is the way he or she concentrates, processes, internalizes, and remembers new and difficult information or skills (Shaughnessy, 1998). The identification of an individual’s learning styles may be the most important link tolerating new material or changing unwanted behaviours (Woodring, 2000). However, researchers have recognized the importance of considering individual differences in designing training environments (Cronbach & Snow, 1977; Noe,1986), there has been a tendency to emphasize generic training methods that largely ignore the characteristics of trainees. Moreover, a number of empirical studies also suggested that learning styles may significantly influence learners’ learning strategy choices in spite of the different research instruments and contexts concerned (e.g. Carson and Longhini 2002, Littlemore 2001). However, over the past 50 years, there has been an excess of research on the interaction of learners’ characteristics, such as gender, motivation, aptitude, and instructional method, but few have found that these characteristics moderate the influence of instructional method on learning (see Hunt, 1975). Moreover, learning styles vary as a result of cultural influences and preferences for gathering information as well as variations due to age, achievement level, and gender (Honigsfeld & Dunn, 2003). Similarly, some others have shown a difference of learning styles that may be influenced by language, culture, and heritage (Dunn & Griggs, 1995; Pewewardy, 2002). In the same way, Dunn and Griggs (1998) have identified four variables that significantly differ among groups and among individuals within specific groups: academic achievement, gender, age, and the processing of new and difficult information. For an example the study done by Park (2000) found that Southeast Asian students (and especially Hmong and Vietnamese) appear to be visual learners. Furthermore, Southeast Asian students compared with Anglo or East Asian students seem to have a higher preference for group learning. All Southeast Asian groups show major preferences for tactile learning, except for White students who show minor preference. Similarly, other researches about learning styles observed gender differences. As example, Park (1997b) observed that across the four ethnic groups, girls had statistically significantly higher preference for kinesthetic

learning style than boys, although both boys and girls had major preferences. Similarly, Restak (1979) also found various gender differences between boys and girls in his study of little children. Further, he described that girls were more sensitive to sounds than boys and more proficient at fine motor performance than boys. Boys, in contrast, showed an early visual superiority to girls.

Furthermore, Kolb (1984) has shown that learning styles are influenced by personality type, educational specialization, career choice, and current job role and tasks. Further, learning style is differences among different academic specialties; it is not surprising to see that ELT research is highly interdisciplinary, addressing learning and educational issues in many fields (Kolb and Kolb). There is extensive literature linking academic success with learning style-based teaching (Burke & Dunn, 2002, Loo, 2002; Skogsberg & Clump, 2003). In fact, studies have shown that learning styles may vary by discipline and academic performance as measured by grade point average (Jones et.al,2003). However, it is the exception rather than the rule that doctoral programs in the broadly defined management field provide more than a token effort at educating their doctoral students on adult pedagogy (Merriam and Caffarella, 1999) and philosophy of education (Noddings, 1998). Therefore, management education is concerned with matching students' learning styles with teaching strategies to ensure success in the education of management students. Moreover, diverse learning styles have been found among marketing students, but active, sensing, visual, and sequential dimensions (Kolb's accommodators and assimilators) appear to be somewhat more prevalent (Frontczak and Rivale 1991).

While individuals tested on the learning style inventory (LSI) show many different patterns of scores, previous research with the instrument has identified four learning styles that are associated with different approaches to learning such as diverging, assimilating, converging, and accommodating (Kolb and Kolb). Furthermore, these four learning styles are described as follows: accommodators (active-concrete) who prefer trial-and-error experiences and people; converges (active-abstract) who prefer problem solving; diverges (reflective-concrete) who prefer people, feelings, and harmony; and assimilators (reflective-abstract) who prefer ideas and theories (Frontczak 1990). A slightly different approach to understanding and measuring learning style can be found in Solomon and

Felder's (2004) Learning Style Index. This approach includes more dimensions in its conceptualization of individual learning differences than does Kolb's (1984) two-dimensional model. Both models propose that matching learning activities with student learning styles improves learning outcomes (Frontczak 1990; Morrison, Sweeney and Heffernan 2003) Much of the criticism of the LSI has been directed at the validity and internal consistency reliability of this measure. Moreover, Furnham (1992) questioned its incremental validity based on evidence that the LSI was highly related to personality. However, in the study of Towler and Dipboye circumvent these problems with the LSI by developing a measure (the Learning Style Orientation Inventory) that directly asks participants their learning style preferences. Further, it indicated high value of construct validity, internal consistency, incremental validity (2003). Therefore, this study based on the Towler and Dipboye study in 2003.

Methodology:

Study was conducted as a survey where a structured questionnaire was used for data collection. Population includes all the final year undergraduates who are specializing in Entrepreneurship and Marketing at University of Ruhuna. Sample was selected using convenience sampling method and comprised of 50 undergraduates which is around 80% of the total intake to these two specialization areas in a given academic year. Questionnaire was based on Learning Style Orientation Inventory (LSOI) developed by Towler and Dipboye (2003), and had five different styles of learning styles, namely Discovery Based Learning (DBL), Group Based Learning (GBL), Experiential Learning (EL), Structured Learning (SL) & Observational Learning (OL). Table 01 provides a detail operationalization of all variables under consideration. Questionnaire carried scale type questions where respondents were provided with statements which they can Strongly Agree, Agree, Slightly Agree, Neither Agree nor Disagree, Slightly Disagree, Disagree and Strongly Disagree; scores of 7, 6, 5, 4, 3, 2, and 1 were assigned respectively for above mentioned categories. Researchers believed that using a seven point scale instead of five point scale would minimize the tendency of average responses.

Mean comparison, was used to analyze the data.

Table 01: Operationalization of variables

I like instructors who make me think about abstract ideas	Discovery Based Learning
I enjoy learning subjects that deal with abstract ideas	
I enjoy abstract ideas when learning	
I like to learn subjects which allow me to ponder	
I like problems which don't have a definitive solution	
I like classes where there is no one correct answer but a matter of opinion	
I am a reflective person when learning	
I like to theorize abstract ideas	
I like instructors who allow me to explore my own ideas	
I enjoy classes when the instructor deviates from the text	
I like instructors who are spontaneous	
I learn a lot from instructors who stray from the main topic	
I enjoy studying in a group	Group Based Learning
I prefer to study in a group	
When learning, I like to go through the process with others	
I like group discussions	
I prefer to discuss concepts with groups	Experiential Learning
I like to put my ideas straight into practice when learning	
I learn best when given the opportunity to obtain practical experience	
I like to put new knowledge to immediate use	
The best way to learn something is to put an idea straight in to practice	
I enjoy being given hands on experience	
I enjoy learning practical topics	
Learning materials (field assignments) that requires action appeals to me	
I don't like to sit and listen	Structured Learning
I enjoy work schedules	
I enjoy making outlines of text and lecture material.	
I like to make a plan before I set out to learn something new	
Devising a work schedule is something I enjoy	
When learning, I like to make an outline of the complex ideas	
Learning a new task, like to first write down the steps I need to perform	
I like to take notes while reading or listening to a lecture	
I have good study habits	
I like to break a task into simpler terms	
I like the instructor to give me many practical examples	Observational Learning
I like to see actual demonstrations of what I am learning	
I learn best when I am given specific examples	
I learn best when pictures or diagrams are provided	
I prefer instructor provides handouts or slides covering each part	
Learning a new task, I need the instructor to give me specific guidance	
Understand an abstract subject, I need to relate it to practical solutions	
I need the instructor to give me guidance	
I prefer things that I can actually see or touch	

Source: Towler, A.J. and Dipboye, R.L. (2003), 'Development of a Learning Style Orientation Measure', *Organizational Research Methods*, 6: 216.

Analysis:

Sample consists of 50 undergraduates out of which 32 were male respondents (64%) and 18 were female respondents (36%). Further 28 respondents (56%) were following marketing specialization area while the remaining 22 respondents (44%) were in the Entrepreneurship specialization area.

First variable to be analyzed was the orientation towards the Discovery based Learning (DBL) and was measured through 8 dimensions. Respondents who were following Entrepreneurship specialization area has allocated higher mean score (5.9091) compared with Marketing specialized students (4.9107). Second variable to be analyzed was the orientation towards Group Based Learning and was measured using 5 dimensions. Again respondents who are following Entrepreneurship specialization area has indicated higher preference (mean score = 6.0727) compared to the respondents who are following marketing specialization area (mean score = 5.0857) for Group Based Learning (GBL) category. Same trend can be observed in Experiential Learning (EL) category where again respondents who are following Entrepreneurship specialization area has indicated higher preference (mean score = 6.5682) compared to the respondents who are following marketing specialization area (mean score = 5.2188). EL was measured using 7 dimensions. When it comes to Structured Learning (SL) which was measured using 9 dimensions again respondents who are following Entrepreneurship specialization area has indicated higher mean score (6.0202) compared to the respondents who are following marketing specialization area (mean score = 5.2341).

Table 02: Mean comparison

Specialization Area		Discovery Based Learning	Group Based Learning	Experiential Learning	Structured Learning	Observational Learning
Marketing	Mean	4.9107	5.0857	5.2188	5.2341	5.1905
	N	28	28	28	28	28
	SD	1.4289	1.1041	2.2489	.8582	1.8149
Entrepreneurship	Mean	5.9091	6.0727	6.5682	6.0202	6.5606
	N	22	22	22	22	22
	SD	.4946	.8407	.4736	.5151	.4107

Total	Mean	5.3500	5.5200	5.8125	5.5800	5.7933
	N	50	50	50	50	50
	SD	1.2167	1.1044	1.8278	.8215	1.5360

Last variable to be analyzed was orientation towards Observational Learning (OL), this was operationlized using 9 dimensions. Respondents who are following Entrepreneurship specialization area has again indicated higher mean score (6.0202) compared with respondents who are following marketing specialization area (mean score = 5.2341). See Table 02 for more details.

Table 03: Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Diff	SE Diff	
	F	Sig.	t	df	Sig.			
DBL	Equal Var Assu	20.997	.000	-3.128	48	.003	-.9984	.3192
	Equal Var not assu			-3.444	34.822	.002	-.9984	.2899
GBL	Equal Var Assu	2.864	.097	-3.473	48	.001	-.9870	.2842
	Equal Var not assu			-3.588	47.968	.001	-.9870	.2751
EL	Equal Var Assu	23.601	.000	-2.761	48	.008	-1.3494	.4887
	Equal Var not assu			-3.089	30.011	.004	-1.3494	.4368
SL	Equal Var Assu	.181	.673	-3.789	48	.000	-.7861	.2075
	Equal Var not assu			-4.013	45.214	.000	-.7861	.1959
OL	Equal Var Assu	20.833	.000	-3.465	48	.001	-1.3701	.3955
	Equal Var not assu			-3.871	30.468	.001	-1.3701	.3540

Table 03 shows the results for the Independent sample t-test. For the first variable, study has to consider equal variances not assumed since F value is significant. By considering the equal values not assumed study finds that for DBL there are significant differences among two groups, ($t = -3.444$, $p < 0.05$). For GBL Again the study finds significant differences among two groups ($t = -3.473$, $p < 0.05$). For EL again has to consider equal variances not assumed since F value is significant. EL again shows significant differences among two groups ($t = -3.089$, $p < 0.05$). The same trend can be observed for SL as well where the study found significant differences ($t = -3.789$, $p < 0.05$). For the final variable OL the study considered equal variance not assumed and again found significant differences among two groups ($t = -3.871$, $p < 0.05$). With the above t-test results (see table 03 for more details), the study can reject the H0 and can accept H1 which states that

there are significant differences among learning styles when it come to Marketing & Entrepreneurship undergraduates.

Conclusions:

Study mainly employed Learning Style Orientation Inventory (LSOI) developed by Towler and Dipboye (2003), which carried five different styles of learning styles, namely Discovery Based Learning (DBL), Group Based Learning (GBL), Experiential Learning (EL), Structured Learning (SL) & Observational Learning (OL) to observe weather there are significant differences in learning among Marketing & Entrepreneurship specialization students. The study reveals that across all learning styles respondents who are following Entrepreneurship specialization area has recorded higher mean scores. Moreover research accepted the alternative hypothesis which stated that there are significant differences among learning styles when it come to Marketing & Entrepreneurship undergraduates. While explaining these findings researchers would like to emphasis the preliminary nature of the study due to its small sample size. Therefore researchers would like to suggest the fact that more research in this area would further strengthen the knowledge respective to learning styles of Sri Lankan students.

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