

## EMPIRICAL ASSESSMENT OF EFFECT OF SOCIO-DEMOGRAPHIC FACTORS ON LEARNING STYLES OF STUDENTS AT MASTERS' LEVEL

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### Abstract

*The present study was conducted to find out effect of socio-demographic variables (gender, location, fathers' academic qualification, mothers' academic qualification and parents' monthly income) on learning styles of students at masters' level. The sample size of eight hundred and twenty was drawn through stratified random sampling technique from public sector universities of Rawalpindi and Islamabad, Pakistan. The study was delimited to Social Sciences, and Management Sciences. Information about socio-demographic variables was collected through a demographic form attached with Kolb's Learning style Inventory version III which was used to explore learning style of students. Frequencies, percentages t-test, and one-way ANOVA were employed to determine the effect of socio-demographic variables on learning styles. After analysis it was found out that Divergent learning style was learning style of majority of students. Gender and fathers' academic qualification had no significant effect on learning styles of students, whereas location, mothers' academic qualification and parents monthly income had significant effect on students' learning styles.*

**Key words:** *Learning Style, Concrete experience, Reflective observation, Abstract conceptualization, Active experimentation.*

## Introduction

Learning is a process of reconstructing experiences and modifying existing knowledge in the light of previous knowledge. It is one of the most important criteria in declaring one educational organization as successful or unsuccessful. It may be planned and sometimes unplanned. Every person has a preferred way of learning that is called Learning style. It is one's particular way of reaching to the solution of a particular problem. Learning is based on personal experiences of the learner. It means that different type of life experiences have their contribution in one's learning. Every individual or learner brings varied experiences to the learning situation. Learning takes place as a result of interplay between individual's personal experiences and the environment. This interplay paves the way for future learning. The individuals are different from others in terms of social, emotional, physical and intellectual demands. They are also unique in terms of learning that takes place and also of the way he or she learns. One person may like to learn through lectures or the other may prefer to learn through assignments and projects. Some acquire and process through listening and some make mind maps. Some may prefer to learn alone and the others may prefer to learn in group. There are some learners who believe in theories whereas some others prefer to have practice and believe that theory without practice is useless and wastage of time and resources. In other words, it can be said that along with individual differences the way the individuals prefer to acquire knowledge is also an important factor to be considered.

A great amount of research has been done in European and America with particular focus on learning styles. Many researches are conducted on exploring relationship or effect of certain variables on learning styles. Many people have conducted studies to examine relationship of learning style with the learning achievement, learning style preferences in different races, learning styles of university on-campus students, and distance learning students etc. Many learning style instruments have been designed in order to assess the learning styles of students. Some people use the terms 'cognitive styles', 'thinking styles', and 'affective styles' interchangeably with 'learning styles'. Some of them are based on perceptual modalities; some on other types. But all of these instruments are designed to assess the differences found among learners preferred way of learning. Demographic variables like, gender, age, location, socio-cultural factors, parents' academic qualification and parents' monthly income and type of education have proved to be predictors of learning styles of students.

In Pakistan this is one of the ignored areas, and not much research is found on different effect of different variables on learning styles or vice versa. Probably the first research on learning styles as doctoral study was conducted by the researcher in 2009. The researcher had used Kolb's learning Style inventory for exploring learning styles of students and examined the differences in grade achievement of university students due to difference in learning styles of students. It is an area of interest of the learner that is why she has selected this title.

## Statement of the problem

Every person has her own learning style to acquire and transform knowledge. Socio-demographic variables are considered important in predicting any dependent variable. The study aimed at exploring effect of socio-demographic factors on students' learning styles at masters' level in public sector universities of Rawalpindi and Islamabad, Pakistan.

It was hypothesized that there was no significant difference in learning styles due to difference in socio-demographic factors. The effect of gender, location, mother and fathers' academic qualification, and parents' monthly income on learning styles was explored.

### Objectives of the study

The research study was conducted to:

1. Explore learning styles of students at masters' level.
2. Examine difference between learning styles of male and female students.
3. Investigate difference between learning styles of rural and urban students.
4. Find out difference between learning styles of students due to difference in academic qualification of their fathers.
5. Investigate difference between learning styles of students due to difference in academic qualification of their mothers
6. Explore difference between learning styles of students due to difference in monthly income of parents.

### Hypotheses of the study

- H<sub>01</sub>. There is no significant mean difference between learning styles of male and female students at Masters' level
- H<sub>02</sub> There is no significant mean difference between learning styles of rural and urban students at Masters' level.
- H<sub>03</sub> There is no significant mean difference in learning styles of students due to difference in their fathers' academic qualification students at Masters' level.
- H<sub>04</sub> There is no significant mean difference between in styles of the students at masters' level due to difference in their mothers' academic qualification.
- H<sub>06</sub> There is no significant mean difference in learning styles of due to difference in their parents' monthly income students at Masters' level.

### Literature Review

Experience has a significant role in learning. Effective learning cannot occur without experience. Experiential learning is opposite to behavioristic approach to learning. It consists of two processes of grasping and transforming knowledge. Life experiences have significant influence on learning. Each student comes with different past experiences with him. Those past experiences provide the opportunity to him to interact with the environment according to his own way. In this way every individual learns in her own way that shows her preference for learning. Learning styles can be perceived as preferred ways of absorbing, processing and retaining information (Schunk, 2000). Students can be more successful if they are aware of their learning style and using learning strategies according to them (Tezci & Ataseven, 20016). Whatever type of past experiences a learner has they pave a way for future learning. Experience along with realization of the value of that experience is very much important. Reflection is considered an important part of experiential learning. The experiential learner articulates an experience and discusses meaning of that experience to other people. He reflects over the experience and examines what has happened to him and why all that has happened. This reflection helps in analysis, and generalization. The generalization that is an abstract concept supports the learner for action. Experiential learning is sequential and starts with an experience and ends up with an action in most of the cases.

The cultural and environmental factors also play their role in forming the learning style of the learners. The terms learning style and cognitive styles are often used interchangeably (James & Gardner,

1995). These terms are interrelated. Learning style is a unique preference between individual and environmental circumstances (Kolb and Kolb, 2005).

### 1.5 Kolb's learning Style Model

David, A Kolb's experiential learning theory is most widely cited and quoted in the literature of experiential learning. Kolb's Learning Styles Models is based on experiential learning theory. There are four stages in his experiential learning theory which are concrete experience, reflective observation, abstract conceptualization, and active experimentation. When an individual experiences something with five senses her experiential learning starts at this point. This is called first stage of experiential learning i.e concrete experience. At the second stage that is called reflective observation, she reflects over the experience. She tries to create mental models. At the third stage i.e abstract conceptualization the individual derives some principles out of that reflection. At the last the learner tests out those principles which were derived at the third stage of abstract conceptualization. This stage is called active experimentation. Kolb believed that the learning that is based on experience is the true learning. Kolb (1981) says that with each of these four modes/ stages a major dimension of personal growth is associated. Development in the concrete experience adaptive mode is characterized by increase in affective complexity. Development in the reflective observation mode is characterized by increase in perceptual complexity. Development in the abstract conceptualization and active experimentation mode is characterized, respectively, by increase in symbolic complexity and behavioral complexity. He asserts that first of all we experience the things from our senses, then this concrete experience helps us to reflect on it by using listening and sight ability, then what ever we built through reflective observation, goes under the process of abstract conceptualization where different ideas are formed, and on the basis of these theories, we actively perform something, or act on those theories. He also says that these abilities can be found in some person at different age level, as well as we use these abilities in different type of skills. There are some professions that demand the particular learning abilities that exist in experiential learning cycle. The persons who are having concrete experience (CE) ability emphasize the ability to employ feeling. This ability demands the sensitivity towards the people's emotions and values. They perform well in social professions, like education, social work etc. The persons who are having command on reflective observation (RO) rely on watching and listening. They try to use their reflective observation in order to find out the solutions to the problems. The people having ability in Abstract conceptualization (AC) use logic, ideas and concepts. They give preference to models. In the last those persons who are social and want to work on key positions in organizations, have the ability of Active Experimentation (AE). They trust more on the people rather than the concepts or ideas. For these people only those things matter which have work for them and are practical. In other words they are pragmatists. They can easily take different actions. The combination of Concrete Experience (CE) and Reflective Observation (RO) gives birth to Diverging learning style. The combination of two abilities creates a unique learning style. Concrete experience and reflective observation creates a divergent learning style. These people rely heavily on their five senses. They collect information from various sources and view a concrete situation from various angles. These learners have their interest in cultural activities and work within groups. They feel comfortable in those activities where they have variety. These learners are less logical and more imaginative. They observe things at their own and take in information with an open mind. When Reflective Observation (RO) and Abstract conceptualization (AC) meet, Assimilative learning style is formed. Second learning style is of assimilative learners. Their prominent abilities are reflective observation and abstract conceptualization. They are good in assimilating information and making mental models. They create theory with their power of reflection. These learners are logical and organized. When Abstract conceptualization (AC) and Active Experimentation (AE) combine converging learning style is formed.

The third types of learners which are convergent learners utilize abstract conceptualization and active experimentation. They apply theories to have practical solutions of problems. They have the ability to concentrate with attention. Convergents are mostly Scientists. They favor problem based learning as they like to find out solution to the problem by using theories. When active experimentation and concrete experience are combined accommodative learning style is formed. Fourth type of learners is accommodative learners. This is combination of active experimentation and concrete experience. They are practical learners. They rely on people for solution of problems rather than doing technical analysis. Managers and executives have accommodative learning style.

### **1.6 Effect of developmental and environmental factors on learning**

The fixed genetic characteristics or traits are transferred from fore fathers to offspring and have a valuable contribution in learning. Learning style is a behavior pattern for effective learning. It is developmental and biological (Dunn, Beaudry, & Klavas, 1989). Piaget (1970) states that learning is bound to developmental stages. There are many researches that support this assertion of Piaget. As the limits to learn are different therefore the educational opportunities that are provided to the learners are different as well according to the educational levels. The way the children learn is different from the adults. Learning can be effective if the learning styles of the learners are kept in mind while planning the education. Dunn and Dunn (1993) state that biological and developmental characteristics contribute to a student's learning style. Learning style is not synonymous with academic ability, this is often called a learning or cognitive style (Roberts & Dyer, 2005 )

Hays and Allinson cited in Yamazaki (2006) assert that the culture of a country may be one of the powerful socialization agents that have a great impact upon the development of learning styles. This study represents the relationship between six topologies of cultural differences and the learning styles of Kolb's learning model. The focus of this study was on the question about which culture is related to which learning style or ability. This study was done in two parts. The first part explores conceptual analogies and relationships between Kolb's model and the six cultural typologies in the disciplines of anthropology, cross-cultural management, and cross-cultural psychology. The second part emphasizes on the empirical results of six comparative studies about cross-cultural differences in learning styles in the past and discusses how six propositions generated from the first theoretical examination can reflect upon their past empirical results.

Hall cited in Yamazaki (2006) describes about high context culture and low context culture, based on how in each individual identity rests in total communication frameworks. In high context culture, surrounding situations, external physical environments, and non-verbal behaviors are important for its members to determine the meanings of messages conveyed in communication. When such type of communication exists among the members of a culture, their relationships stay for longer period of time. Whereas in low context culture, surrounding situations, external physical environments, and non-verbal behaviors are relatively less crucial in communication.

The duration of communication relationship stay relatively for shorter period of time in low context culture. In the high context culture mainly the members rely on concrete experience to learn, whereas in low context culture the people prefer abstract conceptualization to receive the information. It is concluded from the study that there is interplay between people and the world, and it designs learning styles at five levels. These five levels are psychological types, educational specialization, professional career, current job, and adaptive competencies (Kolb, Boyatzis, & Mainemelis, 2001).

### 1.7 Researches on Learning Styles

Several studies have been conducted on learning styles. Some are done on the use of instructional strategies and their relationship with learning style preferences, relationship of learning styles with personality styles, similarities in individuals by college majors, learning styles and their relationships with academic achievement, learning style preferences of students in different academic, and effects of culture on learning styles etc. Some of these researches are cited here. Some researches are conducted in order to examine the effect of demographic variables, like age, gender, family status, parents' education level and monthly income. A study was conducted by Erodogan and Neriman Ataseven to explore effects of education faculty students' (N=950) learning style and demographic factors on their learning strategies. According to their findings learning styles do not differ significantly according to gender. (Tezci and Ataseven, 2016).

Another study was conducted by Ahmed and Hyder. Et.al in 2014 to find out effects of demographic factors on the effectiveness of students learning approaches. From responses of 200 Business students from public and private sector they concluded that demographic variables like gender, age, prior education and socio-economic factors, program of study and levels of education have significant effect on students' leaning approaches ( Ahmed &Hyder. et. Al, 2014)

Hickox worked to review the theoretical origins of Experiential Learning Theory (ELT). She analyzed eighty one studies which were focusing on application of ELT model and application of the concept of learning style in business education, helping professions, accounting, medical profession, post secondary education and teacher education. It was concluded by the researcher that 61.7 % of the studies supported ELT, 16.1 % showed mixed support, and 22.2 % did not support, ELT (Hickox, 1991).

Kolb conducted different studies to find out the similarities in individuals by college majors by using Learning style Inventory he reported results by undergraduate majors. It was found that students belonging to business major were accommodators, engineers were mostly convergers, the students of history, education, political science, science, and psychology majors were tended to be divergers, whereas mathematics, economics, chemistry, sociology, and social sciences majors were assimilators. The students of physics majors were found in between of assimilator and converger quadrants. (Kolb, 1984)

It is evident from the above mentioned study as well as some others studies that different disciplines or majors demand different learning style. If a person is having diverging learning style and wants to enroll in engineering discipline, there are the chances that he would not be able to perform good or become productive in that discipline, same is the case with other subjects. The reason is that each subject or discipline has different primary tasks, criteria for academic excellence and productivity, aching methods, use of technologies and products, research methods, and methods for recording and displaying knowledge. The variations are also evident in terms of socio-cultural differences among teachers and students. They are personal demographics, personality and aptitude, differences in values and norms etc. It means that each student cannot be fit in any specialized field; he has to undergo different but continuing selection and socialization to the basic norms of that particular field. Along with that some particular individual difference like personality to, aptitude and social relationship also effect a student's particular orientation to learning.

Kolb asserts that if the students' learning style is same that of disciplines learning style, then the student will get good grades. He conducted a study with the students of economics and mechanical engineering in order to prove or disprove his assumption. The results were quite consistent with the proposition, in the way that the accommodative students in mechanical engineering had higher grades ( $p < .10$ ) than mechanical engineering students with other learning styles, while in economics, the students with converging learning styles proved to be successful ( $p < .001$ ) in terms of grades than those students who were having some other learning styles. In the mathematics department, however there was no difference found in the grades of two groups of students. In humanities, there were six students, whose learning style was not consistent with their discipline i.e., divergent, got higher grades. So from this study Kolb concluded that the students in economics with converging learning style, the students in mechanical engineering with accommodative learning style performed better than the students with other learning styles. But in humanities those students proved to be good who did not have diverging learning style, while in mathematics the learning styles had no impact on the grades of students.

“One of the most easily overlooked facts about university organization is that academic departments are organized according to subject matter... , while the organization of university departments has received increasing attention from social scientists..., the way in which subject- matter characteristics may require particular forms of department organization has been examined (Biglan cited in Kolb 1981, p. 195)

Schroeder conducted a study on the sample of 4000 students who had just got admission. He tried to find out the learning style of new students. For this purpose he administered Myers Briggs Type indicator. This instrument was based on Carl Jung's theory. Four dimensions were considered in it, extraversion (E) versus Introversion (I), and Sensing (S) versus intuition (N). 'E' vs. 'I' dimension points out that which is more important for a person, whether to give attention to external world of people or the inner world of ideas and concepts. 'N' dimension points out that whether person prefers to perceive through five senses that is he prefers the concrete world or he goes towards the world of imagination for perceiving anything. The study which was conducted by Schroeder was a longitudinal study. And it was termed as TRAILS (Tracking Retention and academic integration by learning styles). This study indicated that 60 percent students preferred the sensing mode of perceiving whereas 40 percent were in favor of intuitive mode. Some interesting relationships were also found between learning style and academic aptitude, college achievement, selection of major. The mean SAT score for concrete active (ES) learners was 932 whereas 1110 for the abstract reflective (IN) learners. This difference is statistically significant and consistent on GRE, MAT, MCAT, etc. the INs scored higher, than ENs scored well, after that ISs scores came and ESs scored least. This relationship is also found in other colleges or universities between the learning pattern and scores in students. First year students showed higher grades with abstract reflective pattern in contrast to concrete active pattern. Concrete active pattern was found prominent pattern in business, nursing and allied health whereas abstract reflective pattern was found in arts and sciences.

### **Research Methodology**

Following research methodology was adopted for this study. The Quantitative approach was employed for this study. All the students of Social Sciences and Management Sciences studying at Master's level in public sector universities of Rawalpindi and Islamabad constituted population of the study.

The total sample size was eight hundred and twenty. The sample was selected through stratified sampling technique. Data was collected through socio-demographic form and Kolb's learning style inventory version. III. Data was collected by personally visiting public sector universities of Rawalpindi and Islamabad. The researcher got permission from departments' heads/chairmen and then contacted students in lecture halls.

## Results and Discussion

Table 1. Distribution of sample according to Socio-demographic Factors.

	Variables	Categories	Frequency (%)
1	Gender	Male	405(49.4)
		Female	415 (50.6)
2	Location	Rural	631 (76.95)
		Urban	189(23.04)
3	Fathers' academic qualification	SSC or below	191 (23.3)
		Bachelors or below	370 (45.1)
		Masters' and above	259 (31.6)
4	Mothers' academic qualification	SSC or below	445 (54.3)
		Bachelors (B.A/ B.Sc) or below	286 (34.9)
		Masters' (M.A/ M.Sc) above	89 (10.7)
	Parents' Monthly Income (PKR)	Below 20000	309 (37.7)
		Between 20000 and 30000	228 (27.8)
		Between 30000 and 40000	124 (15.1)
		Above 40000	159 (19.4)

Table 2: Learning Styles of Students

	Learning styles	Frequency (%)
1	Diverging	346 (42.2)
2	Assimilative	274 (33.4)
3	Converging	102 (12.4)
4	Accommodative	98 (12)
	Total	820 (100)

Table 3. Mean Difference in Learning Styles of Male and Female Students at Masters Level.

Gender	N	M	SD	t-test	P
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Male				0.227	0.894
	405	1.933	1.014		
Female					
	415	1.9517	1.010		

\* The mean difference is not significant at .05 level.

The table shows that t-value (0.227) regarding the mean difference between learning styles of male and female students is not significant at 0.05 level. So the null hypothesis ( $H_0$ ) is accepted and it is concluded that there is no significant mean difference between learning styles of male and female students at Masters' level.

Table 4. Mean Difference in Learning Styles of Urban and Rural Students at the Masters' Level.

Residential Location	N	M	SD	t-value	P
Urban	631	1.9318	0.9824	0.497	0.011
Rural	189	1.97	1.103		

\* The mean difference is significant at the .05 level.

Table shows that T-Value (0.497) regarding the difference between learning styles of the students and their residential location is significant at 0.05 level. So it is concluded that there is a significant difference between learning styles of the students at masters' level and their residential location.

Table 5. Mean Difference in Learning Styles of the Students at Masters Level due to Difference in Their Fathers' Academic Qualification.

Fathers' academic qualification	N	M	SD	DF	F	P
SSC or below	191	1.80	1.001	819	2.441	0.088
Bachelors or below	370	1.98	1.019			
Masters' and above	259	2.00	1.002			

\* The mean difference is not significant at .05 level.

The table shows that F-Value (2.441) regarding the mean difference in learning styles of the students due to their fathers' academic qualification is not significant at 0.05 level of significance, so the null hypothesis is accepted and it is concluded that there is no significant difference between learning styles of the students at masters' level due to difference in their fathers' academic qualification.

Table 6. Mean Difference in Learning Styles of the Students due to Difference in Their Mothers' Academic Qualification.

Mothers' academic qualification	N	M	SD	DF	F	P
SSC or below	445	1.83	0.978	819	6.059	.002
Bachelors or below	286	2.05	1.016			
Masters' and above	99	2.13	1.099			

\* The mean difference is significant at .05 level.

F-Value (6.059) regarding the difference between learning styles of the students and their mothers' academic qualification is significant at 0.05 level of significance, so the null hypothesis is not accepted and it is concluded that there is a significant difference between learning styles of the students at masters' level due to difference in their mothers' academic qualification.

Table 7. Mean Difference between Learning Styles of the Students at Masters Level due to Difference in their Parents' Monthly Income.

Parents' Monthly Income	N	M	SD	DF	F	P
Below 20000	309	1.86	1.032			
Between 20000 and 30000	228	1.87	1.87			
Between 30000 and 40000	124	2.12	2.12	819	3.281	0.020
Above 40000	159	2.07	2.07			

\* The mean difference is significant at .05 level.

Table shows that F-Value (3.281) regarding the difference between learning styles of the students and their parents' monthly income is significant at 0.05 level of significance, so the null hypothesis is not accepted and it is concluded that there is a significant difference between learning styles of the students at masters' level due to difference in their parents' monthly income.

## Discussion

The first null hypothesis was that, there is no significant mean difference between learning styles of male and female students at Masters' level. This null hypothesis was accepted because the calculation was falling in the acceptance region ( $p=0.894$ ) Therefore on the basis of this finding it can be said that males and females do not differ significantly in learning styles, or in other words, it can be said that the gender does not bring any significant difference in the learning styles of the students. This finding correlates with the following studies which concluded that there is no significant difference between learning styles and gender. Remali and Ghazali et.al (2013) have concluded on the basis of their study that gender has no significant effect on learning styles of students. Schmeck et al. (1977); Kozminsky & Kaufman, 1992; Miller et al., 1987; Schmeck & Ribich, 1978; Verma, 1994). But these findings also contradict the findings of Miller's and his associates research published in 1990, where it is concluded that males and females have significant differences in learning styles.

The second null hypothesis was that there is no significant mean difference between learning styles of urban and rural students at masters' level and their residential location. This hypothesis was rejected because T score was found in the critical region ( $0.497$   $p=0.011$ ). It means that the students belonged to

urban area or rural area their residential location can affect their learning styles. Here the research findings matches with the research findings of Clump, and published in College student journal, Vol. 37, 2003, who found out that the students belonging to different geographical area have different learning styles.

The third null hypothesis was that there is no significant difference between learning styles of the students at masters' level due to their fathers' academic qualification. The hypothesis was accepted as the calculated value  $F$  fell in the acceptance region ( $2.441$   $p=0.088$ ). That means there is no significant difference between the learning styles of students due to their fathers' academic qualification.

The fourth null hypothesis was that, there is no significant difference between learning styles of the students at masters' level due to their mothers' academic qualification. This hypothesis was rejected as well because the calculated  $F$  value ( $6.059$   $p=0.002$ ) fell in the critical region. Therefore on the basis of this calculation we can say that there is a significant difference between the learning styles of students due to academic qualification of mother. The possible reason for this difference can be that the mothers' education contributes a lot in the education and rearing of children. So the children whose mothers are highly educated, they differ from those whose mothers are less educated.

The fifth hypothesis was that, there is no significant difference between learning styles of the students at masters' level and their parents' monthly income. This null hypothesis was rejected because the calculated  $F$  value fell in the critical region ( $3.281$   $p=0.020$ ). It could be concluded that there is a significant difference between students learning styles at masters' level due to monthly income of parents. This difference can be attributed to the facilities that the parents can arrange or do arrange while having resources in terms of money. Those parents who are financially well off they provide better environment where the students have not have to worry about money so they have learning style different from those who have less monthly income.

It can be said that the majority of students at masters' level in social sciences and management sciences are those students who are having concrete experience and reflective observation as their strong abilities. There were found vary few students who were having converging and accommodating learning styles. That means that they were lacking the abstract conceptualization and active experimentation abilities. Therefore it can be said that when the teaching methodologies are devised there should be kept in mind the different learning styles of male and female students. Along with that it should be tried to use such type of teaching strategies that match with the diverse abilities of the students. The teachers must be conversant in the knowledge regarding learning styles and they should try to match their teaching styles with the diverse and varied learning styles of students. There should also be made some researches in order to find out the learning styles of the teachers as well so that efforts should be made on their part to accommodate those students who are having different learning styles from teachers. Another thing is that the management of universities/colleges should think seriously that how the knowledge of different learning style makes difference in the results and performance of the students. There should be provided the facilities that accommodate all type of learners in respect of learning styles. Another point is that the teacher should train the learners to be facilitated from those teaching strategies which does not match with their learning styles so that if the situation occur when they have to learn differently they should not be on the losing side. it is suggested that the aptitude tests, and learning styles test should be conducted at the time of completion of secondary school and thus the students should be sent to those areas of study which match with their aptitude and learning style. Along with that when the students are sent to such fields they should be

taught in those fields according to these teaching strategies which match and facilitate these fields of study. As it is noted from the present study that the education of parents does make a difference in the learning styles of students so the government should put serious efforts in educating next generations so that when they become parents their children be facilitated from their education. Along with that it is also clear from this study that the monthly income of parents also make significant difference in learning styles of students so that the government should invest serious efforts in order to improve the financial conditions of the people so that at least they could enjoy the basic facilities and fulfill their basic needs easily.

### Conclusions

The present study was carried out to assess effect of socio-demographic factors on learning styles of students at Masters level. For this study all the students of Social Sciences and management sciences, studying in public sector universities were taken as population. The sample of eight hundred and twenty was selected through stratified Random sampling technique from eight hundred and twenty students of Social Sciences and Management Sciences of eight public sector . It is concluded on the basis of data analysis that location, mothers' academic qualification and parents' monthly income have significant effect on learning styles of students. It is also concluded that gender and fathers' academic qualification do not have significant effect on learning styles of students.

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