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Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

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Abstract

This study has been designed to investigate gender-wise and institution-wise difference in learning styles. The main focus is on classroom learning. The social interaction model of learning styles was used. Sample included the male and female students of secondary class enrolled at both the public and private institutions. The findings showed that female students prefer different learning styles than their counter part. Further study highlights the students of private institution prefer competitive whereas students of public institution prefer avoidant learning style.

Key Words: learning style, public and private institution, male and female students.

1. Introduction

In Pakistan, the process of education continues through two set-ups: One at government supervised institutions and other at privately managed institutions. Under the government supervision, male and female institutions are functioning separately, but in privately managed institutions it is working as separate as well as combined (co-education) for male and female students.

Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

Individual differences lead different ways of learning. These different ways of learning were identified as learning styles. So in this way it can be said that because of individual differences students may have different learning styles.

Learning style is individual's personal way of organizing and processing information. According to Feldman (2004, p. 35) "learning style reflects our preferred manner of acquiring; using and thinking about knowledge". A person comes across different situations in his life. Its his learning style, which determine how he perceive, organize and respond to handle the situation as was described by Felder (2005, p.58), "students characterized by different learning styles preferentially focusing on different types of information and tending on perceived information in different ways". In simplest way the students learning styles is a particular way with whom a student learns the best. "Male and female students are not only biologically different but they posses different social, emotional and psychological characteristics" (Akhtar 2009, p.3).

Teaching and learning are the main components of the system of education. This system formally runs in school. The students learning takes place in classroom environment. So if the classroom environment is effective the system of education is successful otherwise no one can save it from destruction. In Pakistan the quality of education is a big question for educationists. Therefore it was felt to investigate the learning styles preferences in the class. This study has been designed to find-out the gender-wise and institution-wise difference in learning styles of secondary school students.

2. Literature Review

In literature four learning style models are identified based on different characteristics, such as:

- a. Instructional and environmental preferences models.
- b. Social interaction model.
- c. Information processing model.
- d. Cognitive and personality model.

The social interaction model deals with the classroom learning. It considers how the interpersonal relationship of peers, student and teachers helps to gain, understand and assimilate information. The main presenter came under this category is the work of Grasha & Reichmann. They indicated six learning styles.

i. Avoidant Learning style

The students having this learning style do not participate in the class room activities and are not interested to take responsibilities. They do not bother about learning content and attending the class. They study enough to pass the examination only. Mostly they remained absent from the class.

Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

General classroom preference

- They remain passive rather avoid to participate in classroom activities
- They does not like continuous assessment system in class
- They like pass-fail grading system
- They does not like teachers attention
- They like to sit on back benches

Advantage of this style is students take life easy. They remain happy with what the life is. They are not interested in taking serious steps to change their lives. They have time to enjoy the life.

Disadvantage is they do not contribute for the development. They keep themselves away from setting productive goals.

ii. **Participative Learning style**

These students enjoy learning and willing to accept responsibilities for self-learning and try to get knowledge as much as possible. They participate in all activities to enhance their own learning. Their focus is the requirements of the course and their own contribution. They do maximum to fulfill the requirements of the course. They enjoy going to class and participating in classroom activities.

General classroom preference

- They prefer lecture with discussion
- They like to avail all the possibilities to share the information
- They enjoy class reading assignments
- They like those teachers who can conclude the discussion

Advantage of this style is these students have practical experience.

Disadvantage is they may give importance to others needs then their own.

iii. **Competitive Learning style**

These students always try to do better than others. They believe in putting maximum efforts to get reward and recognition. They like teacher's attention for this they follow all the instructional procedures in class. They are anxious about what others are doing. They want to remain at the top.

General classroom preference

- They become a group leader in discussions

Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

- They like teacher-centered teaching
- They want appreciation for doing a good job
- They prefer those activities in which they can perform better than others

Advantage of this style is it motivates students to set targets for their success.

Disadvantage of this style is it make difficult for people to appreciate and to learn collaborative skills.

iv. **Collaborative Learning style**

The students prefer this style believe that they can learn by sharing ideas and talents. These students enjoy working and learning by sharing their knowledge and activities with others in a group. They cooperate with teachers and students in conducting classroom activities.

General classroom preference

- They prefer group work
- They like to organize seminars and team activities
- They like students centered activities
- They prefer to work for group projects

Advantage of this style is it develops skills for working for combined activities.

Disadvantage of this style is that the students may not work with competitive people. They depend too much on others and not always able to work alone.

v. **Dependent Learning style**

They have less intellectual curiosity and they prefer to learn only what is required. They always look towards teachers and peers for the instructions and guidelines. They are good to follow the instructions. They do everything what teacher asks because they totally depend on others.

General classroom preference

- These students like that the material should be provided by teachers
- They want clear instructions from teachers what to do
- They live happily with teacher-centered classroom method
- They prefer the demands of teacher must be clear in all aspects of course

Advantage of this style is these students are good followers.

Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

Disadvantage is it is difficult to develop skills for independent work. They have no self direction. They can not set targets for their life. They can not deal or handle new situation.

vi. **Independent Learning style**

These students can set their goals by themselves. They are confident in their learning abilities. They need less direction from the teacher. They prefer only the content which is important to them. They are target oriented they like to work alone on course projects.

General classroom preference

- They prefer independent study
- They like to follow self-paced instructions
- They like those assignments that enhance their independent skills
- They like the projects which can be designed by students
- They prefer-students centered course designs

Advantage of this style is it develops self-initiated and self-directed learner.

Disadvantage of this style is these students are deficient in collaborative skills. They are failed to consult teachers when they need help.

Researchers tried to study the ways of learning of male and female students. Many researches were conducted and reported similar results. Hopkin (1982) found that female students indicate their preference for participant, collaborative and dependant learning style while male students showed their preference for avoidant, independent and competitive learning style. Some other studies were conducted by Cohen (1986); Bishop (1985) and Sing (1987) and reported similar results that male and female students possess different learning styles. Verma and Kumari (1988) conducted a research study and reported that female students showed their preference for field dependant and environment oriented learning style then the male students. Verma and Tiku (1989) leads to the inference that male and female students has similar preference for independent, avoidant and collaborative learning style but female students have different preference for dependant, participant and competitive learning styles.

The findings of these research studies lead the researcher to find out the answer of the question which variables determine the students learning styles? Whether these are biological differences or environmental situation or school environment? What determines or modified the students learning styles. Students spent a lot of time at school. Different studies were conducted to answer the question. In this regard Verma (1996) conducted a research "Do different types of schools make a difference in learning style preference of adolescents". He uses Aggarwal's Learning style Inventory for the identification of learning styles of government, convent and sainik school students. The results showed different preferences of students learning styles. He gave the reason for

Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

this that different type of school are characterized by peculiar type of learning environment which helps the students in developing peculiar type of learning style preference. Some other research studies were also conducted to investigate the impact of different types of institutions on learning styles of students (Rissler, 1980; Aggarwal, 1982; Cooper, 1991; Misra and Tiwari, 1992). All studies indicate significant differences in learning styles of students enrolled at different institutions except the study of Johanson (1987). He conducted this study for nurses not in formal school education system.

After reviewing the literature it was felt to investigate the scenario in Pakistani situation and formulate following hypothesis.

- i. There is no significant difference in learning styles of male and female students.
- ii. There is no significant difference in learning styles of public and private school students.

3. **Method and Procedure**

The purpose was to study the difference in learning styles of male and female students of public and private schools so the descriptive method of research was adopted. Three variables were identified i.e. gender, type of institution and learning styles. The learning styles were treated as dependent variable; gender and type of institution were as independent variables. All the male and female students studying at public and private institution of Attock city were the population of the study.

- **Sample**

At first four schools (two private and two public) were randomly selected by using lottery method. From these schools four clusters of similar characteristics were selected. In this way 112 students who were present on data collection day in selected clusters were the sample of study.

- **Instrument**

The focus of the study was learning in classroom environment so the social interaction model of learning style was applied to identify the learning styles of students. For this purpose Grasha and Riechmann's (1975) learning style opinionnaire was adopted according to Pakistani scenario. The instrument was comprised of sixty statements assessing six learning styles (ten statements for each style) namely independent, dependent, collaborative, competitive, participant and avoidant. The Statements were designed to respond on five point Likert Scale. The option were coded as strongly agreed =5, agreed=4, undecided=3, disagreed=2, strongly disagreed=1

Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

The instrument was translated in urdu language with the help of language experts of different universities. The instrument was pilot tested at one of the school of Attock city. It was finalized in the light of student's queries and expert opinion of the experts. The reliability was calculated by cronbach's alpha and it was found 0.75.

The instrument was administered to the students in their class with the help of their teacher. The students responded to the opinionnaire at their own.

- **Statistical Technique**

t-test was used to calculate the significant difference between learning styles of male and female students enrolled at private and public schools.

4. Data analysis

Data was analyzed and interpreted in following tables.

Table 1: Gender-wise difference in learning styles

Learning Styles	Male(N=57)		Female(N=55)		t-value	p-value	significance
	Mean	SD	Mean	SD			
Independent	2.42	.653	2.75	.440	3.072*	.003	S
Dependant	2.63	.555	2.91	.290	3.290*	.001	S
Collaborative	2.79	.453	2.98	.135	3.024*	.003	S
Competitive	2.91	.285	3.00	.000	2.279*	.025	S
Participant	2.46	.537	2.91	.290	5.526*	.000	S
Avoidant	2.37	.487	2.35	.480	0.251	.802	NS

*Significant at $\alpha=.05$

S = Significant

NS = not Significant

df = 110

Table-1 shows the difference in opinion of male and female students on learning styles. The t-value for independent, dependant, collaborative, competitive and participant learning style was found significant at .05 level of significance. However, in case of avoidant learning style it is not significant. The mean value of female students for all these learning styles was higher than the mean value of male students which indicates that female students prefer independent, dependant, collaborative, competitive and participant learning styles; whereas the mean value of male students for avoidant learning style is higher (2.37) as compared to the mean value (2.35) of female students although t-value (.251) is not significant but it shows the male students have slight preference for avoidant learning style. Therefore the null hypothesis rejected and it is accepted that there is significant difference in learning styles of male and female students.

Table 2: Institution-wise difference in learning styles

Learning	Public School	Private School	t-value	p-value	significance
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Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

Styles	Students (N=80)		Students (N=32)				
	Mean	SD	Mean	SD			
Independent	2.59	.589	2.56	.564	.205	.838	NS
Dependant	2.75	.490	2.81	.397	.641	.523	NS
Collaborative	2.86	.381	2.94	.246	1.029	.306	NS
Competitive	2.94	.244	3.00	.000	1.447*	.151	S
Participant	2.70	.488	2.63	.492	.733	.465	NS
Avoidant	2.45	.501	2.13	.336	3.376*	.001	S

*Significant at $\alpha=.05$

S = Significant NS = not Significant

df = 110

Table-2 indicates the difference in opinion of students enrolled at different institution.

The t-value (1.447) and (3.376) for competitive and avoidant learning style respectively is significant. The mean value of students enrolled at private institution is higher (3.00) as compared to the mean value of students enrolled at public institution (2.94) for competitive learning style. It indicates that the students of private institution prefer competitive learning style. The mean value of students of public institution is high (2.45) than the mean value of students of private institution (2.13) for avoidant learning style. It described that the students of public institutions preferred avoidant learning style. In this way the null hypothesis rejected and it is accepted that there is significant difference in learning styles of public and private school students. For other learning styles no difference in opinion of the students of public and private institutions was found.

5. Findings

The findings of the study lead to the inference that female students prefer independent, dependant, Collaborative, competitive and participant learning styles (table-1).

The findings regarding the institutions were the students of private institution prefer competitive learning style, whereas, the students of public institutions prefer avoidant learning style (table-2).

6. Conclusion

On the basis of findings it is concluded that there is significant gender-wise difference in learning style of male and female students. Further it is also concluded that there is significant difference in learning styles of public and private school students.

7. Discussion

Different people have different learning style preference. This is may be because of the individual differences. The finding of the study showed that female students preferred different learning style then the male students. This findings strengthen the findings of

Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

the studies conducted by Hopkin (1982); Bishop (1985); Cohen (1986); Sing (1987); Verma (1989) and Verma and Kumari (1989) which also showed similar findings. The other finding of the study was about the institutional effect on learning style. Private and public institution students showed different preference for learning styles. This result was also support the studies conducted by Rissler (1980); Aggarwal (1982); Cooper (1991); Misra and Tiwari (1992) and Verma (1996); all showed that type of institution effects learning styles except the study of Johanson (1987) which showed no effect. The results however are not comparable because of the use of different tools of learning styles.

The reason of these findings seems to be true. The first finding of difference in learning style of male and female students is due to biological, sociological and cultural differences. But the second result of institution-wise difference in learning style is alarming. It was astonishing as the public institutions heir trained teachers as compared to the private institutions. Most of the teachers of private institutions are untrained. The Government of Pakistan is investing a significant amount to run the public institutions but the students enrolled there showed preference for avoidant learning style, which means they prefer out of class study. They are not interested in classroom activities. There may be many reasons the teaching methodology, the teacher's behavior, the student teacher relationship, the school environment etc which is unable to attract students attention to study in class. When they do no prefer to study in class they try to join tuition academy. This promotes tuition culture which may affect the socio-economic status of the parents. This situation is dangerous for public sector institutions. The administrators the teacher must look in this situation for the safe future of nation.

On the other hand, the students of private institutions prefer competitive learning style. The reason may be the parents' pressure as they invest more on the education of their children they expect more.

In the light of the findings of the study it is recommended that the classroom environment of public institutions may be made more attractive. The new trends in pedagogy may be used for teaching. The students centered approach may be adopted to keep the students in class. The pre-service and in-service teacher training programs may be designed and equip the teachers to perform better for students learning.

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Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students

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Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

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Language in India www.languageinindia.com

11 : 10 October 2011

Zarina Akhtar, Ph.D.

Gender-wise and Institution-wise Difference in Learning Styles of Secondary School Students