

## Students' Learning Satisfaction at Higher Education Institutions (HEIs): Do the Teaching Strategies make a difference?

Dr. Syed Abdul Waheed<sup>1</sup>

### Abstract

Teaching practices influence the learning process, activities, and students' satisfaction. The current study investigates students' perceived learning satisfaction with different teaching strategies practiced by university teachers in the Punjab. The ex-post facto study was conducted using survey research by selecting 510 students and 55 university teachers through multi-stage random sampling. Self-developed instruments, namely, Identification of Prospective Teachers' Learning Satisfaction and Practiced Teaching Strategies, were employed to test null hypotheses. A paired samples t-test was applied, and one-way ANOVA was used to determine overall similarities and dissimilarities in learning satisfaction with identified teaching strategies. It was found that discussion in the classroom, verbal presentations, question and answer, lecturing, and writing assignments were often practiced teaching strategies. Students were most satisfied with discussion in the classroom, traditional Lecturing, and verbal presentations and least satisfied with writing assignments. Thus, teaching strategies had a different impact on learning satisfaction. The study has implications for selecting appropriate teaching strategies and emphasizes increased students' learning satisfaction through interactive teaching strategies.

**Keywords:** Learning motivation, learning attitude, Learning interest, prospective teacher, teacher educator, teaching strategy.

### 1. Introduction

Learning of students and their satisfaction with the teaching-learning process is the main focus of most teaching practices. Educationists have been highly concerned with supporting and emphasizing better teaching practices by refining the condition of learning and instruction experiences, eventually satisfying students (Cho et al., 2021; Mahmood, 2004; Prifti, 2022). The study reveals that the students' satisfaction is influenced by the teaching strategies used in the classroom. It indicates that students' learning styles and teaching strategies are crucial to their learning satisfaction and attitude. Chao et al. (2006) describe that teachers can initiate students' satisfaction with learning by introducing specific teaching practices and approaches to learning. Knutson (2014) disclosed that carefully implementing and selecting a teaching strategy is significantly related to students' learning satisfaction.

It has been spotted that teaching strategies affect students' learning satisfaction in different magnitudes. This concept is a form of sentiments or passion for certain learning initiatives. (Chao et al., 2006). Mousouli (2004) points out that educational programs can be assessed by measuring.

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<sup>1</sup>Assistant Professor, Department of Educational Studies, Faculty of Education, University of Okara, 56300, Pakistan. E-mail: [s.a.waheed@uo.edu.pk](mailto:s.a.waheed@uo.edu.pk)

students' satisfaction with learning and the educational process because their satisfaction shows their learning needs, academic expectations, and the extent to which they can be achieved. Conversely, Tessema, Ready, and Yu (2012) asserted that learning content is particularly associated with the quality of teaching and students' satisfaction

Students' satisfaction is affected by several other factors, including all services related to education provided by the institution and mainly the teachers' attitude and quality of teaching towards educating their students. Chao et al. (2006) described it as "along with learning environment, courses, teachers, student's reasons, etc. all influence, possibly, on the learning satisfaction" (p. 142). Nevertheless, one of the crucial effects on students' experience in universities is the faculty. For this cause, according to Malik, Abbasi, Chaudhry, and Imdadullah (2011), universities have taken specific measures to assess teaching quality and effectiveness through students' feedback and other processes to improve their learning experiences and satisfaction. Similarly, Lee (2008) describes that students' outcomes and results can be evaluated by assessing their satisfaction in learning.

There are specific methods to ascertain students' satisfaction with the teaching process. Students' academic achievement can determine their satisfaction (Abbas et al., 2020), but Amina and Shehla (2011) express that it is not only academic achievement that can ascertain how satisfied the students are with the quality of teaching and their learning. It needs a robust analysis of all other indicators of students' learning satisfaction that contribute indirectly or directly. It was highlighted that teachers use various type of practices to enhance the possibilities of students' success and satisfaction (Chao et al., 2006). Supporting the arguments on assessing learning satisfaction through students' feedback, Sajjad (2011) reflects that students' responses and perceptions about teaching effectiveness are crucial in measuring their learning attitude, interest, and motivation, which can further guide improvements in teaching quality and learning experiences.

Students' satisfaction causes many emotions and positive feelings explaining that the greater the degree of satisfaction of the students, the higher is the probability of their performance which can further lead to more interest, interaction and attention towards the studies (Wang & Carlson, 2011). Similarly, Graham and Fan (2007) stated that the quality of writing, motivation, and learners' satisfaction is further improved if freedom is provided to select the title. It was noted that students seemed to like sharing, but data do not support that sharing increased improvement in students' writing attitude or written work quality (Bervell et al., 2020; Hukill, 2008; Shaheen et al., 2023; Waheed et al., 2022). On the contrary, they showed a positive attitude and appeared to have better quality assignments when it was pre-established to publish their work. Thus, the current study on students' learning satisfaction with the strategies used by university teachers can promote learning satisfaction and guide them to appropriate teaching practices.

## **2. Hypotheses**

The following hypotheses were formulated for the execution of the study:

H<sub>01</sub>: Classroom discussion and lecturing strategies do not significantly affect students' learning satisfaction.

H<sub>02</sub>: Verbal presentations and lecturing strategies do not significantly affect students' learning satisfaction.

H<sub>03</sub>: Writing assignments and lecturing strategies do not significantly affect learning satisfaction.

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H<sub>04</sub>: Verbal presentations and discussion in the classroom make significantly no difference in students' satisfaction with learning.

H<sub>05</sub>: Discussion in the classroom and writing assignments significantly do not affect students' satisfaction with learning.

**H<sub>06</sub>: Verbal presentation and writing assignment strategies do not significantly affect learning satisfaction**

### **3. Methods and Procedure**

#### **Research Design**

The current study, from a broader perspective, is quantitative research. It is a survey type of study since we employed a rating scale and questionnaire to survey the respondents. Furthermore, it was conducted in a natural setting of universities, so the research is ex-post facto, and the following procedural steps were undertaken based on the nature of the current study.

#### **Selection of Sample**

The teacher educators and students of MA Education studying in the public sector universities in Punjab constituted the study population. One education department was randomly selected from six public universities in the province. All fifty-five teacher educators were included in the study sample. Similarly, all the 510 students of MA Education who were studying in the selected departments of education constituted the prospective teachers' sample.

### **4. Data Collection**

A rating scale was developed to explore the strategies used by the university teachers in the classroom. It was also used to assess the teaching practices on a scale starting from (1) "never" to (5) "very often". After reviewing the previous studies, ten innovative and most beneficial strategies for teaching in higher education were incorporated into this scale. The prospective teachers' learning satisfaction questionnaire was made to ascertain the impact of the teaching strategy identified through the rating scale on the learning satisfaction of future teachers. This instrument for data collection comprised thirty-six questions with responses ranging from strongly agree to disagree strongly. Three experts took part in validating the questionnaire. Each rephrased some of the statements and replaced a few phrases/words.

### **5. Data Analysis**

The data were collected through the Rating Scale for the identification of Strategies of teaching that are Practiced and the Learning Satisfaction of Prospective Teachers. Questionnaires were analyzed through Statistical Package for Social Sciences (SPSS, Version-24). One-way ANOVA was also applied to investigate overall dissimilarities in the Learning Satisfaction of Prospective Teachers with the teaching strategies. A paired samples *t*-test (2-tailed) was used at  $p < 0.05$  to ascertain the dissimilarities of Learning Satisfaction. Moreover, descriptive statistics were calculated to assess learning satisfaction and students' motivation, interest, and attitude.

### **6. Results**

Teacher educators' teaching strategies were identified before determining prospective teachers' learning satisfaction. Table 1, given below, shows the mean values of the practices teaching strategies in higher education institutions.

Table 1

## Teaching Strategies Practiced by the University Teachers

Teaching Strategy	Mean	SD
Lecturing	4.38	0.78
Using Multimedia with lectures	2.24	1.26
Discussion in the classroom	4.42	0.62
Verbal Presentations	4.47	0.73
Written Assignments	4.38	0.71
Q & A	4.38	0.75
Brain Storming	3.09	0.87
Demonstration	2.87	0.84
Role-playing	2.22	0.90
Case Study	2.29	0.94

It is visible from Table 1 those teaching strategies: discussion in the classroom ( $M=4.42$ ), students' verbal presentation ( $M = 4.47$ ), writing assignments ( $M = 4.38$ ), question and answers ( $M = 4.38$ ), and lecturing ( $M=4.38$ ) show mean scores higher than 4 (often practiced). Therefore, these strategies were selected except for the Question and Answer used in classroom discussion and Lecturing.

### Testing of Hypotheses

In addition to descriptive statistics, inferential statistics were also used during the analysis. Thus, to test the hypotheses at  $\alpha= 0.05$  level of significance, a Paired samples *t-test* was used. The interpretations and analyses of the results are presented here.

#### **H<sub>01</sub>: Classroom discussion and lecturing strategies do not significantly affect students' learning satisfaction.**

The statistics shown in Table 2 point out that the *t*-value ( $t= -3.68$ ,  $p < 0.05$ ) is significant for students' satisfaction. Therefore, a substantial difference was found in MA students' satisfaction with traditional lectures and classroom discussions. Their learning satisfaction is more effective with discussion ( $M = 38.38$ ) than traditional Lecturing ( $M = 37.72$ ). Thus, the discussion in the classroom has more influence on learning satisfaction than the lecturing strategy.

Also, the learning attitude ( $t = -0.61$ ,  $p > 0.05$ ) does not vary significantly in discussions in the classroom and lecturing. Nevertheless, there is a significant difference in their learning motivation ( $t = -7.96$ ,  $p < 0.05$ ) and learning interest ( $t = 2.34$ ,  $p < 0.05$ ) in lecturing and discussions in the class. MA students' learning motivation is higher in discussions in the class ( $M = 12.63$ ) than lecturing ( $M = 11.84$ ), indicating that discussion in the classroom had more impact on their motivation to learn. On the other hand, they exhibited more learning interest in lecturing ( $M = 12.86$ ) than in discussions in the classroom ( $M = 12.67$ ).

Table 2

Paired samples t-test at  $\alpha=0.05$  for Learning Satisfaction with Lecturing and Discussion

L. Satisfaction/ PTLSQ Sub-scale	Mean		Mean Dif.	SD		t-value	Sig.(2-tailed)
	Lecture (L)	Discussion (D)	L-D	L	D		
L. Satisfaction	37.72	38.38	-0.65	3.06	3.87	-3.68	0.00
L. Attitude	13.02	13.07	-0.05	1.40	1.58	-0.61	0.55
L. Motivation	11.84	12.63	-0.79	1.52	1.81	-7.96	0.00
L. Interest	12.86	12.67	0.19	1.59	1.54	2.34	0.02

**H<sub>02</sub>: Verbal presentations and lecturing strategies make no significant difference in students' learning satisfaction.**

Paired samples t-test results at  $\alpha=0.05$  illustrated in Table 3 demonstrate that t-value ( $t=4.39$ ,  $p<0.05$ ) is significant for learning. Thus, the null hypothesis is rejected. It is established that verbal presentation and lecturing strategies significantly affect students' learning satisfaction.

Table 3

Lecturing and Verbal Presentations

LS/PTLSQ	Mean		Mean Dif.	SD		t-value	Sig. (2-tailed)
	Lecture (L)	Presentation-P	L-P	L	P		
L. Satisfaction	37.72	36.83	0.89	3.06	4.20	4.39	0.00
L. Attitude	13.02	11.72	1.30	1.40	2.18	11.34	0.00
L. Motivation	11.84	12.52	-0.68	1.52	1.60	-7.01	0.00
L. Interest	12.86	12.58	0.28	1.59	1.73	3.20	0.00

**H<sub>03</sub>: Writing assignments and lecturing strategies make no significant difference in students' learning satisfaction.**

The paired samples t-test results for comparison of mean scores shown in Table 4 show that the t-value ( $t=5.76$ ,  $p<0.05$ ) is significant for the satisfaction of learning. Hence, the null hypothesis is rejected. As a result, writing assignments and lecturing strategies significantly impact students' learning satisfaction.

Table 4

*Paired Samples t-test*

LS/PTLSQ Sub-scale	Mean		Mean Dif.	SD		t-value	Sig. (2-tailed)
	Lecture (L)	Assignment-A	L-A	Lecture	Assignments		
L. Satisfaction	37.72	36.50	1.22	3.06	4.07	5.76	0.00
L. Attitude	13.02	12.70	0.32	1.40	1.66	3.38	0.00
L. Motivation	11.84	12.04	-0.20	1.52	1.90	-1.85	0.07
L. Interest	12.86	11.76	1.10	1.59	1.97	9.78	0.00

**H04: Verbal presentations and discussion in the classroom make no significant difference in students' learning satisfaction.**

Table 5 reflects that t-value ( $t=8.56$ ,  $p < 0.05$ ) is significant for the satisfaction of learning. Therefore, there was a substantial difference in students' learning satisfaction taught with oral presentations and discussions in the classroom. They showed more learning satisfaction with discussions ( $M = 38.38$ ) than verbal presentations ( $M = 36.83$ ). P-values given in Table 5 reflect that students' attitudes to learning ( $t = 12.50$ ,  $p < 0.05$ ) towards oral presentations and discussions vary significantly. They show a more positive attitude ( $M = 13.07$ ) towards discussions than verbal presentations. Thus, discussions had more influence on students' attitudes than oral presentations.

Table 5

*Learning Satisfaction with Discussions and Verbal Presentations*

LS/PTLSQ Sub-scale	Mean		Mean Dif.	SD		t-value	Sig. (2-tailed)
	Discussion (D)	Presentation (P)	D-P	Discussion	Presentation		
L. Satisfaction	38.38	36.83	1.55	3.87	4.20	8.56	0.00
L. Attitude	13.07	11.72	1.35	1.58	2.18	12.50	0.00
L. Motivation	12.63	12.52	0.11	1.81	1.60	1.20	0.23
L. Interest	12.67	12.58	0.09	1.54	1.73	1.11	0.27

**H05: Writing assignments and discussions in the classroom make no significant difference in students' learning satisfaction.**

Paired Samples t-test results in Table 6 reflect that t-value ( $t=8.87$ ,  $p < 0.05$ ) is significant for the satisfaction of students' learning. Therefore, the null hypothesis is rejected. Hence, there is a substantial difference in students' satisfaction with learning taught with writing assignments and discussions in class.

Table 6  
*Learning Satisfaction with Discussion and Writing Assignment.*

LS/PTLSQ Sub-scale	Mean		Mean Dif.	SD		t-value	Sig. (2-tailed)
	Discussion (D)	Assignments (A)	D-A	Discussion	Assignments		
L. Satisfaction	38.38	36.50	1.88	3.87	4.07	8.87	0.00
L. Attitudes	13.06	12.69	0.29	1.49	1.59	3.87	0.00
L. Motivations	12.57	12.13	0.47	1.79	1.89	5.18	0.00
L. Interests	12.35	11.58	0.89	1.48	1.86	8.39	0.00

**H<sub>06</sub>: Writing assignments and verbal presentation strategies do not significantly affect students' learning satisfaction.**

Data analysis results on PTLSQ in Table 7 show that the t-value ( $t=1.72$ ,  $p > 0.05$ ) is insignificant. Therefore, the null hypothesis is rejected. Thus, writing assignments and verbal presentation strategies do not significantly affect students' learning satisfaction.

Table 7  
*Paired Samples t-test Results*

LS/PTLSQ Sub-scale	Mean		Mean Dif.	SD		t-value	Sig. (2-tailed)
	Presentation (P)	Assignments (A)	P-A	Presentation	Assignments		
L. Satisfaction	36.83	36.50	0.33	4.20	4.07	1.72	0.09
L. Attitude	11.72	12.70	-0.98	2.18	1.66	-9.09	0.00
L. Motivation	12.52	12.04	0.48	1.60	1.90	4.95	0.00
L. Interest	12.58	11.76	0.82	1.73	1.97	7.89	0.00

One-way ANOVA was used to calculate overall dissimilarities in satisfaction of learning with identified teaching strategies. The outcomes regarding ANOVA are given in the following table.

Table 8

*One-Way ANOVA at  $\alpha=0.05$* 

PTLSQ	Teaching Strategies	Mean	SD	Between Groups/ Within Groups	Sum of Squares	Df	Mean Square	F	Sig.
Learning Satisfaction	Lecturing	37.68	3.06	Between Groups	1002.24	3	334.08	22.83	0.00
	Discussions	38.29	3.87						
	Verbal Presentations	36.79	4.20	Within Groups	26750.86	454	14.63		
	Assignments Writing	36.49	4.07						
				Total	27753.10	457			

The results shown for the satisfaction of learning in Table 8 show that F-value ( $F=22.83$ ,  $p < 0.05$ ) is significant. It indicates that discussions in the classroom ( $M=38.38$ ) had the greatest mean score value, while assignment writing ( $M = 36.50$ ) had the lowest value on mean scores among the four strategies.

Table 9

*One-Way ANOVA at  $\alpha=0.05$  for Learning Attitude toward Teaching Strategies*

PTLSQ sub-scale	Teaching Strategies	Mean	<i>SD</i>	Between Groups/ Within Groups	Sum of Squares	Df	Mean Square	F	Sig.
Learning Attitude	Lecturing	13.02	1.40	Between Groups	539.38	3	179.79	60.19	0.00
	Discussions	13.18	1.58						
	Verbal Presentations	11.81	2.18	Within Groups	5460.73	454	2.99		
	Assignments Writing	12.69	1.66						
				Total	6000.11	457			

Table 9 indicates that F-value ( $F= 60.19$ ,  $p < 0.05$ ) is significant for the attitude toward learning, reflecting substantial differences in the attitude toward learning towards the teaching strategies. It indicates that discussions in the class ( $M = 13.07$ ) had the greatest mean score value on the attitude of learning, and verbal presentation (11.72) had the least value.



Table 10

*One-Way ANOVA at  $\alpha=0.05$  for Learning Motivation toward Teaching Strategies*

PTLSQ Sub-scale	Teaching Strategies	Mean	<i>SD</i>	Between Groups/ Within Groups	Sum of Squares	Df	Mean Square	F	Sig.
Learning Motivation	Lecturing	11.79	1.52	Between Groups	196.12	3	65.37	22.14	0.00
	Discussions	12.59	1.81						
	Presentations	12.48	1.60	Within Groups	5398.68	454	2.95		
	Assignments	12.13	1.90						
				Total		5594.80	457		

Table 10 shows that there are differences, which are significant in students' motivation in learning ( $F= 22.14, p < 0.05$ ) towards the strategies of teaching. It shows that education strategies had a significantly varying effect on students' motivation to learn. It shows that discussion in the class ( $M = 12.63$ ) had the maximum mean score value on motivation in learning, while lecturing ( $M = 11.84$ ) had the smallest.

Table 11

*One-Way ANOVA at  $\alpha=0.05$  for Learning Interest in Teaching Strategies*

PTLSQ Sub-scale	Teaching Strategies	Mean	<i>SD</i>	Between Groups/ Within Groups	Sum of Squares	Df	Mean Square	F	Sig.
Learning Interest	Lecturing	12.86	1.59						
	Discussions	12.59	1.54	Between Groups	328.77	3	109.59	37.14	0.00
	Presentations	12.49	1.73						
	Assignments	11.68	1.97	Within Groups	5393.58	454	2.95		
				Total	5722.35	457			

The  $F$ -value as provided in Table 11 also reflects that there are differences, which are significant in students' interest in learning ( $F= 37.14, p < 0.05$ ) in strategies of teaching. To put it in another way, strategies of teaching had significantly varying effects on their interest in learning. It is evident that traditional Lecturing ( $M = 12.86$ ) had the greatest mean score value on students' learning interest. On the contrary, assignment writing ( $M = 11.76$ ) had the lowest.

## 7. Discussion & Conclusion

The results of the study are mentioned here, taking into account the reviewed literature. Traditional Lecturing, discussions in the classroom, writing assignments of prospective teachers, question and answers, and verbal presentations are often used as teaching strategies. Previous studies found that the learners scored higher in the lessons taught by the discussions and consequently, their learning was enhanced through the discussion method. Also, research on learning satisfaction shows that participatory learning methods help students' actively

engage and be involved in learning activities and enhance their learning experiences and satisfaction (Bervell et al., 2020; Prifti, 2022; Freeman et al., 2014; Yılmaz, 2016).

Similarly, according to the present study, interest in learning these strategies differs significantly. The findings of previous studies also agree with this result (Sanasuttipun et al., 2009; Petrina, 2007). It was revealed that the motivation in students' learning was greater in discussion in class than in traditional Lecturing. The literature points out that it was consistent with many previous studies. The third study was conducted on students who were enrolled in an undergraduate psychology class on two different campuses, and they demonstrated their preferences for using PowerPoint presentations in the class.

Another finding of the present study is that prospective teachers show more satisfaction in learning with lecturing than writing assignments. This aligns with previous research by Abbasi et al. (2011) and Sajjad (2011). According to Sajjad (2011), the "students rated lecture method as the best teaching method" in her study of 220 undergraduate students. Also, the present study showed that the students demonstrate more interest and positive attitudes in traditional lecturing than in writing assignments.

Moreover, it was found that the students demonstrated more satisfaction in learning with discussion in class than oral presentations, reflecting that discussion had more effect on their satisfaction in learning than oral presentations. The finding is consistent with the study done by Abbasi et al. (2011). Similarly, Hyun, Ediger, and Lee (2017) found that activity-oriented teaching strategies are critical in enhancing students' learning satisfaction. Moreover, "knowledge, involvement, enjoyment, and active learning" were the main determinants of students' satisfaction while using instructional technology (Cho et al., 2021; Gilani et al., 2020; Green et al., 2018; Prifti, 2022).

It was reflected in the present study that the students showed a better and more positive attitude toward assignment writing than verbal presentation. In agreement with this conclusion, this was found by Brent & Felder (1992) and Hughes (n. d.). On the contrary, they show greater interest and motivation in verbal presentations than in assignment writing. It contradicts the results of Dirks (1997); however, this is in line with the findings by Hamm (2008).

It can be concluded from the paired samples t-test that students' satisfaction in learning was higher with discussion in class than with traditional Lecturing, writing assignments, and verbal presentations. Students demonstrated greater learning satisfaction with more interactive teaching strategies, such as discussions, than traditional Lecturing. Moreover, students expressed more satisfaction in learning with discussion in class than oral presentations because they may hesitate to deliver verbal presentations compared to class discussions. They may feel less stress due to shared participation in a discussion session than a single-handed, relatively one-way oral presentation. On the contrary, they showed greater learning satisfaction with lecturing when compared with writing assignments and verbal presentations. It might be why verbal presentations tend to be more 'threatening' for students due to their 'full exposure' before their fellow students and writing assignments requiring a great deal of intellectual capacity, analytical and critical thinking, and organization ability. In addition, most students 'feel easy' to become passive in the class compared to the demand for the more remarkable ability of compilation and composition in writing assignments.

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