

The Moderating Role of Learning Performance on Teaching Competencies and Student Satisfaction

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ABSTRACT

Purpose:

The purpose of this study was to investigate the moderating role of the learning performance of the student on the relationship of teacher's competencies and student satisfaction in higher education institutions of Karachi.

Methodology:

Three different scales namely SETs, Teaching Competence scale, and learning performance scale were used to measure student satisfaction, teaching competencies, and performance learning of students respectively. A survey method was used to collect firsthand data from tier3 universities of Karachi.

Findings:

The positive impact of teachers' competencies on student satisfaction has been observed. The result shows that the learning performance of students is partially moderating the relationship.

Conclusion:

The study concluded that there is a significant positive impact of teacher's competencies on student satisfaction. The higher teaching competencies lead to greater student satisfaction. Also Learning performance of students from tier3 universities of Karachi has a significant impact on the relationship between student satisfaction and teacher's competence.

1. Introduction

Higher education typically means all education and training provided after post-secondary schooling at institutions such as universities that are authorized by governments around the world (Hunter, 2020; Rodriguez, 2016). It is not limited to degree programs but also short-term courses, technical training, and distance learning courses. As higher education is facing changes continuously, the standards of teaching have become critical issues (Vanderlinde et al., 2016). New teaching methods are required to deal with an increased number of students. Classrooms have modern technologies modified, and more interactive tools have also been introduced in classrooms (Rapanta et al., 2020). But still, stakeholders, i.e., students, employers, regulatory bodies, education commission, and government, seek for most efficient teachers. They demand quality against their money (Nair, 2017). National Council for Teacher Education stated the teacher is the most important element in any educational program (Dc, 1998). Researchers say that the progress of school is ultimately dependent on teacher quality. Teachers are the most significant human force in institutions that transform students into successful employees (Hanushek et al., 1998). The quality of a nation depends upon the quality of its citizens. The quality of its citizens depends not exclusively, but in a critical measure upon the quality of their education, the quality of their education system depends upon the quality of their teacher (Chauhan & Sharma, 2015).

The resources of any Institution give optimum results only if they are utilized effectively. Human resource is an essential asset and form the intellectual capital of any setup (Dung et al, 2021). In education, teachers are among the most critical factors that function not only as guides and facilitators of knowledge but also as inculcators of values and transformers of inner being (Gul & Dr. Showkeen, 2017). The employee of any institution needs to demonstrate that they can add value to the institution thus, to produce quality individuals, we need quality teachers (Rice, 2003).

The job of Teachers today has progressively changed and become more challenging (Tri et al,2021). From transmitting the knowledge and skills to developing the interest and boosting talents among students, teachers play a vital role in their field. Teachers are also supposed to help students develop logical, cognitive, and creative thinking abilities in line with the learning system's objectives, leading to adaptable and flexible individuals who can easily adjust to different environments. Empathy among students and teachers plays an essential role in nurturing meaningful learning (Hargreaves, 1979).

Improving the professionalism among teachers can enhance the quality of education (Susanto,2021). Teacher competence is required to increase teacher professionalism and national education quality. Teachers and learning environments are most successful when students are motivated and engaged (Peltier et al., 2005). The best educational institutions could regress without skilled teachers, while a typical institution equipped with qualified and competent teachers could validate itself as the best (Abid et al., 2017).

Rapid growth has been witnessed in the higher education sector of Pakistan in the last decade, and many new institutions have entered the market. As a result, in recent years, students have placed a greater emphasis on obtaining degrees that will equip them with the knowledge and skillset desired by the market. Various researches have shown that students are becoming dissatisfied with teachers (Göksoy, 2017). As a service provider, a university must undertake a study to determine the level of satisfaction of its consumers, in this case, its students (Banerjee & Brinckerhoff, 2002). Universities can assess how

well they fulfill or surpass student needs by focusing on student satisfaction. Therefore, it has become necessary for the professionals working in the educational sector to make sure that good quality education is being provided and in this competitive world, the expectations of students are successfully fulfilled. This demands researchers, university administration, and teachers to analyze and explore students' expectations of quality education. Education is heavily influenced by teachers' performance in carrying out their responsibilities; hence teacher performance has become a critical aspect in achieving educational success and quality education (Rahmawati et al., 2019). The current study is based on the theory of action which states that specific action leads to desired results. In this case, universities can work on teachers to increase their customer satisfaction. As stated in action theory, improving the quality of teaching universities can optimize their customer satisfaction.

The Pakistani higher education system needs quality improvement, as the demand of this era. The higher education system in Pakistan is under debate based on its quality (Aziz et al., 2014). The quality is directly associated with the faculty knowledge, skills, and competency level (Jocelyn et al, 2021). Several studies show that the quality of education in educational institutions has various determinants, among which teacher competence is one of the keys and constant indicators (Bhargava, 2011). Numerous factors determine a teacher's performance which includes Job-satisfaction, Job motivation (Fogaça et al., 2018) Skills, attitudes, Compensation, Leadership, Work-life conflicts, Workplace environment (Khan & Jabbar, 2013).

Presently, Pakistan is struggling against improving professionalism in teachers. The system faces a huge challenge, especially in terms of teaching competencies (Khan et al., 2017). To be a successful teacher, teachers need to work on some competencies such as intellectual ability, management, interpersonal and professionalism (Rapanta et al., 2020). There is a need to study the relationship of teachers' competence that leads to the higher learning performance of students in the Pakistani context. Competency mapping is an important step for the success of any organization. It helps in recruiting the right person, training them, and nurturing the right candidate for the job. It is equally important in the education sector as it is important in the corporate world. Hence, this study aims to establish a relation between the teacher's competence, student satisfaction, and learning performances. Based on this following are the objectives of the research:

1. To Empirically testing the impact of teaching competencies on student satisfaction from the perspective of higher education institutions.
2. To Empirically testing the moderating effect of learning performance on the relationship between Teaching competence and student satisfaction.

2. Literature Review

2.1. Competence

McClelland (1973) argued that success might not be predicted by achievement and intelligence scores. It is essential to outline the correct competencies required to perform effectively at the job. Then these competencies can also be assessed by various tests. According to McClelland, Competence is a personal trait or set of habits that lead to more effective or superior job performance, in other words, an —ability that adds clear economic value to the efforts of a person on the job (McClelland, 1973). “Competence” or “Competent” alludes to a state of being able and skillfully fit (Hoffmann, 1999). The generally accepted and relevant definition of competence in human resources is “an underlying characteristic of a person which results in effective and superior performance

on the job” (Klemp, 1980). It can also be described as skills, areas of expertise, attitudes, and capacities that separate higher performers (Woodruffe, 1993) found that competence is the ability that is different from the attribute. The author considered competence as conduct and stated that people could have a similar competency level, but their execution makes them different. Competencies are the job elements exhibited in actions that can easily be observed in the workplace. The most cited ones are knowledge, skills, abilities, attitudes, aptitudes, appropriate behavior, and impact on performance outcomes at work (Sanghi, 2007). Although the meaning and scope of the word “Competency” are still under discussion (Shippmann et al., 2000). Teaching competence is "the ability to teach successfully" and defines teacher competencies as "the knowledge, skills, and attitudes that satisfactorily fulfill the social and professional needs of teaching jobs and result in effective learning (Rice, 2003). Competency is defined as the skills, abilities, or potential of an individual to perform well (Boyatzis, 2008; Brophy & Kiely, 2002). It is found as the arrangement associated with a complex set of activities, structured around the fundamental constructs known to be 'intent' (Boyatzis, 2008).

Teachers must have a specific level of information and certain attitudes and skills to organize their job tasks effectively. While competencies are the prerequisites that a teacher must meet to execute their work successfully, they also encompass the knowledge, abilities, and values that the teacher must display (Aziz et al., 2014).

In this study, the researcher adopted the idea of three main “components of competencies” from “Teacher competence and student conflict handling strategies.” Those components are “interpersonal skills,” “classroom procedures,” and “subject knowledge.” The first factor covers the area of social competence, for example, the ability of a teacher to communicate with the students, positive approach towards students, ability to understand students’ learning difficulties, building trust, and acknowledging students. The second component comprises teaching skills; it talks about the organization and teaching ability of a teacher. Ability to use advanced teaching methods, creating a flexible and exciting learning environment for the students. The last component is all about subject knowledge, which includes expert knowledge, planning, and structuring of the course content (Malm & Löfgren, 2006).

2.2. Student Satisfaction

Student Satisfaction is based on a student's assessment of various outcomes and experiences that are directly related to their education (Oliver et al., 1989). A study was conducted at Bahauddin Zakariya University to investigate student satisfaction in Pakistani universities. They studied the satisfaction level of students with the services universities are providing in Pakistan. Examining and comparing significant differences in satisfaction levels across gender and other programs/disciplines constitute the foundation for primary objectives. Surprisingly, there were no significant differences in opinion between male and female respondents. Generally, satisfaction is incredibly low, and the findings imply that university students are dissatisfied with educational services provided by Pakistani universities (Abbasi et al., 2011).

According to Northrup, If the course contents are relevant and useful, and feature real-world examples, facts, and happenings, students are more generally satisfied (Northrup, 2001). Furthermore, course design must allow for extensive communication, as communication directly impacts students' learning, satisfaction, and retention. On the other hand, learning outcomes may have an impact on a student's performance. It might be considered as cognitive and emotional variables. Learning achievements are regarded

as essential cognitive characteristics. Theoretical and methodological knowledge, problem-solving abilities, personal/social competencies (e.g., self-regulated or collaborative learning), or media competency are all examples of competencies (Weinert, 1999). Whereas emotional variables such as student satisfaction with a course play a vital role in decision making, such as continuing or dropping a course (Chiu et al., 2005; Levy, 2007).

Various instruments linked to "Higher educational Student Satisfaction" (Melese, 2017) and the association with multiple variables have been explored in previous studies (Sooriyabandara et al., 2018). The majority of the models differ due to the variables employed in each scenario and terms of methodology. For this study, the research uses four constructs: teaching and learning, learning and research environment, Student management and guidance, and Logistics services adopted from "Student Satisfaction Scale Development and Application for Sport Management in China" (Liu et al., 2016).

Student satisfaction factors involve a well-organized admission process, registration process, an environment of the campus, student facilities and campus climate, curriculums, assistance for completing the MBS, and course financing. The "Learning Environment" has been identified as the most influential element in student satisfaction among all the variables (Saleem et al., 2012). "Infrastructure and facilities, Academic management, and Academic Support Services" have a relation to "Student Satisfaction" and should be given greater attention to satisfy students (Isaac, 2012).

2.3. Learning Performance

Various factors of student's learning performance can be measured including aptitude, skills, students' self-evaluation of knowledge as well as their motivation to learn more (Young et al., 2003). It is frequently linked to a favorable attitude towards the subject, teacher, and environment. Teachers are more inclined to commit themselves to their students if students have favorable attitudes on their learning successes (Paswan and Young, 2002). As a result, students will have a more favorable opinion of their teachers' approaches. Teachers' competence, responsiveness, organization of the courses, and interaction with students have diversified effects on student interest, pedagogy, and their learning performance (Billups & Kite, 2009). Respectful interactions are most recognized as a teaching and learning strategy by both educators and students (Willemse et al., 2018). Additionally, this strategy has a good impact on student evaluations of instructors (Paswan & Young, 2002). Teachers must educate students with both knowledge and skills (Cheng, 2011).

Learning may be considered as the acquisition of knowledge through the comprehensible information transmission either from being a member of society or from the personal thinking process (Bandura 1997). Learning performance is the byproduct of combining the two conceptual definitions of learning and performance, which can be characterized as the self-assessment of student's efforts they have expended in a specific course, the knowledge they gained in a particular course, skills they learned in class, compared to the other classes. This study measured learning performance by studying variable monitoring and scaffolding (Pat-El et al., 2013). Scaffolding is the technique that refers to instructional scaffolding in which the support is given by the teacher throughout the learning process. This support is specifically tailored according to the individual need of the student and the instructional approach further enable the student to gain experience in student-centered learning (Al-Rahmi et al., 2018; Cummunis, 2000).

2.4. Model Development

The conceptual model of the study presents the major determinant of student satisfaction. Our model incorporates teacher competencies as an independent variable and learning performance as a moderator.

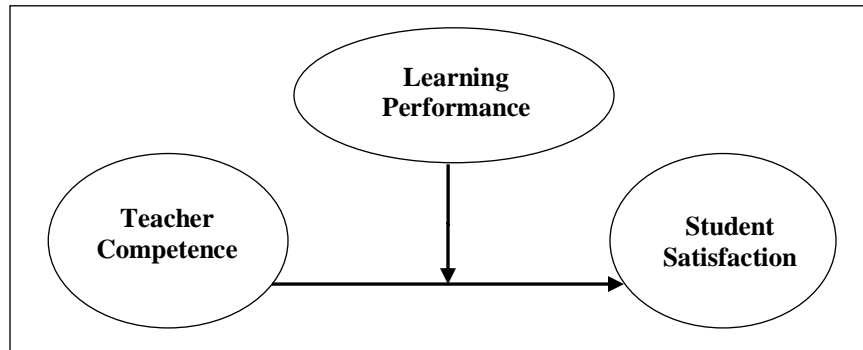


Figure.1. Conceptual Framework
Source: Author's own elaboration

3. Methodology

Quantitative data analysis has been employed for the survey. In this study, an inferential approach is used to conduct survey questionnaires for university-level students to investigate the impact or correlations between lecturer competencies and student satisfaction. Since this research is conducted in the tier3 universities of Karachi. A simple random sampling technique is used in data collection. For primary data sources, a limited number of respondents can be useful. According to the data available on the HEC website (2016-17), the approximated number of student enrollment in the business department of HEIs of Karachi is 55000. Total 400 questionnaires were distributed in different universities of Karachi and out of which 381 filled responses. According to the sampling size chart developed by Krejcie and Morgan (1970), the sampling size required for a population of 20,000 is 377 (Krejcie & Morgan, 1970). The questionnaire was filled out by students enrolled business education department of higher education institutions to gain firsthand information. The response rate of this research remained 95%. While statistical analysis tool used is SMART PLS3-SEM.

4. Results and Discussion

4.1. Reliability Test

Cronbach's Alpha analysis is conducted to measure the reliability of the scale. If the Cronbach Alpha value is more than 0.60, a variable is said to be reliable (Salkind, 2000).

Table.1. Reliability & Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
LP	0.937	0.948	0.696
SS_	0.935	0.941	0.554
TC	0.959	0.963	0.608

Source: Author's own elaboration

Table.1 shows that Cronbach's Alpha is greater than 0.7 for each variable. As a result, the instrument exhibits strong inter-item consistency and is trustworthy.

Table.2. Factor Loading and Variance Inflation Factor

Item Code	Factor Loadings	Variance Inflation Factor (VIF)
FR3	0.722	2.607
IT2	0.715	3.074
LS3	0.776	3.244
LS4	0.71	2.813
LSRE1	0.8	3.662
LSRE10	0.683	3.353
LSRE2	0.818	3.287
LSRE3	0.714	3.26
LSRE5	0.772	2.703
LSRE8	0.679	2.711
Monitor1	0.794	2.476
Monitor2	0.786	2.218
Monitor3	0.88	4.516
Monitor4	0.88	4.49
Monitor5	0.876	4.222
ODS2	0.707	2.767
ODS4	0.848	4.421
PA1	0.78	2.778
PA2	0.717	2.123
PA4	0.802	3.435
SC1	0.744	3.677
SC2	0.872	4.873
SC3	0.759	3.394
SC4	0.796	3.224
SK1	0.79	3.831
SK3	0.834	3.837
SMG3	0.71	2.267
Scaffold1	0.83	3.038
Scaffold3	0.855	3.436
Scaffold5	0.762	2.375
TL1	0.768	2.741
TL2	0.757	2.976
TL3	0.738	2.299
TL5	0.734	2.191
TS2	0.816	3.834
TS3	0.786	3.129
TS4	0.75	3.069
TS5	0.789	2.904

Source: Author's own elaboration

The Confirmatory Factor Analysis (CFA) was used to assess the model and ensure that the psychometric features of each item in the instrument were correct. A total of 60 items were loaded. Out of 60, 27 items were to measure Teaching competencies, 10 items for Learning Performance, and the remaining 23 items were loaded for student satisfaction. Items that were resulted in below 0.6 were then omitted and CFA was carried out again.

The results of CFA are shown in Figure 2 indicate that all loading factors scored are above 0.6 and it is sufficient to explain an excellent psychometric characteristic for each item (Awang et al., 2018).

4.2. Multicollinearity Test

Collinearity problems are a concern from both a methodology and an interpretational aspect (Joseph F Hair et al., 2019). Multicollinearity occurs when two or more constructs are correlated with one another (Chin, 1998; Joe F Hair et al., 2011). To investigate multicollinearity, the researchers proposed a robust metric called the variance inflation factor VIF, with a threshold level of 5 as recommended by (J. F. J. Hair et al., 1995). Table-2 shows the VIF values for each construct indicator, and all of the VIF values are less than the threshold of 10, indicating that multicollinearity does not occur in this study.

4.3. Discriminant Validity (DV)

DV analyzes how unique or different the study's constructs are in comparison to other components in the same model. In comparison to other measures of discriminant validity, the HTMT ratio is thought to be more accurate or good (Henseler et al., 2015). According to the guidelines, the HTMT threshold value should be 0.90. (Henseler et al., 2015). The results of the HTMT ratio are shown in Table-3, and all of the values are less than the 0.90 thresholds.

Table.3. Discriminant Validity

	LP	SS_	TC
LP	0.834		
SS_	0.561	0.744	
TC	0.59	0.643	0.780

Note: Values in color indicates the square root of AVE

Source: Author's own elaboration

4.4. Coefficient of Determination

R^2 measures the overall predictive efficiency of the model, and it illustrates the combined variance of all independent variables. The R^2 value of this study model has been reported in table.4.

Table.4. Coefficient of Determination

	R Square	R Square Adjusted
SS_	0.477	0.473

Source: Author's own elaboration

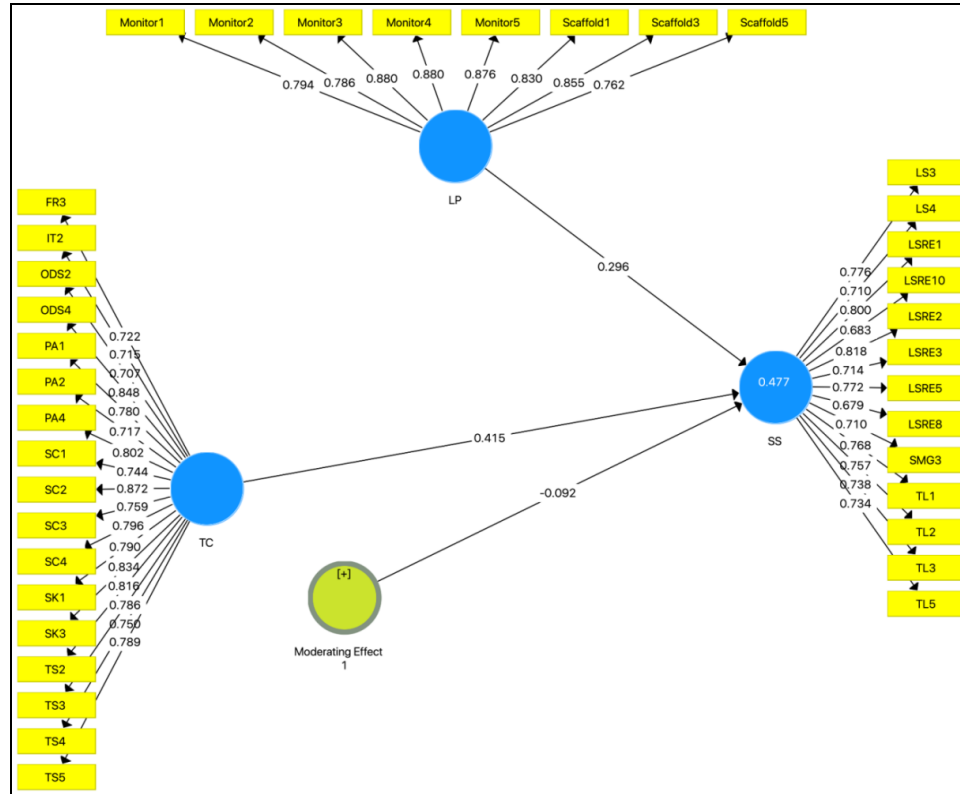


Figure.2. Structural Equation Model
Source: Author’s own elaboration

4.5. Path Co-efficient

Path Co-efficient an extended type of multiple regression is used to calculate the amount and significance of hypothesized causal relationships between all three variables i.e., Teacher’s competence, Learning performance of students, and Student satisfaction.

Table.5. Path Coefficient

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
LP -> SS_	0.296	0.3	0.054	5.529	0.000
Moderating Effect 1 -> SS_	-0.092	-0.092	0.031	2.961	0.003
TC -> SS_	0.415	0.417	0.052	8.033	0.000

Note:*** indicates the level of significance at 1%.

Source: Author’s own elaboration

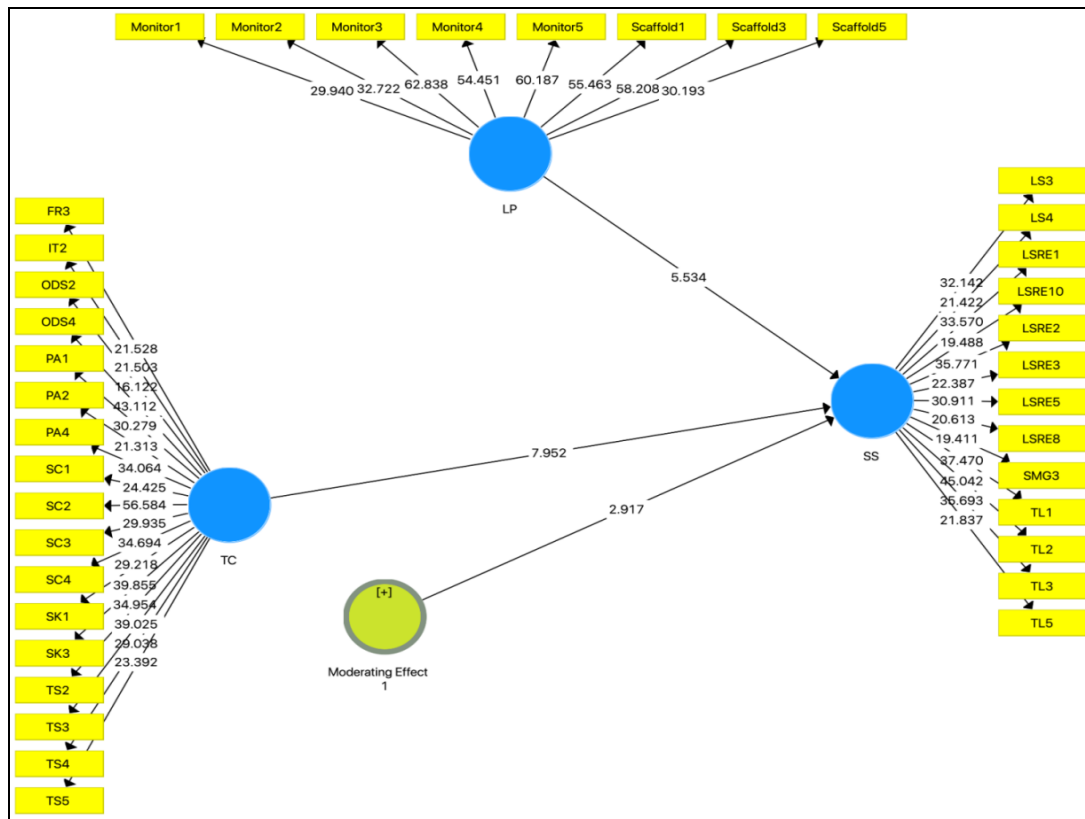


Figure.3. Structural Model (Bootstrapping)
Source: Author’s own elaboration

Table.6. Confidence Interval Bias Corrected

	Original Sample (O)	Sample Mean (M)	Bias	0.025	0.975
LP -> SS_	0.296	0.3	0.003	0.191	0.401
Moderating Effect 1 -> SS_	-0.092	-0.092	0.001	-0.158	-0.036
TC -> SS_	0.415	0.417	0.002	0.311	0.513

Source: Author’s own elaboration

According to Hair et al Structural model results may report by reading p-value, t-value, and upper and lower confidence intervals (Hair et al., 2012). The findings of this research show that hypothesis 1 i.e. “The higher the level of teacher’s competencies leads to the higher level of student satisfaction” is accepted with the P-value being less than 0.000 which is significant (Mcleod, 2019). Hypothesis 2 i.e., “Learning Performance has an influence on the relationship between teacher’s competence and student satisfaction” is also accepted with a p-value of 0.003. The negative sign in the Mean value (-0.092) shows that they share an inverse relationship which means as student satisfaction increases the learning performance declines. The results may indicate a peculiar relationship in Karachi. They show that Karachi’s higher education system has objectives that are not aligned with student learning performance.

Literature states that a higher degree of teaching competence leads to a higher degree of learning performance resulting in higher satisfaction among the students (Costa et al., 2015). However, the current study for tier3 universities stands in contradiction to the above statement. Institutions may be classified into tiers based on their admission criteria. Tier3 institutions are still excellent, but admissions are easier because they are less selective with their admission criteria (Chada, 2021). The findings reveal that student satisfaction is directly influenced by teaching competency which is also supported by the literature (Long et al., 2013), but it is not leading to higher learning performance in students. The results of these findings could mean that there are other factors at play that impede students learning ability. Since this research was carried out at tier3 universities it is important to note that the university environment is also playing a role.

Outside of the university, there are even larger social, economic, and cultural factors. It has already been established from other research that the learning environment and students' socio-economic status play a big role in educational facilitation (Saifi, 2011). Another important factor could be the overall health and nutrition of our students Murray, 2021. The lack of focus on healthcare and nutrition is directly related to cognitive problems which impact learning (Nayardi,2013). There can also be cultural factors related to the pursuit of education. Typically, in third world countries, higher education is seen to earn a livelihood and also as a status indicator (Bunoti,2012).

5. Conclusion

The study investigates the impact of teachers' competence on student satisfaction in Higher Education Institutions of Karachi in addition the study also examines the moderating effect of Performance learning on the given relationship. Based on the findings of this investigation, it is hereby concluded that there is a significant positive impact of teacher's competencies on student satisfaction. Therefore, in terms of practice, the research findings of this study provide a valid framework that resulted in a rethinking of the adoption of teaching competencies. The higher education teachers could increase student learning which will result in student satisfaction. Furthermore, the learning performance of students from tier3 universities of Karachi has a significant impact on the relationship between student satisfaction and teachers' competence. The findings ascertain that the relationship is inverse in nature which explains that the variable partially moderates the relationship.

The empirical shreds of evidence suggested that the variables are highly associated with one another and the quantitative findings provided evidence about the factual impact of variables. Hence teaching competency means the right way of transferring units of knowledge, application, and skills to the students. This understanding will enable HEIs to recruit competent teachers and deliver quality education to the students. Administrators, policy makers, educationalists and social entrepreneurs, coaches, and those who are interested in establishing innovative training programs and supporting management and policy decisions may find this research study useful.

The research effort shall facilitate the readers in providing quantitative evidence supporting the inclusion of teaching competencies in the hiring and recruitment process, promotion, training, and development process in the educational institutes, which are prerequisites for attaining competitive standards from an international perspective.

5.1. Recommendation

This study was conducted among tier3 universities of Karachi. Researchers may consider broader this study by targeting universities from all over Pakistan. Macro environmental factors relating to learning performance should be studied to understand the lack of quality in the education system. Institutions should research to understand the factors that may contribute towards higher learning performance. Further research may also be conducted to determine the reasons for an inverse relationship between learning performance and student satisfaction.

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