

Exploring the Mediating Effect of Student Motivation on the Relationship between ESL Teacher’s Feedback and Undergraduate Academic Outcomes and Satisfaction from the Public Sector Universities in Jamshoro

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Abstract

This research paper aims to examine the mediating effect of student motivation on the relationship between ESL teacher feedback and undergraduate academic outcomes and satisfaction in public sector universities in Jamshoro. The study was conducted with a sample size of 164 undergraduate students. The data was analyzed using Smart PLS, a statistical method for SEM. The results of the study shown a constructive and substantial association among ESL teacher feedback and student motivation. It was also found that student motivation had a significant impact on undergraduate academic outcomes and satisfaction. Additionally, the study found that student motivation partially mediated the relationship between ESL teacher feedback and undergraduate academic outcomes and satisfaction. These results recommended that ESL teacher feedback plays a crucial role in enhancing student motivation, which ultimately leads to improved academic outcomes and satisfaction among undergraduate students.

Keywords: ESL teacher feedback, undergraduate academic outcomes, satisfaction, public sector universities, Jamshoro.

Introduction

The importance of motivation cannot be overstated when it comes to students’ academic achievement and their ongoing pursuit of learning outside of the classroom (Guo, 2020).

Motivation encompasses various elements, including the desire for success, perceived likelihood of achieving goals, the value placed on completing tasks, and the drive to circumvent disappointment (Dörnyei and Ushioda, 2013). However, numerous studies have shown that as students progress through their schooling, their motivation tends to decline, often leading to learning difficulties (Yeung et al., 2011). Therefore, it is crucial to increase students' motivation levels in order to promote their academic success. According to Bandura's social cognitive theory, students' motivation is highly influenced by their social environments (2011). In this case, the context of the classroom and the interactions within it play a significant role in shaping students' motivation. Among the various social factors that impact student learning, teacher feedback stands out as a powerful tool (Pereira et al., 2016). This refers to the information provided by teachers to students regarding their performance and progress (Hattie and Timperley, 2007). Research has consistently shown that teacher feedback has a significant impact on students' motivation levels. Positive and constructive feedback has been found to increase students' self-efficacy and their belief in their own abilities (Hattie and Timperley, 2007). This, in turn, can lead to higher levels of motivation and academic achievement (Pereira et al., 2016). On the other hand, negative or unhelpful feedback can have the opposite effect, causing students to doubt their abilities and become disengaged from the learning process (Guo, 2020). Moreover, teacher feedback can influence students' goals and expectations. When students receive effective feedback that is specifically tailored to their progress and provides guidance on how to improve, they are more likely to set realistic goals and have a clearer understanding of what is expected of them (Pereira et al., 2016). This can lead to a sense of purpose and direction, which are essential elements of motivation (Yeung et al., 2011).

Teachers play a critical role in providing feedback to students and aiding them in improving their performance. By providing corrective feedback, teachers enable students to identify and rectify their mistakes and enhance their overall academic satisfaction (Li, Schwabe, Yang, & Chen, 2015). Corrective feedback is an essential aspect of teachers' evaluation strategies (Wang & Wu, 2017), and students generally appreciate receiving it from their teachers (Aravena, 2015). Additionally, research has shown that there is a strong correlation between students' motivation and their academic success (Meral, Colak, & Zereyak, 2012). Motivation is a key factor in academic success, and highly motivated students tend to perform well on tests and exams (Honicke & Broadbent, 2016). They also display a strong eagerness to study their subjects in depth, as noted by Ahmed and Safaria (2013). Darazi, Khoso, and Mahesar (2022) also suggest that motivation and academic performance have a mutually influential relationship. Furthermore, Wang and Wu (2017) also emphasize the importance of providing corrective feedback to students. They argue that through feedback, students are given the opportunity to improve their performance and correct their errors. This enables them to develop their skills and knowledge further, leading to increased motivation and satisfaction in their studies. Moreover, research has consistently shown a strong link between motivation and academic achievement (Meral et al., 2012). This is because highly motivated students demonstrate a greater willingness to engage with their studies, resulting in improved performance (Honicke & Broadbent, 2016). They are also more likely to pursue their subjects with enthusiasm and a desire to learn, leading to better outcomes in terms of grades and overall academic success (Ahmed & Safaria, 2013).

The primary focus of this research is to examine the impact of teachers' constructive, evaluative, and corrective feedback on the academic performance and satisfaction of undergraduate students, particularly those in ESL programs in public universities in Jamshoro. This study highlights the crucial role of motivation and satisfaction in shaping students' educational achievements. According to some significant studies, feedback from teachers plays a crucial role in students' academic development and motivation (Hattie & Timperley, 2007; Zhu & Leung, 2011). It serves as a guiding tool for students to improve their learning and achieve their desired goals (Nicol & Macfarlane-Dick, 2006). Additionally, students' satisfaction with the feedback provided by teachers has a significant impact on their academic performance and overall experience in their academic journey (Carless, 2006). In summary, this study aims to provide valuable insights into the relationship between teachers' feedback, motivation, satisfaction, and academic outcomes of ESL students in higher education, in hopes of improving the overall educational experience for these students.

Research Objectives

1. To observe the association among ESL teacher's feedback & undergraduate academic outcomes among students in public sector universities in Jamshoro.
2. To assess the impact of ESL teacher's feedback on undergraduate student satisfaction at public sector universities in Jamshoro.
3. To investigate the mediating result of student motivation on the association between ESL teacher's feedback and undergraduate academic outcomes and satisfaction in public sector universities in Jamshoro.

Literature review

ESL Teacher's Feedback and Student Motivation

Feedback has been recognized as an important component in language learning and teaching, particularly in English as a Second Language (ESL) contexts. It refers to the information given to students about their performance, with the aim of enhancing their learning and improving their language proficiency (Corpus, 2011). The role of feedback becomes even more significant for ESL students as they are often learning a new language, which requires continuous input and guidance for growth and development. Additionally, feedback plays a crucial role in motivating ESL students to learn and participate in their language classes. In this essay, I will discuss the relationship between ESL Teacher's feedback and student motivation with relevant examples from the literature (Guo et al., 2019). Feedback serves as a powerful motivational tool for ESL students. It provides them with the necessary information about their performance, which helps them identify their strengths and weaknesses. When students receive feedback that highlights their strengths, it boosts their confidence and encourages them to continue working towards improvement. On the other hand, constructive feedback pointing out students' weaknesses provides them with the opportunity to work on their weaknesses and strive for improvement. As stated by Legutke and Thomas (1991), feedback helps students to "experience themselves as competent language users". This feeling of competence motivates students to engage more in their learning and challenges them to set higher goals for themselves. Moreover, feedback that is timely, specific, and personalized can have a important impact on student inspiration. A study

conducted by Diab and Lopriore (2009) found that students who received fast and specific feedback showed higher levels of motivation and engagement in their language learning. This is because timely and personalized feedback provides students with a sense of value and importance, which increases their motivation to continue learning. Feedback also has a direct impact on students' self-efficacy beliefs. Self-efficacy refers to individuals' beliefs in their own ability to achieve a certain goal or perform a specific task successfully. According to Bandura (1977), self-efficacy beliefs play a vital role in determining people's motivation, effort, and persistence in achieving a particular task.

Feedback, when given in a supportive and encouraging manner, helps students develop positive self-efficacy beliefs. For instance, if a student receives feedback that highlights their improvement in certain language skills, they are more likely to believe in their ability to master those skills, which, in turn, motivates them to continue practicing and learning. In conclusion, feedback is an essential tool for enhancing ESL students' motivation (Guo et al., 2019). It not only provides them with information about their performance but also helps them develop positive self-efficacy beliefs. Moreover, it encourages students to strive for improvement and promotes their active participation in their language classes. Therefore, it is imperative for ESL teachers to provide timely, specific, and personalized feedback to their students to foster a positive and motivated language learning environment.

H1: ESL Teacher's feedback is significantly and positively related to Student Motivation

ESL Teacher's Feedback via mediation of Student Motivation on students' Academic Outcomes

According to Mahesar, Darazi, and Khoso (2021) as well as Westmacott (2017), indirect corrective feedback has a significant impact on the learning process of undergraduates, compared to direct corrective feedback. Researchers have found that students who receive this type of feedback tend to perform better in exams, actively engage in classroom activities, and submit their assignments on time (Ahmad & Safaria, 2013). Moreover, students who have received corrective feedback also demonstrate effective communication skills and are more confident in sharing their ideas during classroom discussions. The influence of corrective feedback goes beyond just improving students' learning outcomes. It also plays a crucial role in enhancing their critical thinking abilities and boosting their confidence to excel (Pham, 2015). These findings suggest that corrective feedback from instructors can have a profound impact on students' academic performance and overall development.

Motivation is a key factor that plays a vital role in the academic outcomes of students. As an ESL teacher, one of the main objectives is to help students achieve their academic goals. The feedback provided by the teacher serves as an important tool in motivating students to improve their performance. This feedback can have a significant impact on student motivation, which in turn can influence their academic outcomes. According to Bandura (1997), motivation is closely linked to self-efficacy, which is an individual's belief in their ability to successfully complete a task. As an ESL teacher, through feedback, one can provide students with a sense of accomplishment, thus enhancing their self-efficacy.

When students feel motivated and believe in their ability to succeed, they are more likely to put in the effort and work towards their academic goals. This positive reinforcement through teacher feedback can lead to an increase in student motivation. Moreover, feedback can also

serve as a form of extrinsic motivation for students. Students appreciate and value the feedback provided by teachers, as it helps them identify their strengths and weaknesses. This, in turn, can lead to an improvement in their academic performance as they strive to achieve better results. As stated by Deci and Ryan (2018), extrinsic motivation, such as feedback, can serve as a facilitator for intrinsic motivation, which is the driving force behind students' academic performance. Furthermore, through feedback, teachers can also provide specific and constructive criticism, highlighting areas where students need improvement.

This can help students set realistic goals and work towards achieving them, which can further enhance their motivation. As noted by Stiggins (2004), teacher feedback that is meaningful and timely can have a powerful impact on student motivation and subsequent academic outcomes. In conclusion, there is a strong relationship between ESL teachers' feedback and students' academic outcomes when mediated by student motivation. Feedback that is meaningful, timely, and specific can serve as a source of motivation for students. This, in turn, can lead to an improvement in their self-efficacy and overall academic performance. As an ESL teacher, providing effective and goal-oriented feedback can greatly contribute to the success of students in their academic pursuits.

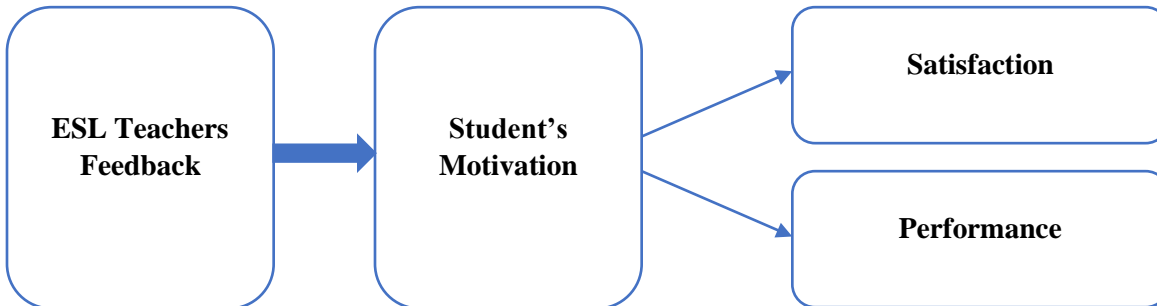
H2: ESL Student's motivation impacts positively and significantly as mediator for Teacher's feedback on academic satisfaction

ESL Teacher's Feedback via mediation of Student Motivation on students' satisfaction

According to Mahesar, Darazi, and Khoso (2021), student satisfaction at the university level encompasses both academic achievement and language learning. This implies that when students are happy with their academic performance and language abilities, they are considered satisfied with their overall university experience. In addition, studies by Ahmad and Safaria (2013) have shown that students who receive corrective feedback demonstrate better test performance, active class participation, timely submission of assignments, effective communication, and contribution to group discussions.

Pham (2015) also originate that opinion not only improves student knowledge but also enhances their critical thinking skills and self-confidence, thus contributing to their academic success. Moreover, Arbabisarjou, Zare, Shahrakipour, and Ghoreishinia (2016) suggest that high levels of self-motivation in undergraduates are positively correlated with academic success. This highlights the close relationship between self-motivation and academic achievement among undergraduate students. Schunk and Zimmerman (2007) emphasize that teachers' feedback can assist students in identifying and addressing their mistakes, obtaining reliable information, and increasing their motivation for success.

H3: ESL Student's motivation impacts positively and significantly as mediator for Teacher's feedback on academic performance

Conceptual Framework**Figure 1. Conceptual Framework****Methodology with Operationalization**

This study is focused on explaining existing phenomena through a quantitative approach. The participants of this research are undergraduate students of English Language and Literature from public sector universities in Jamshoro, Sindh Pakistan. The data was collected through a questionnaire consisting of closed-ended questions, with certain items adapted from previous studies. A seven-point Likert scale was utilized to measure the responses. The participants were selected randomly using a simple random sampling method.

Measures

The study gathered data from a questionnaire consisting of 21 items, adapted from previous studies to measure the constructs of ESL teacher feedback, student motivation, satisfaction, and performance. Items were selected based on their validity and reliability, ensuring that they accurately captured the intended concepts. ESL teacher feedback was measured using 6 items from the study by Guo (2017). These items assessed the perception of students on the effectiveness and relevance of the feedback provided by their ESL teachers. Student motivation was measured using 5 items adapted from the study by Pintrich et al (1991). These items gauged the level of motivation students felt towards learning the English language and how well the feedback from their teacher contributed to it. Satisfaction was measured using 5 items from the study by Darazi et al (2023), and Performance was also measured using 5 items from the study by Darazi et al (2023). These items evaluated the perceived level of performance in learning English as a result of the feedback provided by their teacher. "A seven-point Likert scale was used for all items, with the options ranging from strongly disagree (1) to strongly agree (7)". A total of 200 questionnaires were distributed, and after eliminating incomplete and invalid responses, data from 164 students were used for analysis. Statistical analysis was conducted using PLS-SEM and SPSS version 22.0.

Data Analysis

The analysis of this research has been carried out using the Smart PLS. Smart PLS (Partial Least Squares) is a statistical software specifically designed for inferential statistics (Hair et al., 2022). It is utilized to study the relationship between independent and dependent variables and to identify underlying trends and patterns in the data (Hair et al., 2022).

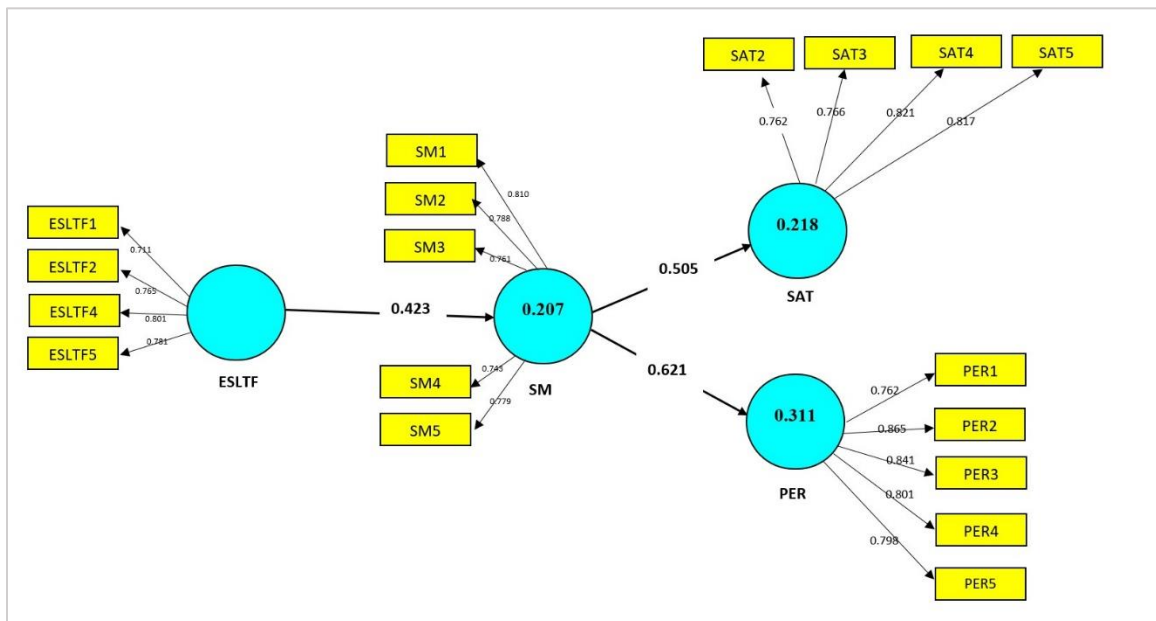
Moreover, it can also estimate parameters in linear and non-linear models and make predictions. Hence, by using Smart PLS, this study not only presents the data in a concise manner but also helps in understanding the relationships and trends within the data.

Findings of Measurement Model Smart PLS

Measurement models are a specific type of statistical tool that is utilized to assess the soundness and credibility of measurement instruments used in a study (Hair et al, 2022). They are an essential component in Smart PLS literature reviews as they aid in validating the measures employed, evaluating their reliability, and verifying the accuracy of the findings. The purpose of measurement models is to ensure that the measures used are appropriate for the research questions and objectives at hand, and to confirm that the results obtained are dependable and meaningful.

Practically speaking, a measurement model is a visual representation of the relationship between latent constructs and their observed indicators (Hair et al, 2022). It helps researchers to understand how well their chosen measures reflect the underlying theoretical concepts being studied. By assessing the relationships between constructs and their indicators, measurement models allow researchers to pinpoint any indicators that may not be reliable or valid, and make necessary improvements or adjustments. Furthermore, these models also help to identify possible sources of measurement error and provide insights on how to reduce or control for these errors.

Figure 2: Measurement Model



Measurement Model of this study is significant and exhibits strong reliability and validity. Reliability and validity of an instrument are important qualities of any measurement model.

Reliability refers to the extent to which an instrument consistently measures what it intends to measure. The reliability of the study's measurement model is high because the reliability values of all indicators are greater than 0.7. This means that the indicators of the model are consistently measuring the construct they are intended to measure. The validity of the model can be seen through its relationship with other constructs.

In this study, all relations are significantly related with p-values less than 0.05, meaning that the construct is measuring what it is supposed to measure. This shows that the model is valid and can accurately measure the concept of interest. Moreover, the R-square values for all relations are moderate to strong, indicating that the measurement model can explain a significant amount of variance in the construct being measured. Overall, this indicates that the measurement model in this study is reliable and valid, providing accurate and consistent results. Researchers can have confidence in using this model to measure the construct under study, making it a valuable tool in conducting research.

Outer Loadings

In the context of Smart PLS literature, outer loadings refer to the measure of the relationship between a latent variable and its indicator variables. These loadings indicate the strength of association between the latent variable and the corresponding indicators (Hair et al, 2022). Outer loadings play a crucial role in predicting the variance in the latent variable and are a key component in assessing the reliability and validity of the measurement model (Baghozzi and Yi, 1989).

The significance of outer loadings is determined by their value, with a loading of 0.7 or higher considered significant (Hair et al, 2022). This indicates a strong relationship between the latent variable and its indicators. In the current study, all indicator variables for ESLTF, SM, SAT and PER have outer loading values above 0.7, demonstrating a strong and consistent relationship between these variables and their respective latent variables. This reinforces the reliability and validity of the measurement model used in this research.

Table 2. Factor Analysis (Outer Loadings)

| <i>Sr. No</i> | <i>Latent Indicators</i> | <i>ESLTF</i> | <i>SM</i> | <i>SAT</i> | <i>PER</i> |
|---------------|--------------------------|--------------|-----------|------------|------------|
| 1 | ESLTF1 | 0.711 | | | |
| 2 | ESLTF2 | 0.765 | | | |
| 3 | ESLTF4 | 0.801 | | | |
| 4 | ESLTF5 | 0.781 | | | |
| 5 | SM1 | | 0.810 | | |
| 6 | SM2 | | 0.788 | | |
| 7 | SM3 | | 0.761 | | |
| 8 | SM4 | | 0.743 | | |
| 9 | SM5 | | 0.779 | | |
| 10 | SAT2 | | | 0.762 | |
| 11 | SAT3 | | | 0.766 | |
| 12 | SAT4 | | | 0.821 | |
| 13 | SAT5 | | | 0.817 | |
| 14 | PER1 | | | | 0.762 |

| | | |
|----|-------------|-------|
| 15 | PER2 | 0.865 |
| 16 | PER3 | 0.841 |
| 17 | PER4 | 0.801 |
| 18 | PER5 | 0.798 |

Internal Consistency Reliabilities

Internal consistency reliability refers to the extent to which the items on a questionnaire are consistent in measuring the same underlying construct (Kibria Aamir et al, 2021). It is often assessed using Cronbach's alpha, which evaluates the internal consistency among a set of items on a questionnaire (Baghozzi and Yi, 1989). In the context of Smart PLS literature reviews, reporting internal consistency reliability is crucial as it reflects the quality of the instrument used in the study (Hair et al, 2022). A high level of internal consistency reliability indicates that the items on the questionnaire accurately reflect the intended construct, thus enhancing the credibility and validity of the results (Hair et al, 2022). Conversely, a low internal consistency reliability implies that the items do not align with the underlying construct, and the findings should be interpreted with caution (Hair et al, 2022).

In essence, internal consistency reliability offers a measure of the suitability of the instrument used to assess the research variables in Smart PLS literature reviews. As such, it is a crucial aspect to consider when evaluating the quality and robustness of the results. Without adequate internal consistency reliability, the conclusions drawn from the study may lack accuracy and validity, as the instrument used may not effectively measure the constructs under investigation (Hair et al, 2022).

Table 3. Internal Consistency Reliabilities.

| <i>Latent Variables</i> | <i>Cronbach's Alpha</i> | <i>rho_A</i> | <i>Composite Reliability</i> |
|-------------------------|-------------------------|--------------|------------------------------|
| <i>ESLTF</i> | 0.765 | 0.721 | 0.812 |
| <i>SM</i> | 0.732 | 0.706 | 0.781 |
| <i>SAT</i> | 0.812 | 0.803 | 0.827 |
| <i>PER</i> | 0.823 | 0.807 | 0.839 |

Based on our analysis, it can be concluded that factors such as ESLTF, SM, SAT, and PER exhibit strong internal consistency reliability (ICR), with noteworthy values of Cronbach's Alpha at 0.765, 0.732, 0.812, and 0.823, respectively. Our findings also reveal significant values in rho_A at 0.721, 0.706, 0.803, and 0.807 for these factors, highlighting their strong internal consistency reliability. Moreover, the Composite reliability values for these factors also exceed the minimum acceptable threshold of 0.7, with scores ranging from 0.812 to 0.839.

In simpler terms, our analysis shows that ESLTF, SM, SAT, and PER demonstrate high levels of internal consistency reliability, which means that the items in each of these factors are strongly related and consistently measure the same construct. This suggests that these factors are reliable and can be considered as valid measures for their respective constructs. Furthermore, the loadings for each of these factors exceed the required value of 0.7, further supporting their reliability. In summary, our findings highlight the robustness and consistency of these factors in measuring their intended constructs.

Convergent and Divergent Validities (AVE and Discriminant validity)

Average Variance Extracted (AVE) is a statistical measure used to determine how much variance is explained by a specific construct in a structural equation model (Baghozzi & Yi, 1989). It is calculated by dividing the explained variance of the construct by the total variance of the measured items (Kibria Aamir et al, 2021). The main purpose of AVE is to assess the discriminant validity of a measurement model. This involves comparing the validity of a construct with the validity of other constructs to ensure that they are distinct and do not overlap. This is important as it helps researchers determine whether the measured variables truly represent the intended concepts (Hair et al, 2022). To assess discriminant validity, researchers look at the correlation between different constructs in the model. If the correlation between two constructs is less than the square root of the AVE of each construct, then there is evidence of discriminant validity (Hair et al, 2022). This means that the measured variables are not highly related to each other and are measuring different aspects of the construct.

In summary, AVE is a crucial measure for assessing the relationship between constructs in a structural equation model. It provides valuable insights into the discriminant validity of the measured variables and helps ensure that the model accurately reflects the intended concepts.

Table 4. Convergent and Divergent Validities

| <i>Latent Variables</i> | <i>ESLTF</i> | <i>SM</i> | <i>SAT</i> | <i>PER</i> | <i>AVE</i> |
|-------------------------|--------------|--------------|--------------|--------------|--------------|
| <i>ESLTF</i> | 0.786 | 0.571 | 0.465 | 0.610 | 0.618 |
| <i>SM</i> | 0.512 | 0.762 | 0.511 | 0.567 | 0.581 |
| <i>SAT</i> | 0.491 | 0.533 | 0.736 | 0.581 | 0.543 |
| <i>PER</i> | 0.623 | 0.481 | 0.469 | 0.805 | 0.649 |

The results of the study revealed significant values for convergent and divergent validities for all three latent variables: ESLTF, SM, SAT, and PER. This means that these variables hold an average variance of more than 0.5, indicating a strong correlation with the underlying constructs. Furthermore, all four variables showed significant values for the average variance extract, with values of 0.618 for ESLTF, 0.581 for SM, 0.543 for SAT, and 0.649 for PER. This suggests that the factors measured in this study are highly reliable and valid.

Moreover, the discriminant validity (DV) analysis also yielded significant results, with values of 0.7 in the diagonal loadings of all latent variables. This further supports the robustness of the study's findings, as it indicates that the variables are distinct and not measuring the same underlying construct. Specifically, the diagonal loadings were 0.786 for ESLTF, 0.762 for SM, 0.736 for SAT, and 0.805 for PER, clearly demonstrating their discriminatory power.

Therefore, based on the findings of this study, it can be concluded that all three latent variables have strong convergent and divergent validities. This means that the variables are highly correlated with their underlying constructs and are not measuring the same constructs as other variables. These results add to the overall reliability and validity of the study, providing strong evidence for the robustness of its findings.

R_Square and F_Square (Model Fit Test)

R-Squared (R2) and F-Squared (F2) are two commonly used metrics for evaluating model fit in the world of SmartPLS research (Hair et al., 2022). While both measures are utilized in a similar manner, they differ in their focus on either the observed or predicted variances of the dependent variable. R2, or the Coefficient of Determination, represents the percentage of variance in the dependent variable that is accounted for by the independent variables in the model (Hair et al., 2022). On the other hand, F2, or the Coefficient of Determination for latent variables, measures the percentage of variance in the dependent variable that is explained by the latent variables in the model (Kothari, 2004).

The primary function of R2 is to assess the overall fit of the model and to identify which independent variables have a significant impact on the dependent variable (Baghozzi & Yi, 1989). The higher the R2 value, the better the model's fit to the data. Therefore, this measure can be useful in determining the most influential variables in the model. However, it is worth noting that R2 tends to be inflated when the number of independent variables in the model is large, making it challenging to pinpoint the most crucial variables driving the model's fit. In comparison, F2 is a more precise measure of model fit as it focuses on the latent variables rather than the independent variables (Baghozzi & Yi, 1989). This enables researchers to better identify the most critical latent variables in the model, which are often not apparent when looking at R2 alone. Additionally, F2 takes into account the number of latent variables in the model and can help determine if the model is overfitted, meaning if it is too complex and might not generalize well to new data (Hair et al., 2022). R2 is frequently utilized to evaluate the correlation between the independent and dependent variables and is considered an essential factor in determining the model's goodness of fit (Hair et al., 2022). While it provides an idea of the overall model fit, it does not offer any insight into the contribution of individual latent variables in the model.

Table 5. R Square and F Square Analysis (Model Fit Test)

| <i>Latent Variables</i> | <i>R Square</i> | <i>R Square Adjusted</i> | <i>F Square</i> |
|-------------------------|-----------------|--------------------------|-----------------|
| ESLTF | -- | -- | 0.241 |
| SM | 0.207 | 0.205-- | 0.291 |
| SAT | 0.218 | 0.218 | -- |
| PER | 0.311 | 0.307 | -- |

The model fit testing serves as a crucial element for this research as it provides substantial evidence for the effectiveness and accuracy of the model. The independent variable of ESLTF, with an F Square value of 0.241, is playing a pivotal role in influencing the mediating and dependent variable. This showcases that it is a critical factor in determining the outcomes of the study. Additionally, the mediating variable SM, with a value of 0.291 for F Square and 0.207 for R Square, displays a strong mediating and dependent role, further reinforcing its significance. This indicates that the mediating variable has a significant impact on both the independent and dependent variable, making it a vital aspect of the research. Moreover, the variables of SAT and PER, with R Square values of 0.218 and 0.311, respectively, also support the crucial role of the mediating variable. This means that the mediating variable has a substantial impact on the outcomes of the variables, further strengthening its importance in the research. The values of R Square for SAT and PER also signify a decent level of variation,

which suggests that the mediating variable is a significant contributor to the final outcomes of the study.

In conclusion, the results of the model fit testing are substantial and confirm the effectiveness and significance of the independent variable ESLTF, the mediating variable SM, and the dependent variables SAT and PER. The values of F Square and R Square validate the modeling and loadings of the variables, showcasing the precise and impactful influence of the independent variable on the mediating variable and the mediating variable on the dependent variables. Hence, the model fit testing is a crucial aspect of this research, providing valuable insights and further supporting the validity and reliability of the findings.

Findings of Structural Model

The structural model in Smart PLS literature reviews refers to a visual representation of the connections between various unobservable variables and their measurable indicators in a research study. This model is used to illustrate the interrelationships between these variables and indicators, which helps to understand the underlying theoretical or conceptual framework of the study (Hair et al, 2022). It is a useful tool for identifying potential sources of bias and errors in the data and can also assist in identifying the key contributing factors to the overall model. The graphical representation of a structural model is created by using arrows to establish the causal relationships between variables, resulting in a structured and easy-to-understand diagram (Kibria Aamir et al, 2021).

In smart PLS literature, path coefficient is a term used to measure the impact of a specific factor on a dependent variable. This numerical value indicates the strength of the relationship between the factor and the outcome, and is calculated by taking into account both the direct and indirect effects of the factor on the outcome (Baghozzi and Yi, 1989). A path coefficient of zero indicates a weak relationship between the factor and the outcome, while a coefficient of one indicates a strong relationship. Path coefficients are valuable in understanding which factors have the most influence on the outcome and can help in assessing the relative importance of each factor. Overall, the use of structural models and path coefficients in Smart PLS literature reviews allows for a comprehensive and in-depth analysis of the relationships between variables and their indicators. They provide a visual representation and numerical value, respectively, which aid researchers in understanding and interpreting the key factors and their impact on the outcome of a study. These tools are widely used in various fields such as psychometrics, marketing, and organizational research to enhance the understanding of complex relationships and aid in decision-making processes (Hair et al, 2022).

Table 6. Path Coefficient

| <i>Hypotheses</i> | <i>Path Coefficient</i> | | |
|-----------------------|-------------------------|-----------------------|---------------------|
| | <i>Beta</i> | <i>Standard Error</i> | <i>T Statistics</i> |
| <i>ESLTF -> SM</i> | 0.423 | 0.081 | 8.224 |
| <i>SM -> SAT</i> | 0.505 | 0.062 | 10.124 |
| <i>SM-> PER</i> | 0.621 | 0.093 | 12.117 |

The purpose of this study was to investigate the relationship between ESL teacher feedback and undergraduate academic outcomes and satisfaction in public sector universities in Jamshoro. Specifically, the study aimed to explore the mediating effect of student motivation on this relationship. Data was collected from a sample of undergraduate students enrolled in public sector universities in Jamshoro through a questionnaire. The questionnaire included items related to ESL teacher feedback, student motivation, academic outcomes, and satisfaction. The data was analyzed using path coefficient analysis to test the hypotheses of the study. The results of the analysis showed a significant relationship between ESL teacher feedback and student motivation, with a beta value of 0.423 and a t-statistic of 8.224. This suggests that ESL teacher feedback has a positive impact on student motivation. Moreover, the results also revealed a significant relationship between student motivation and academic satisfaction, with a beta value of 0.505 and a t-statistic of 10.124. This indicates that higher levels of student motivation are associated with higher levels of academic satisfaction. Furthermore, the study found a strong relationship between student motivation and academic performance, with a beta value of 0.621 and a t-statistic of 12.117. This suggests that motivated students tend to have better academic performance. Overall, the findings of this study highlight the important role of ESL teacher feedback in promoting student motivation. This, in turn, has a positive impact on student academic satisfaction and performance. Therefore, it is crucial for ESL teachers to provide effective and timely feedback to their students, as it can enhance their motivation. This feedback can be in the form of constructive criticism, praise, or specific suggestions for improvement.

Discussion

The findings of this study emphasize the significant role of ESL teacher feedback in promoting positive outcomes for undergraduate students in public sector universities in Jamshoro. The results indicate that ESL teacher feedback has a positive impact on student motivation, which in turn, has a significant association with academic satisfaction and performance. The relationship between teacher feedback and student motivation has been widely investigated in the education literature. Previous studies have shown that effective and timely feedback from teachers can enhance student motivation (Hattie & Timperley, 2007; Keegan & Gunawardena, 2007; Shute, 2008). This is supported by motivational theories such as self-determination theory, which suggests that students are more likely to be motivated when their basic psychological needs for autonomy, competence, and relatedness are fulfilled (Deci & Ryan, 2000). ESL teacher feedback that caters to these needs, such as providing autonomy in decision-making, acknowledging students' competence, and building positive relationships, can foster intrinsic motivation and promote positive academic outcomes. Moreover, the findings of this study also highlight the significant relationship between student motivation and academic satisfaction. This is congruent with previous research that has established the strong link between motivation and satisfaction in academic settings (Chen & Lajom, 2016; Naveed, 2011; Spence & Helmreich, 1978). Students who are motivated tend to have a positive perception of their learning experiences, leading to higher levels of satisfaction. The study also found a strong relationship between student motivation and academic performance. This finding is consistent with previous research that suggests

motivated students are more likely to engage in deep learning and actively participate in academic tasks, resulting in better academic performance (Ginsburg-Block & Sykes, 2013; Schmitt & Anderson, 2016). Motivated students are also more likely to persist through challenges and setbacks, leading to better academic outcomes. Overall, the findings of this study highlight the important role of ESL teacher feedback in promoting student motivation, which has a cascading effect on academic satisfaction and performance. This highlights the crucial role of ESL teachers in providing effective feedback and creating a supportive learning environment that fosters student motivation. This can be achieved through strategies such as providing specific and timely feedback, using a variety of feedback methods, and building positive relationships with students (William & Thompson, 2008). Furthermore, universities can also play a role in promoting ESL teacher training and development to enhance their feedback practices, thus promoting positive academic outcomes for their students.

Implications of the Study

The present study aims to explore the mediating effect of student motivation on the relationship between ESL teacher's feedback and undergraduate academic outcomes and satisfaction from public sector universities in Jamshoro. The findings of this study have important implications for both ESL teachers and university administrators.

- i. Firstly, the results of this study suggest that ESL teachers should provide timely and effective feedback to their students as it has a direct impact on their academic outcomes and satisfaction. This highlights the importance of teacher evaluation and training programs to enhance their feedback giving skills. Furthermore, ESL teachers should also consider the individual learning needs and preferences of their students while providing feedback in order to increase their motivation and engagement.
 - ii. Secondly, the study findings indicate that student motivation plays a crucial role in mediating the relationship between ESL teacher's feedback and academic outcomes and satisfaction. This implies that in addition to providing effective feedback, ESL teachers should also focus on creating a learning environment that fosters student motivation. This can be done by incorporating different teaching strategies and techniques, promoting a growth mindset, and recognizing and acknowledging students' efforts and achievements.
 - iii. Moreover, the study results have implications for university administrators in terms of curriculum design and policy making. The findings suggest that a well-designed feedback system that addresses students' academic needs and preferences can significantly impact their motivation and ultimately their academic outcomes and satisfaction. Therefore, universities should invest in the development of a comprehensive feedback mechanism that is not only effective but also takes into account the diverse backgrounds and learning styles of students.
 - iv. In addition, the study results have broader implications for the higher education system in Pakistan. The emphasis on standardized testing and grades in the education system can have a negative impact on student motivation and, in turn, their academic outcomes and satisfaction. Therefore, this study highlights the need for a shift towards a more holistic approach to education that values individual progress and growth rather than just grades.
- To sum up, the findings of this study have important implications for ESL teachers, university administrators, and the higher education system in Pakistan. It highlights the crucial role of
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feedback and student motivation in shaping academic outcomes and satisfaction in undergraduate students. It is hoped that these implications will be taken into consideration while designing teacher training programs and education policies in order to improve the overall quality of education.

Restrictions and Plan for Future Research

The present study addressed the mediating role of student motivation on the relationship between ESL teacher's feedback and undergraduate academic outcomes and satisfaction in public sector universities in Jamshoro. The study highlighted the importance of effective feedback from teachers in improving students' academic performance and satisfaction. However, there are certain limitations to this study that need to be acknowledged.

- i. Firstly, the sample for this study was restricted to only public sector universities in Jamshoro, which may limit the generalizability of the findings to other educational settings. Future research should include a more diverse sample from both public and private universities to increase the external validity of the results.
- ii. Secondly, the study relied on self-reported measures, which may be influenced by social desirability bias and may not accurately reflect the students' actual motivation levels. Future studies could use observational or experimental methods to gather data on students' motivation to provide a more comprehensive understanding of the relationship between teacher feedback, student motivation, and academic outcomes.
- iii. Additionally, the study did not consider other potential factors that may influence students' academic outcomes and satisfaction, such as students' prior academic achievement, learning styles, and socioeconomic background. Future research should incorporate these variables to gain a more holistic understanding of the potential mediating role of student motivation.
- iv. Moreover, the study focused on undergraduate students, and the results may not be applicable to graduate or postgraduate students. Future research could investigate the mediating role of student motivation on the relationship between teacher feedback and academic outcomes among graduate students.
- v. Finally, the study used a cross-sectional design, which limits the ability to establish causality between the variables. Future research could employ a longitudinal design to better understand the temporal relationship between teacher feedback, student motivation, and academic outcomes.

In conclusion, this study provides a valuable contribution to the existing literature on the role of teacher feedback in enhancing students' academic outcomes and satisfaction in the context of ESL education. However, the above-mentioned limitations highlight the need for further research to provide a more comprehensive understanding of the complex relationship between teacher feedback, student motivation, and academic outcomes.

Conclusion

In conclusion, the current study investigated the relationship between ESL teacher's feedback, student motivation, and undergraduate academic outcomes and satisfaction in public sector universities in Jamshoro. The findings of this study revealed that there is a significant positive relationship between ESL teacher's feedback and student motivation, as well as between student motivation and academic outcomes and satisfaction. Furthermore, the results also showed that student motivation partially mediates the relationship between

ESL teacher's feedback and academic outcomes and satisfaction. This suggests that when ESL teachers provide effective and timely feedback to their students, it can enhance their motivation, leading to improved academic achievements and satisfaction with their university experience. Therefore, it is crucial for ESL teachers to regularly provide constructive feedback to their students in order to promote their motivation and ultimately improve their academic outcomes and satisfaction. This study has important implications for ESL teaching and learning in the context of public sector universities and highlights the significance of teacher feedback and student motivation in promoting student success and satisfaction.

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