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Language Shift and Learning Gaps: Unveiling the Academic Impact of English Medium Instruction through SEM

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Abstract: This study demonstrates that the medium of instruction significantly impacts students' academic performance, with English playing a central role in shaping their educational outcomes. The use of Structural Equation Modelling revealed that factors such as teacher support, student motivation, educational background, learning strategies, English communication skills, and attitude towards the English language are all positively associated with academic performance. However, language anxiety was found to negatively affect English communication, which in turn influences motivation and learning outcomes. All these factors were confirmed by using the confirmatory factor analysis. These findings are consistent with recent literature, confirming that English proficiency is not only a tool for academic achievement but also a driver of confidence and long-term educational engagement. Therefore, fostering an encouraging classroom environment, minimizing language anxiety, and enhancing teacher roles are critical for improving student performance in English-medium settings.

Keywords: Medium of Instruction (MOI), Motivation, Attitude, Confirmatory Factor Analysis (CFA), Structural Equation Modelling (SEM)

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Introduction

Adam was honored by the angels due to his ability to learn, emphasizing the sacred value of knowledge acquisition. Learning is not just a transfer of information from teacher to student but a collaborative process involving communication, interaction, and engagement. Active participation, reading, writing, discussion, and assessment are essential. Teacher-student interaction, in particular, enhances the effectiveness of the learning process and improves academic performance (Ali et al., 2024).

Language plays a central role in learning, as it is the medium through which knowledge is shared and understood. With over 5,000 languages spoken worldwide, many countries, including Pakistan, are multilingual. For effective learning, students must have a strong command of the language of instruction, especially at the elementary level, where foundational understanding begins. Poor language skills can exclude students from discussions and limit their ability to express and comprehend ideas (Sana & Atta, 2024).

In Pakistan, Urdu is the national language and serves as a "link language" across provinces. However, English dominates official communication, education, and professional sectors. Despite Urdu's national status, it lacks the technical vocabulary needed in fields such as science, business, and technology. English, on the other hand, is globally significant and is considered essential for accessing international research, higher education, and professional opportunities (Shakir & Kiazai, 2023).

English has approximately 430 million second-language speakers and 330 million native speakers. Around 80% of content on the internet is in English, making it a key resource language for students. Proficiency in English allows

students to engage with global knowledge, read original works, and excel in professional education (Tayyab et al., 2023).

Academic performance is determined by various factors, including content understanding, communication skills, motivation, and learning strategies. GPA is a common measure of student performance, but success also depends on regular class participation, note-taking, time management, and exam preparation. Communication skills, including listening, reading, writing, and speaking, are fundamental to demonstrating academic knowledge effectively (Bibi et al., 2023).

Language anxiety negatively affects performance, causing nervousness and self-doubt, especially among students learning in a second language. Research highlights a direct link between language skills and academic achievement. A student's attitude and motivation towards the language also significantly impact their success. Attitude can either hinder or facilitate language learning. Motivation can be integrative, instrumental, or result-based, each influencing learning behaviour (Sana & Atta, 2024).

The teacher's role is critical. Teachers must provide opportunities for students to practice language through reading, writing, speaking, and listening. They also need to support and maintain student motivation throughout the learning process (Imran et al., 2023).

The medium of instruction (MOI) remains a debated issue in Pakistan. While English is essential for higher education and professional courses, regional languages provide easier comprehension at the early learning stages. Most rural schools follow national or local languages, while urban and private schools favour English. Even low-income families prefer English-medium schools, recognising the advantages in professional life (Shahzad et al., 2024).

However, comfort and fluency in the mother tongue allow deeper understanding and better expression. A balanced approach introducing education in the mother tongue initially and transitioning to English in higher levels may provide the best outcomes. This recognises both the cognitive benefits of native language instruction and the practical necessity of English for global competitiveness (Munir et al., 2023).

Rationale of the Study

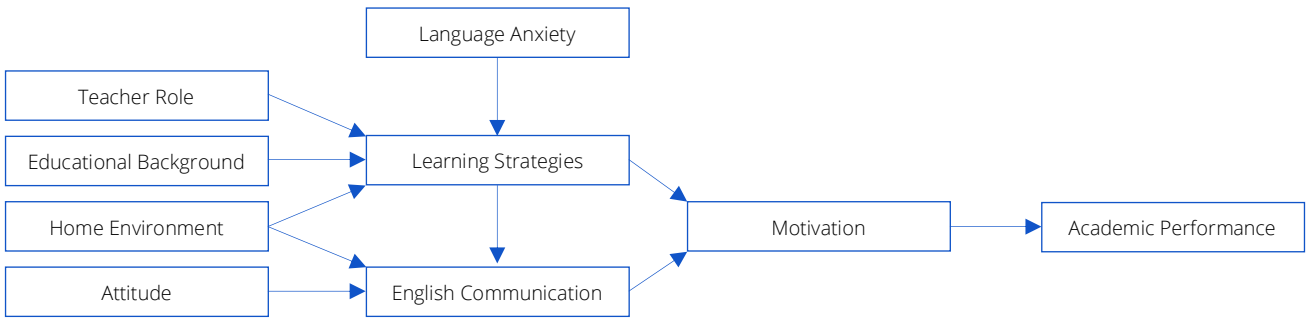
MOI significantly affects students' academic performance, confidence, and classroom participation. Language barriers often hinder understanding and limit students' ability to express themselves. This study aims to examine how MOI influences academic performance and to identify key factors that influence students' concept development in a second language by using CFA, and also aims to develop an SEM model explaining how academic performance is affected by MOI. The findings will help support both students and teachers in improving educational effectiveness.

Conceptual Model

The inference and pertinent literature review are the basis for the conceptual framework for academic performance with regard to MOI. Each cell represents a construct, and the entire model is focused on the motivation to learn English as influenced by its antecedents, which include the home environment, teacher role, attitude, educational background, learning strategies, and English communication. Finally, motivation has an impact on academic success.

Figure 1

Conceptual Framework



Research Methodology

In order to evaluate the effect of MOI on students' learning and academic performance, this study is cross-sectional and retrospective. The study sample consists of second-semester students who have taken one required English course from all departments (pure and social sciences) at the University of Gujarat, Hafiz Hayat Campus.

To guarantee representation across genders and fields, stratified random sampling was employed. Strata were based on faculty (pure/general sciences), departments, and gender. Based on Bartlett et al. (2001), 25% of the 1170 population was sampled. A total of 300 students were selected, 118 from pure sciences (50 males, 68 females) and 182 from general sciences (105 males, 77females). A pilot study involving 25 students verified the use of a questionnaire. The reliability of the test was 0.92.

Data Analysis Techniques

Through the use of SPSS 16.0 and STATISTICA 7.0, the study hypotheses were tested using CFA and SEM. To assess for normality, the Shapiro-Wilk test was used. Depending on the distribution, either the Pearson or Spearman correlation was used.

Confirmatory Factor Analysis

Using Maximum Likelihood Estimation and fit indices like chi-square and RMSEA, CFA were utilised to test the measurement model. A suggested approach to CFA proceeds through the following process.

The first step is to clearly define the model that we want to test. It involves the process of theoretically defining constructs. Examine the pertinent research and theoretical literature to bolster the model specification. After that, the number of factors and the type of loadings between the factors and the measures are chosen. The variables on the experimental units must be measured. The research should include a minimum of four structures, with three elements per construct.

We must ascertain the covariances, also known as correlations, among each of the variables. Perform the first descriptive statistical analysis. To get the estimates of factor loadings that were free to change, we will have to select a method. Maximum likelihood estimation, the most popular model-fitting technique, should likely be applied unless there is a significant lack of multivariate normality in our measures. The chi-square goodness-of-fit test is the most widely used measure of model adequacy.

Lastly, we present and discuss the findings. However, if we wish to compare two models, one of which is a simplified version of the other, we can simply look at how their χ2 statistics differ. It is possible to compare complete and reduced factor models for almost all tests of individual factor loadings.

Structural Equation Modelling (SEM)

SEM was used to model latent components, account for measurement error, and evaluate causal relationships between variables. It is a multivariate statistical analysis method that combines qualitative causal assumptions with statistical data to assess and estimate causal links. It can be viewed as a special fusion of dependence and interdependence strategies.

SEM assumptions include multivariate normality, linearity, absence of outliers, model identification, sufficient sample size (200–400), and uncorrelated error terms. Path analysis and CFA were employed. Models were visualised with path diagrams representing relationships between observed and latent variables.

Absolute Fit Indices

Absolute fit indices show which suggested model fits the sample data the best.

1) Model Chi-Square (χ^2)

A conventional metric for assessing overall model fit, the Chi-Square value evaluates the degree of difference between the sample and fitted covariance matrices. A good model fit would yield an insignificant result at a 0.05 threshold (Barrett, 2007).

2) Root Mean Square Error of Approximation (RMSEA)

The LISREL program reports the RMSEA as the second fit statistic. More recently, authorities in this field seem to agree on a strict upper limit of 0.07.

$$\epsilon_\alpha = \sqrt{\max(\frac{F}{df} - \frac{1}{NM}, 0)}$$

3) Goodness-of-Fit statistic (GFI) and the Adjusted Goodness-of-Fit statistic (AGFI)

GFI is a substitute for the Chi-Square test. The value of this statistic increases with larger samples, and it ranges from 0 to 1. For the GFI, an omnibus cut-off point of 0.90 has historically been advised. As the sample size increases, AGFI tends to rise. Similar to the GFI, the AGFI has values between 0 and 1, with 0.90 or higher generally being regarded as a sign of a well-fitting model.

$$\mathrm{GFI} = \frac{\mathrm{tr}(\hat{\sigma} / \mathrm{W}\hat{\sigma})}{\mathrm{tr}(\hat{s} / \mathrm{W}\hat{s})};$$

$$\mathrm{AGFI} = 1 - \frac{1 - \mathrm{GFI}}{1 - \mathrm{k}/\mathrm{n}}; 0 \le \mathrm{GFI}, \mathrm{AGFI} \le 1$$

4) Root Mean Square Residual (RMR) and Standardised Root Mean Square Residual (SRMR)

The square root of the discrepancy between the sample covariance matrix's residuals and the hypothesised covariance model is what determines the RMR and SRMR. The SRMR has values between 0 and 1, with well-fitting models achieving values below 0.05.

$$RMR = \sqrt{\frac{2}{n(n+1)} \sum_{i}^{n} \sum_{j}^{i} (s_{ij} - c_{ij})^2} \quad \mathbf{C} = (c_{ij}) = \hat{\mathbf{\Sigma}} = \mathbf{\Sigma}(\hat{\gamma})$$

(s_{ij}) for the $n \times n$ input COV, CORR, UCOV, or UCORR matrix

Incremental Fit Indices

Incremental fit indices are a class of indices that compare the chi-square value to a baseline model rather than using the chi-square in its raw form.

$$IFI = \frac{\chi^2_{null} - \chi^2_{model}}{\chi^2_{null} - df_{model}}$$

1) Normed-fit index (NFI)

By comparing the model's χ^2 value to the null model's χ^2, this statistic evaluates the model. This statistic's values fall between 0 and 1. According to more current recommendations, NFI ≥.95 should be the cut-off criterion.

$$\mathrm{NFI} = \frac{\chi^2_{\mathrm{indep}} - \chi^2_{\mathrm{model}}}{\chi^2_{\mathrm{indep}}}; 0 \le \mathrm{NFI} \le 1$$

Non-Normed-Fit Index

$$\mathrm{NNFI} = \frac{\chi^2_{\mathrm{indep}}(\mathrm{df}_{\mathrm{indep}} / \mathrm{df}_{\mathrm{model}})\chi^2_{\mathrm{model}}}{\chi^2_{\mathrm{indep}} - \mathrm{df}_{\mathrm{indep}}}$$

2) CFI (Comparative fit index)

The CFI is an updated version of the NFI that accounts for sample size and still yields good results. A value of CFI ≥ 0.95 is currently acknowledged as indicative of good fit; however, an original cut-off criterion of CFI ≥ 0.90 was proposed.

$$\mathrm{CFI} = \frac{[\mathrm{df(null\ model)} - \mathrm{df(proposed\ model)}]}{\mathrm{df(null\ model)}}$$

Parsimony Fit Indices

The Parsimonious Normed Fit Index (PNFI) and the Parsimony Goodness-of-Fit Index (PGFI) were created as two parsimony fit indices to address this issue. The GFI serves as the foundation for the PGFI, which accounts for the loss of degrees of freedom. For these indices, no thresholds have been suggested; parsimony fit indices can be obtained in the 0.50 range, while other goodness-of-fit indices attain values above 0.90. "Information criteria" indices are another name for the second type of parsimony fit index. Of these indices, the Akaike Information Criterion (AIC) is arguably the most well-known.

Although it is challenging to provide a cutoff point because these indices are not normed to a 0–1 scale, smaller values indicate a well-fitting, frugal model; in other words, the model that generates the lowest value is the best. It should be noted that for these statistics to be deemed reliable, a sample size of 200 is required.

$$PGFI = \frac{df_{min}}{df_0} GFI$$

Results and Discussion

Descriptive Statistics

Demographic data, educational background, home environment, and learning strategies are all included in the questionnaire. The participants were between the ages of 17 and 23, with a mean = 19, SD = 1. Average daily study time was 2 hours (SD ≈ 2). First semester GPA had a Mean of 3.06 with SD = 0.48. Gender is distributed as 51.7% male and 48.3% female, of which 65.7% urban and 34.3% are rural. Medium of instruction of the participants is distributed as 27.7% always used English as medium, 48.7% never used English medium, and 68.7% used English at an intermediate level. Grades in the last taught English course are distributed as 17.7% scored A+, 28.7% A, and 0.3% D.

Parental Education

Fathers: 6% below middle, 33% matric, 21.3% postgraduates
Mothers: 20% below middle, 34% matric, 6.7% postgraduates

Language use:

Home language: Urdu (39.3%), Punjabi (29%), English (3%)
Most fluent: Urdu (54.7%), Punjabi (17.7%), English (11.3%)
Favourite language: Urdu (36.7%), English (28.3%), mixed (17.3%)
Mobile messaging: Mixture (33.3%), Punjabi (33%), English (22.7%), Urdu (11%)

English Learning Preferences

Useful skill: Speaking (56.7%), Listening (16.7%), Reading (16.3%), Writing (10.3%)
Vocabulary strategies: Consult dictionary (reading: 43.7%, writing: 33.7%), ask others (reading: 19%, writing: 29.7%), skip/guess unknown words (~13–16%)

Correlation Analysis (Spearman)

Correlation among Teacher's role & learning strategies is r = .264, correlation between Attitude and learning strategies is r = .184, correlation between Language anxiety and communication is r = –.217, correlation between Learning strategies and motivation is r = .414, correlation between Motivation and teacher's role is r = .408 and correlation between Motivation & academic performance is r = .415. All correlations are significant at a 0.01 P value, except language anxiety (non-normal data).

Confirmatory Factor Analysis

CFA was conducted to validate the constructs used in the study. All items across the constructs showed significant p-values, confirming their inclusion. Table A-1 shows the Measures of Goodness of Fit for all the factors.

For the *Educational Background* construct, the most influential item was intermediate marks (β = 0.778), while medium of instruction at the intermediate level was the least influential (β = –0.133). In the *Home Environment* construct, mother's education had the highest loading (β = 0.935), whereas encouragement to speak English at home was least significant (β = 0.172).

For *Learning Strategies*, regular class attendance was the most significant factor (β = 0.773), and needing extra coaching for English was the least (β = 0.290). In the *English Communication* construct, good listening skills emerged as the most important (β = 0.589), while speaking English with friends was less influential (β = 0.365). Within *Language Anxiety*, fear of being laughed at while speaking English had the highest loading (β = 0.927), whereas comfort asking questions in English was the lowest (β = –0.203).

The *Attitude* construct showed that understanding while listening was the most influential (β = 0.718), while excitement about learning a new language was the least (β = 0.277). In the *Motivation* factor, preference for English as the medium of instruction from the primary level was most significant (β = 0.712), while speaking English outside class was less important (β = 0.489). For *the Teacher's Role*, the perceived usefulness of English courses had the highest estimate (β = 0.632), and lectures delivered in English had the lowest (β = 0.131). Lastly, in the *Academic Performance* construct, alignment of exam performance with knowledge was most critical (β = 0.810), while making a study schedule had the least importance (β = 0.220).

Model fit indices were also evaluated. Constructs such as *Educational Background, Learning Strategies, English Communication, Language Anxiety, Teacher's Role,* and *Academic Performance* met the recommended fit criteria, with GFI values above 0.90, AGFI values above 0.80, RMSEA below or equal to 0.08, and χ^2/df values below 3. The *Motivation* and *Attitude* constructs had marginal fit with RMSEA values of 0.11 and 0.15, respectively, indicating weaker model fit, though their items were still retained. However, the *Home Environment* construct, despite having significant item loadings and a good GFI (0.935), failed to meet the overall model fit requirements and was excluded from the final structural equation model.

Table A-1

Measures of Goodness of Fit for all the factors

	χ^2	d.f	p-value	χ^2 /d.f	GFI	AGFI	RMSEA
Recommended				≤ 3	≥ .90	≥ .90	≤ 0.08
Educational Background	93.8389	20	0.000000	4.6	0.922	0.860	0.115
Home Environment	54.8527	5	0.000000	10.97	0.935	0.805	0.177
Learning Strategies	11.496	5	0.042377	2.29	0.985	0.955	0.065
English Communication	14.4631	5	0.012921	2.89	0.981	0.942	0.08
Language Anxiety	108.91	35	0.000000	3	0.928	0.887	0.08
Attitude	146.877	20	0.000000	7	0.878	0.780	0.157
Motivation	122.539	27	0.000000	4.5	0.907	0.844	0.118
Teacher's Role	24.14	9	0.004078	2.68	0.972	0.935	0.078
Academic Performance	13.842	5	0.016645	2.76	0.981	0.944	0.079

Structural Equation Modelling

SEM was employed to predict students' academic performance while learning in a foreign language, specifically English. A path diagram was developed to represent the structural model. These constructs' standardised path coefficients show how strongly they are correlated with academic achievement.

The fitted path diagram (Figure II) shows that all variables contribute to academic performance, either directly or indirectly, with coefficients ranging from 0.127 to 0.691. Some variables, such as motivation and learning strategies, demonstrate stronger relationships with academic performance, while others, such as teachers' role and language anxiety, show comparatively moderate influence. Despite the variation in path coefficients, all paths in the model were found to be statistically significant, validating their inclusion.

A number of recognised goodness-of-fit metrics were used to evaluate the model's overall fit. The observed and anticipated covariance matrices were first compared using the chi-square statistic. A satisfactory model fit is indicated by a significant p-value and a chi-square to degrees of freedom ratio (χ^2/d.f.) of 1.62, both of which are below the 3-point cutoff. This ratio offers a more reliable evaluation, particularly for samples larger than 200, even though the chi-square test is sensitive to sample size.

A good fit between the proposed model and the population covariance matrix was indicated by the (RMSEA), which was 0.046, much below the suggested maximum limit of 0.08. Furthermore, the model's adequacy was further confirmed by the SRMR, which was 0.080 and within the acceptable range.

Although the precise value was not disclosed, the NNFI, which takes model parsimony into account and is less sensitive to sample size, surpassed the acceptable threshold of 0.90. Both the AGFI and GFI were 0.810. Even while both indices fall just short of the traditional threshold of 0.90, they nevertheless indicate a respectable degree of model fit, particularly when paired with the better fit indices (RMSEA, SRMR, and χ^2/d.f.). It is also mentioned that because GFI is sensitive to sample size and model complexity, it has lost favour in more recent work.

As shown in Table A-2, all structural correlations among the latent constructs were statistically significant overall. This demonstrates that the proposed pathways significantly add to the understanding of students' academic achievement. Together, the total model fit indices shown in Table A-3 lend credence to the structural model's sufficiency. As a result, the factors affecting academic performance in a foreign language learning context are validly and reliably represented by the fitted SEM.

Table A-2

Model Estimates of SEM

Variables	Parameter estimate	Standard Error	T Statistic	Prob. level
Teacher role ->learning strategies	0.343	0.064	5.357	0.000
Attitude ->learning strategies	0.127	0.050	2.507	0.012
Language anxiety ->English communication	-0.144	0.036	-3.969	0.000
Educational background -> English communication	0.140	0.038	3.701	0.000
learning strategies -> English communication	0.164	0.063	2.582	0.010
learning strategies ->motivation	0.691	0.132	5.219	0.000
English communication >motivation	0.457	0.125	3.660	0.000
Motivation -> academic performance	0.193	0.078	2.472	0.013

Table A-3

Measure of Goodness of Fit of Model

	χ^2	d.f	p-value	χ^2 /d.f	RMSEA	SRMR	GFI	AGFI
CFA Model	1124.26	693	0.000000	1.62	0.046	0.080	0.831	0.810
Recommended				≤ 3	≤ 0.08	≤ 0.08	≥ .90	≥ .90

Models Estimated Equations

$Y = 0.193\ X_7$

$X_7 = 0.691\ X_5 + 0.457\ X_6$

$X_5 = 0.343\ X_1 + 0.127\ X_2$

$X_6 = 0.140\ X_3 - 0.144\ X_4 + 0.164\ X_5$

Were X_1 =Teacher Role, X_2 = Attitude, X_3 = Educational Background, X_4 = Language Anxiety, X_5 = Learning Strategies, X_6 = English Communication, X_7 = Motivation and Y = Academic Performance

Based on the results of the SEM, it can be logically concluded that both the role of the teacher and students' attitudes toward the English language have a direct influence on their learning strategies. This aligns with previous research, which highlights a significant correlation between effective learning approaches and academic achievement in higher education (Soares et al., 2009). Furthermore, students' educational background and learning strategies were found to positively impact their English communication skills, whereas language anxiety had a negative effect on their ability to communicate in English. In turn, both learning strategies and English communication skills directly influence students' motivation, which is itself positively associated with academic performance. Thus, motivation plays a mediating role, indirectly linking learning behaviours to academic outcomes.

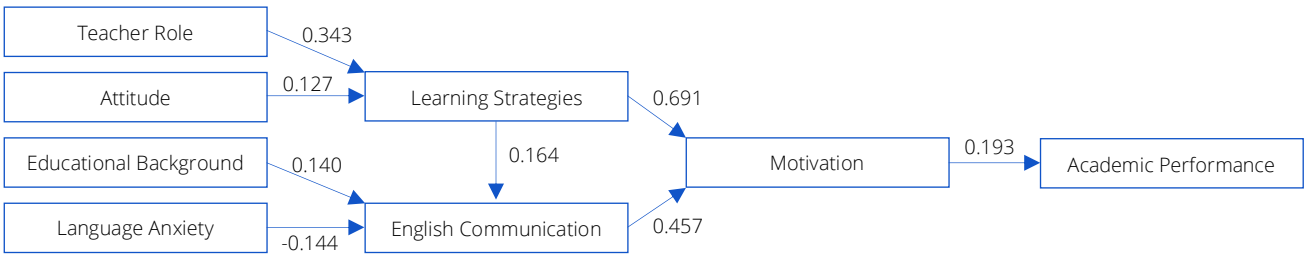
Language anxiety is the only factor that has been found to have a negative correlation with academic achievement. These connections align with results from other research that examined different aspects of learning a second language. Notably, second language researchers have long emphasised the dual roles of anxiety and motivation in language learning. The inverse relationship between language anxiety and motivation suggests that higher anxiety can hinder motivational levels. The current study supports this notion. Motivation is widely recognised as a crucial factor in second language acquisition, representing the effort that learners invest in learning a language based on their internal needs or desires. These findings also corroborate the broader view that proficiency in the MOI is strongly correlated with overall academic performance. Therefore, the structural relationships identified in this study are supported not only by the model's statistical significance but also by existing literature, reinforcing the validity of the proposed model.

Fitted Model Path Diagram

A SEM path diagram that included factors and an effective goodness-of-fit index was produced.

Figure 2

Path Diagram



Measuring the overall effect of the English Medium of Instruction on Motivation and Academic Performance

Overall effect on Motivation

Total directly and indirectly effect of teacher's role, Attitude, Educational Background, Language Anxiety, Learning Strategies and English Communication on Motivation of students.

TR→ LS→MOT = (0.343) (0.691) = 0.2370
ATT→LS→MOT = (0.127) (0.691) = 0.0877
ATT→LS→EC→MOT = (0.127) (0.164) (0.457) = 0.0095
EB→EC→MOT = (0.140) (0.457) = 0.0639
LA→EC→MOT = (-0.144) (0.457) = -0.0658
Total impact on motivation, both directly and indirectly is 0.2370 + 0.0877 + 0.0095 + 0.0639 - 0.0658 = 0.3323
Total effect of teacher role on motivation is 0.2370
Total effect of attitude on motivation is 0.0877 + 0.0095 = 0.0973
The total effect of educational background on motivation is 0.0639
Total effect of language anxiety is -0.0658
It shows that the teacher's role has a greater effect on motivation, while attitude towards learning in English has the second highest effect on motivation.

Overall Effect on Academic Performance

Directly and indirectly, the total effect on academic performance
TR→ LS→MOT→AP = (0.2370) (0.193) = 0.0457
ATT→LS→MOT→AP = (0.0877) (0.193) = 0.0169
ATT→LS→EC→MOT→AP = (0.0095) (0.193) = 0.0018
EB→EC→MOT→AP = (0.0639) (0.193) = 0.0123
LA→EC→MOT→AP = (-0.0658) (0.193) = -0.0126

Total direct and indirect effect of teacher's role, Attitude, Educational Background, Language Anxiety, Learning Strategies and English Communication through motivation on academic Performance is 0.0457 + 0.0169 + 0.0018 + 0.0123 -0.0126 = 0.0642

These results indicate that MOI's impact on academic performance is 0.0768, when the teacher has a supportive role and tries to enhance students' abilities in the English language. The student has a good educational background and English communication skills, his attitude is positive, and his motivation is high. But when a student has to face language anxiety, MOI's impact on academic performance is 0.0642.

Teacher's Role and Student Attitudes

According to SEM analysis, learning strategies are significantly influenced by the teacher's role and the attitudes of the students toward the English language. This is consistent with current research that highlights how teacher behaviors affect students' motivation and engagement. According to Peng (2021), for example, teacher praise greatly increases the academic motivation and engagement of EFL students, indicating that constructive teacher-student interactions promote improved learning strategies and results.

Language Anxiety and English Communication

Current research supports the model's finding that language anxiety and English communication skills are negatively correlated. According to Welesilassie and Nikolov (2024), pupils' willingness to communicate in English both within and outside of the classroom is negatively impacted by higher levels of foreign language fear. Their research supports the negative effects of anxiety on language proficiency by showing that pupils with lower anxiety levels demonstrate higher communicative ability.

Motivation and Academic Performance

Recent research supports the idea that academic success and English communication skills are mediated by motivation. According to a study by Wicaksono et al. (2023), EFL students who had higher levels of self-efficacy and grit exhibited more academic resilience and motivation, which enhanced their academic performance. This implies that improving academic performance in language learning environments requires cultivating motivation.

Educational Background and Learning Strategies

The positive influence of educational background on learning strategies and English communication skills in the model is consistent with findings from recent studies. Research by Motlagh et al. (2011) emphasizes the role of self-efficacy, often rooted in prior educational experiences, in shaping effective learning strategies and academic success. Students with a strong educational foundation are more likely to employ effective learning strategies, facilitating better language acquisition and communication skills.

Conclusion

In summary, SEM analysis is well-supported by current research, highlighting the complex interrelations among teacher influence, student attitudes, language anxiety, motivation, and educational background in determining academic performance in EFL contexts. These findings underscore the importance of holistic approaches in language education that address both affective and cognitive factors to optimize student outcomes.

Limitations of the Study

It is important to take into account the limitations of this research study while evaluating the results. First, only University of Gujarat students were included in the sample because of time and budgetary limitations. As a result, the findings might not be as applicable to different organizations or areas. Second, the study was limited to second-semester students, making it difficult to evaluate the long-term impacts of learning a foreign language. The reliability and external validity of the results might have been improved with a bigger and more varied sample size. Finally, the accuracy of the results may have been impacted by recall bias or deliberate misreporting, as the academic performance statistics were based on self-reported grades.

Recommendations / Suggestions

A number of suggestions are made for further research and instructional strategies in light of the study's limitations and conclusions. To investigate how the medium of instruction affects academic achievement over time, a longitudinal study design is recommended. Comparative research could also be done to investigate how gender, residential background (rural vs. urban), or academic discipline (social vs. pure sciences) affects language-related academic results. Fostering a culture that encourages students' enthusiasm and proficiency is vital, particularly when it comes to learning English.

Students should be helped to improve their English communication skills and learning strategies in order to do better academically. These abilities are crucial for understanding course content, writing assignments, and presentations. By highlighting the long-term benefits of learning English for postsecondary education, foreign possibilities, and worldwide career prospects, teachers can significantly increase student motivation. Nowadays, a large number of students just study English because it is required of them; they are not aware of its wider relevance.

Universities and the Ministry of Education should thus actively encourage this change by setting up seminars, workshops, and short courses designed to improve students' English language skills. Students' skills would be more in line with the expanding demands of globalisation, thanks to such initiatives. In the end, this study might provide a starting point for further investigation into the relationship between language acquisition and academic achievement in higher education environments.

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