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## **Empirical Measurement Of Academic Barriers Among The Undergraduate Urdu-Medium Students In The Universities Of Balochistan**

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### **ABSTRACT**

This quantitative study examines the educational challenges faced by female students from an Urdu-medium background pursuing higher education in Quetta, Balochistan. The study sought to investigate the academic difficulties faced by Urdu-medium female undergraduate students studying at public universities in Quetta. It attempted to quantify the level of difficulties experienced by these students in adjusting to English-medium higher education. Furthermore, the study intended to establish the reliability of the Academic Challenges Scale, designed to measure significant areas of academic struggle. Lastly, it attempted to compare levels of academic difficulties between students from the three public universities in Quetta to determine patterns and institutional differences. The sample size consisted of 200 students, with 67 students from the University of Balochistan, 67 from Sardar Bahadur Khan Women's University, and 66 from the Balochistan University of Information Technology, Engineering and Management Sciences. Data collection was conducted through structured questionnaires by means of purposive sampling to measure students' perceptions regarding academic challenges, language difficulty, and coping mechanisms. The scale was found to be highly reliable (Cronbach's  $\alpha = .979$ ). The results showed that because of the bilingual education system, Urdu-medium students suffer from academic overload, low self-confidence, and poor academic achievement. Scores of participants were more than the midpoint of the scale, suggesting very high levels of academic difficulty. The study further indicated that BUITEMS students had significantly lower challenge scores compared to UOB and SBK students. Findings are reported with recommendations for specific language support and institutional interventions.

**Key Word:** Urdu-Medium Students; Academic Challenges; Higher Education; Bilingual Education; Language Barriers; Baluchistan; Female Undergraduates; Cronbach's Alpha; ANOVA.



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### Introduction

Language is one of the most powerful instruments that shapes human thought, interaction, and access to knowledge. It determines how individuals conceptualize reality, acquire information, and participate in social, political, and educational systems (Ahmad, 2011). In multilingual societies such as Pakistan, language serves not only as a medium of communication but also as a symbol of power, identity, and class (Rahman, 2002; Mansoor, 2004). Over the decades, Pakistan's education system has evolved under the complex interplay of colonial legacies, socioeconomic stratification, and linguistic diversity. English remains the dominant language of higher education, governance, and professional advancement, while Urdu and various regional languages—such as Balochi, Pashto, Sindhi, and Punjabi—serve as primary languages for early schooling and community life (Rahman, 2004; Manan, David, & Dumanig, 2016). This linguistic duality has created a persistent divide between English-medium and Urdu-medium learners, particularly affecting students transitioning from public-sector Urdu-medium schools to English-medium universities. At the time of independence in 1947, Pakistan inherited a deeply hierarchical educational structure, in which English was associated with the elite and administrative classes, while Urdu was promoted as a unifying national language (Mahboob, 2009). Despite the state's efforts to promote Urdu as the medium of instruction, English retained its prestige as the language of higher education and socioeconomic mobility (Rahman, 2002). This dichotomy has continued to influence the country's education policies, where English-medium private institutions cater to the privileged classes, while Urdu-medium public schools serve the majority population (Kirkpatrick & Sussex, 2012; Shamim, 2008). Consequently, students from Urdu-medium backgrounds often face serious academic barriers when they enter universities, where the primary language of instruction, textbooks, and examinations is English (Shamim, 2011). These barriers extend beyond simple language comprehension—they encompass cognitive, emotional, and social dimensions, such as lower self-confidence, academic anxiety, and limited classroom participation (Anbreen, 2015; Khan, 2019). This linguistic inequality has become a significant determinant of academic success and social mobility in Pakistan. Balochistan, Pakistan's largest but least populated province, presents a distinctive case in terms of linguistic and educational diversity. It is home to multiple ethnic and linguistic groups, including Balochi, Pashto, Brahui, and Urdu speakers (Kiazai, 2017). The region faces multiple educational challenges: poor infrastructure, gender disparities, low literacy rates, and a shortage of qualified teachers (Bengali, 2015; UNESCO, 2020). The language issue adds another layer of complexity. Most public schools in Balochistan still teach in Urdu, while higher education institutions such as the University of Balochistan, Sardar Bahadur Khan Women's University, and Balochistan University of Information Technology, Engineering, and Management Sciences (BUIITEMS) use English as the main medium of instruction. This abrupt shift in linguistic environment creates a pedagogical and psychological barrier for Urdu-medium students, especially for female learners who already face cultural and social constraints (Zubaida & Rauf, 2021). The challenges faced by Urdu-medium students in English-medium higher education institutions are multifaceted. First, linguistic difficulties—such as understanding lectures, reading academic texts, and writing assignments—impede academic performance (Rahman, 2004; Faiz, 2015). Second, these students often have limited exposure to English-speaking environments and lack access to supplementary learning resources such as academic writing centers or English tutoring programs (Syed et al., 2019). Third, sociocultural expectations, particularly for female students in conservative regions like Balochistan, further restrict opportunities for practice and exposure to English (Manan et al., 2016;



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Sarooj, 2020). These barriers often result in reduced participation in classroom discussions, lower grades, and diminished confidence (Anbreen, 2015). Moreover, the problem is not confined to language alone. It reflects broader inequalities in Pakistan's educational structure, where the medium of instruction acts as a gatekeeper to upward mobility (Willoughby & Aftab, 2020). Students educated in English-medium private schools tend to perform better academically, secure higher-paying jobs, and gain access to international opportunities, while Urdu-medium students often find themselves marginalized in both academia and the job market (Rahman, 2002; Hamid, 2015). This inequitable system perpetuates a form of linguistic elitism, where proficiency in English equates to intelligence, competence, and modernity (Mahboob, 2009; Shamim, 2011). In Balochistan, the intersection of language and gender further compounds educational inequality. Female students, particularly those from rural or Urdu-medium backgrounds, encounter cultural and institutional barriers that hinder their academic progress (Bengali, 2015). Many families in Balochistan still adhere to traditional gender norms that limit women's educational opportunities, mobility, and exposure to academic resources (Kiazai, 2017). Within this context, Urdu-medium female students experience double marginalization: linguistic disadvantage and gender-based restrictions (Zubaida & Rauf, 2021). As a result, they often lack the confidence to communicate in English-dominated academic spaces, leading to passive participation and underperformance. These issues are exacerbated by the lack of institutional language support at public universities. Unlike some private universities in Pakistan that offer language bridging programs, most public-sector institutions in Balochistan do not provide formal English language assistance, despite admitting a large number of Urdu-medium students (Qayyum & Rauf, 2021). This neglect deepens the educational divide and discourages Urdu-medium students, particularly women, from achieving their academic potential. Empirical research underscores the significant challenges Urdu-medium students face in English-medium contexts. Studies by Anbreen (2015) and Irfan (2017) found that Pakistani university students often rely on rote memorization rather than comprehension due to language difficulties. Similarly, Rahman (2002) demonstrated that English functions as a form of "linguistic capital" in Pakistan, privileging those who can use it fluently. In a comparative study, Qayyum and Rauf (2021) discovered that Urdu-medium college students perceived English as both a necessity for success and a barrier to participation. These findings echo international research suggesting that students learning in a second language experience greater cognitive load, lower retention, and weaker academic outcomes (Cummins, 2000; Krashen, 1982). Despite this growing body of research, little empirical work has focused specifically on Urdu-medium female undergraduates in Balochistan. Given the province's unique sociocultural and linguistic landscape, it is critical to explore how these factors interact to shape students' academic experiences. This study aims to fill that gap through a systematic quantitative assessment of academic barriers among Urdu-medium students in public universities of Quetta. This research draws upon **Cummins' (1979) Linguistic Interdependence Hypothesis** and **Bourdieu's (1991) theory of Linguistic Capital**. Cummins suggests that proficiency in the first language supports second language learning when cognitive and academic skills are transferable across languages. However, when students are denied opportunities to develop academic proficiency in their first language, they struggle in the second language medium. In Pakistan's case, Urdu-medium students often experience a discontinuity between their prior education and university-level expectations. Bourdieu (1991), on the other hand, conceptualizes language as a form of symbolic power, where mastery of English serves as a form of "capital" conferring social and academic privilege. These theoretical perspectives help explain the systemic



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disadvantages faced by Urdu-medium learners in English-dominated institutions. This study aims to assess the academic challenges faced by Urdu-medium female undergraduates studying in public universities of Quetta. It seeks to measure the extent of their academic difficulties in English-medium settings, test the reliability of the Academic Challenges Scale, and compare challenge levels among students from the University of Balochistan (UOB), Sardar Bahadur Khan Women's University (SBKWU), and Balochistan University of Information Technology, Engineering and Management Sciences (BUIITEMS) to identify institutional differences. The study focuses mainly on academic challenges faced by Urdu-medium female students, excluding broader cultural or social factors unrelated to education. The use of purposive sampling and inclusion of only three universities within Quetta restricts the generalizability of the findings to a wider population.

### **Methodology**

The methodology section follows with a detailed explanation of the data extraction process, and the statistical models that are employed in the study.

### **Data**

Data for this study were collected through a structured questionnaire designed to measure the academic challenges faced by Urdu-medium female students in English-medium universities. The questionnaire was distributed in person to participants from the University of Balochistan, Sardar Bahadur Khan Women's University, and Balochistan University of Information Technology, Engineering and Management Sciences. Respondents were informed about the purpose of the study and their consent was obtained before participation. The data were collected over a two-week period, and all responses were kept confidential and used only for research purposes.

### **Descriptive statistics**

Descriptive statistics are statistical methods used to summarize, organize, and present data in a meaningful way. They describe the basic features of a dataset, such as the average (mean), median, mode, standard deviation, frequency, and percentage, providing a simple overview of the sample and the measures. Descriptive statistics help researchers understand patterns and trends without making conclusions beyond the data itself. are statistical methods used to summarize, organize, and present data in a meaningful way. They describe the basic features of a dataset, such as the average (mean), median, mode, standard deviation, frequency, and percentage, providing a simple overview of the sample and the measures. Descriptive statistics help researchers understand patterns and trends without making conclusions beyond the data itself.

### **Reliability coefficient**

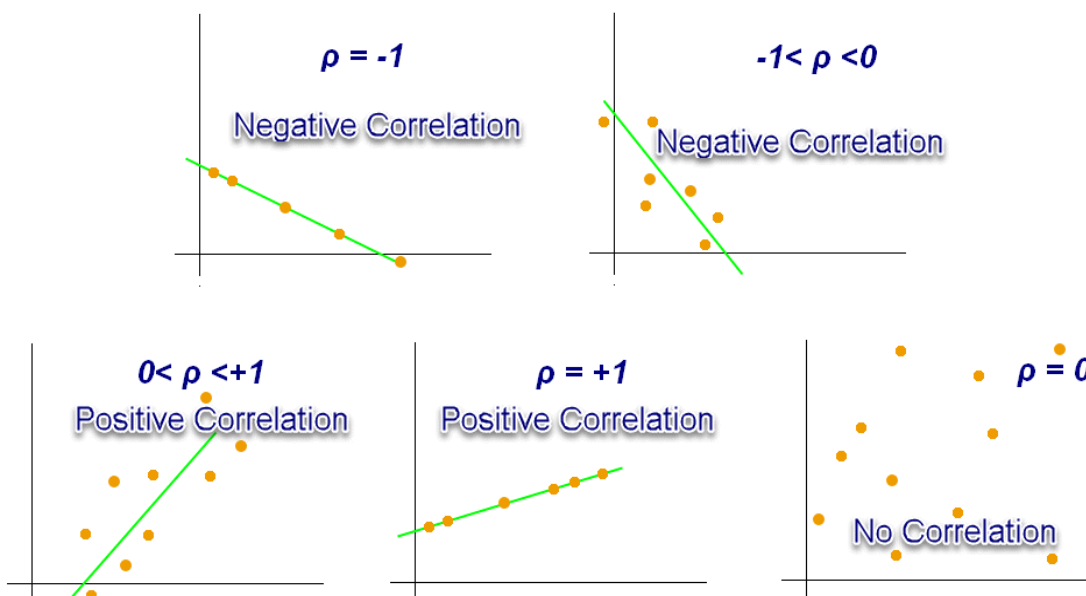
Reliability coefficients indicate the consistency or stability of a measurement instrument, showing how reliably it measures a particular construct. A higher reliability coefficient (often expressed as **Cronbach's alpha**) suggests that the items in a scale are internally consistent and produce similar results under consistent conditions. In simple terms, it shows whether the tool gives dependable and repeatable results when applied to similar groups or settings.



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**Correlation Coefficient**

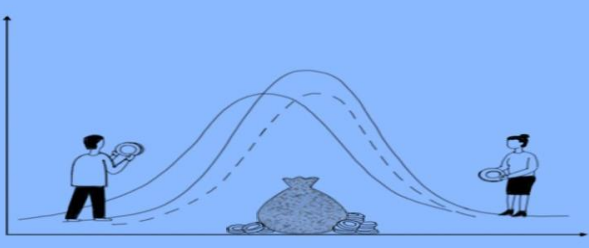
A **correlation coefficient** is a statistical measure that describes the strength and direction of a relationship between two variables. It ranges from **-1 to +1**, where values close to +1 indicate a strong positive relationship, values close to -1 show a strong negative relationship, and values near 0 suggest no relationship between the variables. The most commonly used correlation coefficient is **Pearson’s r**, which measures the linear association between two continuous variables.



**Figure 3.1 Correlation coefficient**

**ANOVA (Analysis of Variance)**

**ANOVA** is a statistical test used to determine whether there are significant differences between the means of three or more groups. It helps researchers find out if at least one group mean is different from the others, without testing each group pair separately. ANOVA compares the variance **between groups** to the variance **within groups** to assess whether the observed differences are statistically meaningful.



## Analysis of Variance (ANOVA)

*[ən-ō-və]*

An analysis tool used in statistics that splits an observed aggregate variability found inside a data set into two parts: systematic factors and random factors.

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**Figure 3.2 Analysis of variance**



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**Results and Discussion**

This section presents the results and discussion based on several statistical analyses. Descriptive statistics summarized participants’ responses, while a pie chart illustrated the distribution of students by medium of instruction. The reliability test using Cronbach’s alpha ( $\alpha = .979$ ) showed excellent internal consistency of the scale. Correlation analysis indicated strong positive relationships among scale items, confirming validity. Finally, ANOVA results revealed significant differences in academic challenge levels among universities, showing that Urdu-medium students experience varying degrees of academic difficulty across institutions.

**Table 4.1: Students' Preferred Medium of Instruction in Pakistan.**

Medium of Instruction	Frequency	Percent	Cumulative Percent
English	59	29.5	29.5
Urdu	26	13.0	42.5
Both	115	57.5	100.0
<b>Total</b>	200	100.0	100.0

The table shows the distribution of students based on their medium of instruction. Out of a total of 200 respondents, 59 students (29.5%) reported English as their medium of instruction, while 26 students (13%) studied in Urdu-medium institutions. The majority, 115 students (57.5%), indicated that they were taught through both English and Urdu mediums. The cumulative percentage reached 100%, showing that more than half of the participants had experience with a bilingual mode of instruction, suggesting that a mixed medium is the most common educational approach among the surveyed students.

**Table 4 2: Score Distribution for Research Scale.**

Scale	No of items	M	SD	Range		Skewnes S	
				Minm	Max	Statistics	SE
A_C	15	50.660 0	5.43989	31.0	60.0	-2.124	.172

The table presents the descriptive statistics for the Academic Challenges (A\_C) scale, which consists of 15 items. The results show that the mean score (M) of participants was **50.66** with a standard deviation (SD) of **5.44**, indicating moderate variability in responses. The scores ranged from **31.0** to **60.0**, suggesting that while some students reported relatively low academic difficulties, others faced significant challenges. The skewness value of **-2.124** (SE = 0.172) indicates a negatively skewed distribution, meaning that most respondents scored toward the higher end of the scale. This implies that a large proportion of Urdu-medium female students experienced high levels of academic challenges in English-medium university settings.



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Pie Chart: Score Distribution for Research Scale

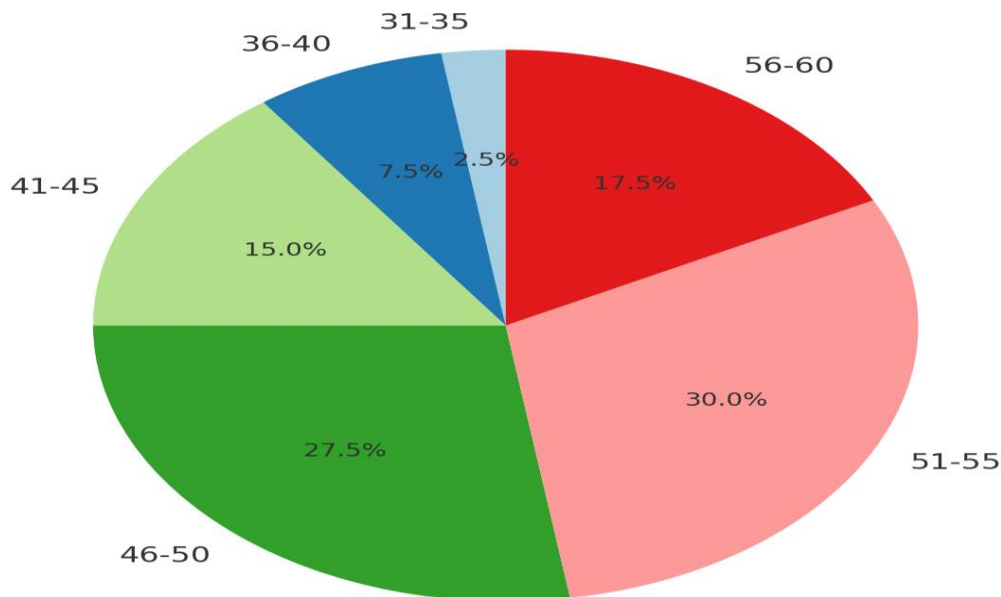


Figure 4.1 Pie char of descriptive statistics

Table 4.3: Reliability coefficients for the Quantitative research scale.

Sr.no	Scale	No of Items	Cronbach’s alpha
1	Academic Challenges	15	.979

Cronbach’s alpha value of .979 for the 15-item scale of academic challenges is far above the generally accepted level of .70. This indicates excellent reliability and points to the fact that the instrument always measures the same concept. That is, students' responses were quite consistent with each other, hence reinforcing the trust that reflects their academic challenges.

Table 4.4: Item Total Correlation-Coefficient for Academic Issues.

Item no	R	P
2	.707	< .001
3	.854	< .001
4	.896	< .001
5	.846	< .001
6	.804	< .001
7	.826	< .001
8	.894	< .001
9	.912	< .001
10	.905	< .001
11	.869	< .001
12	.916	< .001
13	.901	< .001
14	.816	< .001
15	.880	< .001



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16	.858	< .001
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All 15 item-total correlations are statistically significant and high (ranging from .707 to .916,  $p < .001$ ). The fact that all these item-total correlations are high demonstrates that each of the items is making a significant contribution to the total scale and that each is highly correlated with the construct of academic difficulty. This is yet another assurance of the validity and robustness of the measurement instrument, that it is capturing various facets of students' academic challenges well, including language issues, workload, and classroom interaction.

**Table 4.5: One-way ANOVA for Academic Challenges of Urdu medium students across three universities**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	515.467	2	257.734	9.449	.000
Within Groups	5373.413	197	27.276		
Total	5888.880	199			

The ANOVA analysis ( $F = 9.449$ ,  $p < .001$ ) shows significant variation in the academic problems encountered by Urdu-medium students among the three universities. This indicates that the institutional environment shapes the level of problems encountered by the students. The results show that students in some universities face more problems than in others, which indicates the influence of university culture, academic facilities, and support structures on shaping the experiences of the students.

**Table 4.6: Post Hoc Tukey HSD Comparison of Academic Challenges of Urdu-Medium Students Across Three Universities.**

(I) University	(J) University	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
UOB	SBK	-0.259	0.906	.956	-2.398	1.880
	BUIITEMS	3.264*	0.906	.001	1.125	5.403
SBK	UOB	0.259	0.906	.956	-1.880	2.397
	BUIITEMS	3.522*	0.902	.000	1.392	5.653
BUIITEMS	UOB	-3.264*	0.906	.001	-5.403	-1.125
	SBK	-3.522*	0.902	.000	-5.653	-1.392

The Post Hoc analysis gives a better indication of where the discrepancies are. It indicated that BUIITEMS students have fewer academic difficulties than UOB and SBK students ( $p < .001$ ). Nonetheless, there was no statistically significant difference between UOB and SBK students. This discovery implies that though UOB and SBK students are confronted with similar amounts of difficulty, BUIITEMS might have comparatively superior academic support facilities, instructional methods, or resources that minimize challenges for Urdu-medium students.



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**Table 4.7: Homogeneous group comparison of universities on academic challenges using Tukey HSD test**

University	N	Subset for alpha = 0.05	
		1	2
BUIITEMS	67	48.4	
UOB	66		51.667
SBK	67		51.925
Sig.		1.000	.956

Post hoc analyses with the Tukey HSD test revealed that the students at BUIITEMS ( $M = 48.40$ ) perceived significantly fewer academic difficulties than UOB ( $M = 51.67$ ,  $p = .001$ ) and SBK ( $M = 51.93$ ,  $p < .001$ ). The difference between UOB and SBK was not significant ( $p = .956$ ). These findings indicate that Urdu-medium students at BUIITEMS have fewer challenges in adjusting to English-medium higher education, whereas those at UOB and SBK encounter equivalent and greater challenges.

### Conclusion

The second stage utilized a survey to cross-check and build on these findings. The quantitative findings reaffirmed that the students from Urdu-medium schools tended to perform lower than their counterparts in English-medium institutions. This finding aligns with Rehman and Saghir (2021) and Khan (2019), who established a significant correlation between proficiency in English and academic performance at the tertiary level. The statistics also indicated the differences between graduates of government and private schools. The private schools, predominantly operating in English, better prepared students for university education, while graduates of the government schools trailed behind. This institutionalized disparity serves to endorse Rahman's (2002) contention that English-medium education in Pakistan functions as a vehicle for "linguistic capital" for the ruling elite. This study offers clear, measurable evidence that Urdu-medium female undergraduate students in Quetta face severe scholastic challenges in English-medium higher education, and that these challenges vary institution by institution. The reliable 15-item scale used in the current study can aid institutional diagnostics and evaluation of remedial programs.

### References

- Ahmad, N. (2011). A comparative study of the nature of difficulties and factors affecting the learning of English by the secondary school students of provincial and federal government schools in Khyber Pakhtunkhwa [Unpublished MPhil thesis]. University of Peshawar.
- Ahmad, S. (2011). Language and communication in a social context. National Book Foundation.
- Anbreen, T. (2015). The influence of English second language learning on Pakistani university students' identity. *Procedia – Social and Behavioral Sciences*, 192, 379–387. <https://doi.org/10.1016/j.sbspro.2015.06.054>
- David, M. K., Dumanig, F. P., & Manan, S. A. (2016). National languages — medium of instruction empowerment or disempowerment? *Linguapax*
- Faiz, A. (2015). Challenges in translating Faiz Ahmad Faiz into English. *International Journal of South Asian Studies*, 8, 1–10. <https://iisjoa.org/sites/default/files/iisjoa/April%202025/Paper%207>



## Vol. 3 No. 10 (October) (2025)

- Hamid, M. O. (2015). Language, identity, and social divides: medium of instruction debates. (paper on MOI / identity; often cited for Bangladeshi/Bengali MOI debates)
- Manan, S. A., David, M. K., & Dumanig, F. P. (2016). English language education policy in Pakistan: A critical analysis. In R. Kirkpatrick (Ed.), *English language education policy in Asia* (pp. 219–244). Springer. [https://doi.org/10.1007/978-3-319-22464-0\\_11](https://doi.org/10.1007/978-3-319-22464-0_11)
- Qayyum, Z., & Rauf, S. (2021). English or Urdu medium of instruction: College students' perceptions. *Balochistan Review*, (Vol. 2, 2021), 173–191
- Rahman, T. (2002). *Language, ideology and power: Language-learning among the Muslims of Pakistan and North India*. Oxford University Press.
- Rahman, T. (2002). *Language, ideology, and power: Language-learning among the Muslims of Pakistan and North India*. Karachi: Oxford University Press.
- Rahman, T. (2004). *Denizens of alien worlds: A study of education, inequality and polarization in Pakistan*. Oxford University Press.
- Rahman, T. (2004). *Language ideology and power: Language-learning among the Muslims of Pakistan and North India*. Karachi: Oxford University Press.
- Sarooj, R. (2020). View of a qualitative study on the effect of linguistic discrimination on the students of Iqra University. Vol. 1 No. 1 *Pakistan Review of Social Sciences (PRSS)*. <https://journals.pakistanreview.com/index.php/PRSS/article/view/4/16>
- Willoughby, J., & Aftab, Z. (2020). *The fall of Urdu and the triumph of English in Pakistan: A political-economic analysis (PIDE Working Paper No. 29)*. Pakistan Institute of Development Economics
- Ahmad, N. (2011). *A comparative study of the nature of difficulties and factors affecting the learning of English by the secondary school students of provincial and federal government schools in Khyber Pakhtunkhwa [Unpublished MPhil thesis]*. University of Peshawar.
- Ahmad, S. (2011). *Language and communication in a social context*. National Book Foundation.
- Anbreen, T. (2015). The influence of English second language learning on Pakistani university students' identity. *Procedia – Social and Behavioral Sciences*, 192, 379–387.
- Bengali, K. (2015). *Education crisis in Pakistan: The real story*. Sustainable Development Policy Institute.
- Bourdieu, P. (1991). *Language and symbolic power*. Harvard University Press.
- Cummins, J. (1979). Cognitive/academic language proficiency, linguistic interdependence, the optimum age question, and some other matters. *Working Papers on Bilingualism*, 19, 121–129.
- Cummins, J. (2000). Language, power, and pedagogy: Bilingual children in the crossfire. *Multilingual Matters*.
- Faiz, A. (2015). Challenges in translating Faiz Ahmad Faiz into English. *International Journal of South Asian Studies*, 8(1), 1–10.
- Hamid, M. O. (2015). Language, identity, and social divides: Medium of instruction debates. *Asian Education Review*, 4(2), 22–34.
- Irfan, M. (2017). The effect of English as a medium of instruction on students' academic performance in Pakistan. *Journal of Education Research*, 20(3), 101–115.
- Khan, R. (2019). The impact of language medium on academic achievement at tertiary level in Pakistan. *Journal of Social Sciences*, 15(2), 67–81.
- Kiazai, A. N. (2017). *Language and education in Balochistan: Issues and challenges*. University of Balochistan Press.



## Vol. 3 No. 10 (October) (2025)

- Krashen, S. (1982). *Principles and practice in second language acquisition*. Pergamon.
- Mahboob, A. (2009). English as an Islamic language: A case study of Pakistani English. *World Englishes*, 28(2), 175–189.
- Manan, S. A., David, M. K., & Dumanig, F. P. (2016). English language education policy in Pakistan: A critical analysis. In R. Kirkpatrick (Ed.), *English language education policy in Asia* (pp. 219–244). Springer.
- Mansoor, S. (2004). *The medium of instruction dilemma in Pakistan*. Oxford University Press.
- Qayyum, Z., & Rauf, S. (2021). English or Urdu medium of instruction: College students' perceptions. *Balochistan Review*, 2(1), 173–191.
- Rahman, T. (2002). *Language, ideology and power: Language-learning among the Muslims of Pakistan and North India*. Oxford University Press.
- Rahman, T. (2004). *Denizens of alien worlds: A study of education, inequality and polarization in Pakistan*. Oxford University Press.
- Willoughby, J., & Aftab, Z. (2020). *The fall of Urdu and the triumph of English in Pakistan: A political-economic analysis*. PIDE Working Paper No. 29.
- Zubaida, T., & Rauf, S. (2021). Linguistic challenges faced by Urdu-medium students in Balochistan universities. *Pakistan Journal of Education Studies*, 3(1), 55–72.
- Gravetter, F. J., & Wallnau, L. B. (2021). *Statistics for the behavioral sciences* (11th ed.). Cengage Learning.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage Publications.
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>