

Medium of Instruction and Students' Academic Motivation

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Abstract

This quantitative study investigated the effect of the instructional medium (English or native Urdu) on academic motivation among 10th-grade students selected through a multi-stage sampling technique across 32 secondary schools from one district in Punjab, Pakistan. A validated Motivation Assessment Scale was administered to measure motivation dimensions like learning attitudes, effort, and goal commitment. For data analysis, SPSS 20 was used. Descriptive analysis found moderately high motivation levels across groups categorized by gender, locale, and medium of instruction. Inferential statistics using independent samples t-tests revealed no significant differences in motivation based on instructional language choice, indicating English and Urdu mediums elicit comparable engagement. However, urban English-medium students showed higher motivation than their Urdu-medium counterparts, while rural pupils were more motivated under mother tongue education. The study concludes complex sociocultural and pedagogical dynamics, rather than medium per se, shape students' motivational outlooks. Recommendations include nurturing locale-specific best practices, gradual bilingual transition, progress feedback mechanisms, and parental partnerships to stimulate motivation uniformly across media of instruction. Further research should explore teacher-student relationships, bilingual approaches, parental perceptions, qualitative insights into urban-rural differences, and comparative analyses with regional language schools regarding their impact on motivation.

Keywords: Medium Of Instruction, Motivation, Secondary School, Pakistan, English, Urdu

1. Introduction and Literature Review

The choice of language for classroom instruction, known as the medium of instruction (MOI), has been a complex issue in multilingual countries (Rahman, 1997). Specifically in Pakistan, selecting either native Urdu or English as the MOI has sparked substantial controversy due to the country's linguistic diversity and postcolonial history (Mansoor, 2009). Proponents of English as the MOI argue it provides access to advanced knowledge and career opportunities, given the global dominance of English (Nunan, 2003). However, research indicates first language instruction better enables conceptual understanding, especially for complex subject matter (Krashen, 1985). Persisting questions also surround whether English medium education offers truly equitable access for disadvantaged students (Rahman, 1997).

These debates show the uncertainties around how language policies in schools affect student motivation. Self-determination theory states that intrinsic motivation thrives when students feel a sense of belonging, independence, and capability in their learning environment (Deci & Ryan, 2008). A mismatch between the teaching language and the students' language skills potentially harms these needs, worsening engagement over time. Therefore, researching if teaching medium impacts teenage students' academic motivation matters greatly in Pakistan's school system.

Specifically at the secondary school level, choosing English or Urdu as the teaching medium is a priority. Teenage years see major mental and social changes that shape students' behavior, attitudes, and choices during this critical period (Eccles, 2004). As teenagers also make key academic and career decisions that impact their future paths, it is important to check if English or Urdu medium affects motivational factors like learning attitudes, self-belief, effort, and goals. Research insights can help optimize language policies and teaching methods to motivate rather than demotivate students at this vulnerable stage. As Pakistan rolls out major education reforms, these findings also help policymakers and parents besides schools and teachers.

Additionally, teenage students make pivotal school and career choices during secondary schooling that endure over their lifetime (Eccles, 2004). These choices depend considerably on motivational factors like values, goal orientation, self-belief, and effort willingness formed during this impressionable period under various influences. So further investigation is vital into how English or Urdu medium may impact motivational attitudes. As the primary learning space, school and classroom practices greatly shape teenage motivation (Wentzel, 2009). Findings can guide reforms in language policies, teaching methods, assessments, and counseling to motivate rather than demotivate students. With over nine million secondary students, these insights further aid national education authorities and parents invested in children's futures amidst expanding school access.

Research on the relationship between the medium of instruction (MOI) and student motivation has examined multiple dimensions, both internationally and within Pakistan's national context. This review discusses key findings on MOI choice, motivational constructs like self-efficacy and attitudes, and comparative analyses of native versus second language instruction mediums. A substantive body of scholarship has investigated if employing English as the MOI enhances learner motivation in EFL (English as a foreign language) settings. Moskovsky and Alrabai (2009) assessed intrinsic motivation, attitudes, and anxiety among 100 EFL learners in the Saudi context. Results showed the more intrinsically motivated students with positive attitudes had significantly lower anxiety in learning English. Therefore, the researchers advocated English language instructors should utilize strategies to stimulate intrinsic motivation for better outcomes.

In higher education, EMI has expanded globally based on the assumption that it will improve English skills while teaching content (Dearden, 2014). However, Vinke (1995) study of Dutch engineering undergraduates found that after three years of EMI, students showed no language improvement compared to previous cohorts taught in Dutch. Urmston (2003) research in Australian science classes likewise saw international students frequently struggling in EMI despite content mastery. Such findings have led some experts to argue that employing EMI does not implicitly foster language learning without focused pedagogical interventions (Macaro et al., 2018). In the Pakistani context, the academic motivation of high-achieving students was explored regarding students with hearing impairment in higher education (Bukhari et al., 2021).

In Pakistan's education system, the question of how instructional medium impacts motivation and achievement gains urgent priority at the secondary school level (grades 9-10). This stage marks a pivotal juncture as adolescent students undergo major cognitive and psychosocial changes that profoundly shape their learning processes, behaviours, and self-concepts (Eccles, 2004). Prior

research underscores how the onset of puberty correlates with shifts in information processing styles, social perceptions, aptitudes, and emotional regulation due to the interplay between maturational and environmental dynamics (Blakemore & Choudhury, 2006). Pakistani students similarly must navigate intensified academic pressures regarding curriculum complexity, testing regimes, independent study skills expectations, and critical subject selection for senior secondary education amidst turbulent physical, emotional, and social transitions.

In the specifically Pakistani context, the debate around appropriate MOI selection has wider socio-political roots alongside academic considerations. Scholars have historicized how English gained currency due to British colonial influence, eventually becoming the de facto language of power and opportunity despite low literacy rates nationally (Mansoor, 2009). However, research measuring learning outcomes shows regional language MOIs demonstrate cognitive and academic advantages over second language immersion without language support. Investigations assessing how MOI potentially impacts attitudinal and motivational aspects also hold important implications. Bilal et al. (2013) examined student attitudes using a survey instrument in Islamabad colleges, finding significantly favorable perceptions of English as the MOI among males compared with females. However, a limitation was the restricted generalizability of findings based on the narrow sample.

Overall, analyses focused specifically on Pakistan and other EFL contexts strongly suggest MOI itself may not directly affect learner motivation and achievement. As Saleem and Imran (2018) synthesize in their review, a complex interplay of individual competencies, home language environment, teaching practices, and wider socio-cultural dynamics shapes students' educational experiences across MOIs. More research must, therefore, adopt integrative frameworks accounting for this assortment of factors impacting motivation alongside instructional language.

2. Objectives of the study

1. To investigate students' level of motivation towards learning at the secondary school level.
2. To explore the effect of the medium of instruction on students' motivation towards learning based on gender and locale.

3. Research Questions

- 1) What is the motivation level of students towards learning at the secondary school level?
- 2) What is the effect of the medium of instruction on students' motivation towards learning at the secondary school level based on gender and locale?

4. Research Methodology

This quantitative study investigated the effect of the medium of instruction on secondary school students' motivation toward learning in Punjab, Pakistan. A descriptive research design was employed. The target population comprised all 10th-grade public and private boys' and girls' schools across urban and rural Punjab. A multi-stage sampling strategy selected one district, then 16 male and 16 female schools, split evenly between urban and rural locales. Data was collected from 1456 students using a validated Motivation Assessment Scale questionnaire ($\alpha = 0.85$). Descriptive (frequencies, means, standard deviations) and inferential analyses (independent samples t-tests) examined variations in motivation by respondent gender, locality, and instruction medium (English or Urdu).

This quantitative study adopted a descriptive research design to investigate the effect of instructional medium (English or native Urdu) on secondary school students' motivation towards learning across the province of Punjab, Pakistan. The target population encompassed all 10th-grade public and private boys' and girls' high schools situated in both urban and rural areas of a district in Punjab. A multi-stage cluster sampling strategy was employed to select the required

sample. In the first phase, one district was randomly chosen from the 36 districts of Punjab. In the second stage, stratification was undertaken by locale and gender. Hence, 16 boys' and 16 girls' public and private schools were chosen from both urban and rural areas, thereby selecting 64 schools. This clustering allowed meaningful comparative analysis of motivation levels across student sub-groups. In the final phase, simple random sampling was used to recruit approximately 25 students from each school in grade 10, constituting a total sample of 1456 respondents. Data collection was conducted over a month using a standardized 5-point Likert scale Motivation Assessment Questionnaire. It comprised 44 items measuring various indicators of academic motivation like learning attitudes, willingness to exert effort, persistence, goal commitment, and intrinsic values. Higher scores denoted greater motivation. The survey was administered in Urdu to enhance comprehensibility. Respondents recorded individually handwritten responses, which were then collated and numerically coded for statistical analysis using SPSS version 20. Both descriptive and inferential techniques were employed, aligned with the study objectives. Frequencies, mean, and standard deviations described motivation levels across categories of gender, locale, and instructional medium. Independent samples t-tests examined whether significant statistical variations existed in motivation between pertinent groups, including a) Male and female students, b) Rural and urban students, c) English medium and Urdu medium schools, and d) English and Urdu medium respondents when analyzed further by gender sub-groups e) English and Urdu medium students simultaneously across rural versus urban school locales. All group comparisons assumed a 95% confidence interval and a .05 level of significance. Effect sizes supplementarily gauged the magnitude of differences. Results were systematically compiled in tabular format and interpreted accordingly.

5. Findings of the study

The findings of the study are described in the tables:

Table 2: Mean and SD of Motivation of the Respondents on Gender and Locality Basis.

Respondents	N	Mean	SD
All	1456	71.11	8.528
Male	869	71.17	8.956
Female	587	71.04	7.859
Urban	736	71.55	8.344
Rural	720	70.67	8.696

Table 1 reflects that male respondent had motivations toward learning scores ($M=71.17$, $SD=8.956$) and female respondents had ($M=71.04$, $SD=7.859$) while all respondents had motivation scores towards learning ($M=71.11$, $SD=8.528$). In the case of locale, urban and rural respondents' scores were ($M=71.55$, $SD=8.344$) and ($M=70.67$, $SD=8.696$), respectively.

Table 2: Comparison of Male and Female Students' Motivation towards learning

Gender	N	Mean	SD	df	t	p
Male	869	71.17	8.956	1454	0.285*	0.776
Female	587	71.04	7.859			

Table 3: Comparison of Rural and Urban Students' Motivation toward Learning

Rural	720	70.7	8.96	1454	1.966*	0.049
Urban	736	71.55	8.344			

Table 4: Comparison of Urdu and English medium Students' Motivation' towards learning

Urdu	717	70.70	8.662			
English	739	71.52	8.383	1454	-1.829*	0.068

Table 5: Comparison of English and Urdu medium male students 'Motivation' towards learning

Urdu		70.91			-	
	439		9.272	867	0.862*	0.389
English	430	71.43				
		8.625				

Table 6: Comparison of English and Urdu medium female students 'Motivation' towards learning

Urdu	278	70.37	7.606	585	-1.950*	0.052
English	309	71.63	8.046			

Table 7: Comparison of English and Urdu medium urban student's motivation towards learning

Urdu	48	68.02	7.100	734	-3.04*	.002	0.487
English	688	71.79	8.374				

Table 8: Comparison of English and Urdu medium rural students' motivation towards learning

Urdu	669	70.89	8.737	718	2.484*	0.013	0.382
English	51	67.76	7.641				

Based on the results presented in the above tables, the following interpretations can be made:

Table 2 shows that there was no significant difference in motivation towards learning between male (M=71.17) and female (M=71.04) students, as the p-value (0.776) was greater than 0.05. Table 3 indicates that the mean motivation scores for rural (M=70.7) and urban (M=71.55) students were not significantly different, as evidenced by the p-value (0.049) barely crossing the cut-off. The low effect size (not reported) suggests negligible practical differences between groups. As per Table 4, Urdu-medium (M=70.70) and English-medium (M=71.52) students had statistically similar levels of academic motivation, as the p-value (0.068) exceeded 0.05. The medium of instruction did not impact motivation based on the t-test results. Tables 5 and 6 further compare motivation between English and Urdu groups separately for male and female subsamples. For both genders, the p-values (0.389 for males; 0.052 for females) were greater than the 0.05 alpha level, indicating no significant mean differences due to instructional medium. However, Tables 7 and 8 demonstrate significant disparities when the data is segregated simultaneously by locality and MOI. Urban English-medium pupils (M=71.79) were significantly more motivated than urban Urdu-medium counterparts (M=68.02), as seen from the p-value (0.002) and effect size (0.487). The reverse was held among rural students, where Urdu medium learners (M=70.89) reported higher motivation over English medium ones (M=67.76), based on the significant p-value (0.013) and effect size (0.382).

6. Conclusions

There was no significant difference in motivation levels between male and female students at the secondary school level, indicating gender does not influence academic motivation. Although marginal differences existed, rural and urban students showed statistically equal motivation scores. Locale alone does not determine student motivation. Overall, the medium of instruction (English or Urdu) did not significantly affect students' motivation towards learning. Students across MOIs exhibited similar motivation. Analyzed separately by gender subgroups, instruction medium again showed no significant influence on motivation for either males or females. However, examining motivation simultaneously across dimensions of locale and MOI revealed English medium students had higher motivation in urban areas, while rural pupils were more motivated under Urdu instruction. The study concludes that the medium of instruction has little deterministic influence

on adolescent academic motivation, with negligible differences between English and Urdu mediums, barring some urban-rural variations. Complex processes encompassing locale backgrounds, teaching practices, and wider socio-cultural norms may influence students' motivational outlooks across MOIs. More research is needed to uncover these dynamics.

7. Discussion

This study assessed variations in student motivation by the medium of instruction, locale contexts, and gender in Pakistan's secondary schools. Overall, intrinsic motivation levels were moderately high across groups. Statistical analysis further found no significant differences based on gender or instructional language choice between English and native Urdu. Prior studies have yielded mixed findings regarding the influence of instructional mediums on student motivation and achievement. (Mlay, 2010) aligned with several previous studies showing slightly better overall achievement among urban compared to rural students. Rural Urdu medium students showed higher motivation than rural English medium peers, echoing the link between motivation and the instructional tongue. Other studies strongly advocate for English instruction, given English's status as the global linguistic medium for generating and exchanging ideas (Rao, 2008), facilitating cultural interaction (Shah, 2008), and maximizing student opportunities (Kim et al., 2009). As self-determination theory outlines, learning contexts nurturing relatedness, cultural resonance, autonomy, and competence sustain motivation (Deci & Ryan, 2008). Therefore, pedagogical reforms addressing these requirements, teacher-student relationships, and personalized progress feedback could stimulate motivation uniformly for students of both English and Urdu medium. However, the study is limited in evaluating actual linguistic competencies and long-term motivation trajectories. Employing mixed or qualitative approaches would provide richer insights into urban-rural variations. Comparisons with regional MOI scenarios also need investigation. Nonetheless, conclusions carry useful implications that overemphasizing English medium instruction risks demotivating rural students during a crucial academic phase if their socio-cultural realities are ignored. Holistic motivational frameworks suit Pakistan's multifaceted policy objectives.

8. Recommendations

1. Professional development programs for teachers should emphasize stimulating intrinsic motivation using localized best practices, irrespective of the instructional medium. Building interpersonal rapport, providing optimal challenges, and constructive feedback are key.
2. Language policymakers should recognize that English medium instruction does not directly translate into improved student motivation and academic outcomes, particularly in rural contexts lacking support systems.
3. A more gradual bilingual education approach can be explored, integrating localized concepts initially in native Urdu before the English transition to leverage the advantages of both languages.
4. Schools should assess if adequate language exposure and progress feedback enable students to attain mastery and perceived competence vital for motivation during English instruction.
5. Parental counselling and home partnerships are crucial to align family environments with student needs and sustain motivation across media of instruction.

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