Impact of the Use of Multilingual Education on the Students' Skills

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Abstract

This study investigated the impact of multilingual education on student skills within government primary schools in District Dera Ismail Khan, Khyber Pakhtunkhwa. Employing a descriptive research design, the research captured stakeholder perspectives and examined the influence of multilingual practices on learner development. The population encompassed 1,231 head teachers and 3,704 teachers, from which a sample of 297 heads and 351 teachers was selected through stratified random sampling based on gender and professional designation. Data were gathered using a five-point Likert scale questionnaire, and analysis incorporated descriptive statistics, t-tests, correlation, and regression techniques. The findings revealed stakeholder views regarding the implementation of multilingual approaches and measured the subsequent effect on student competencies. The study contributes empirical evidence from a specific regional context to the broader discourse on language policy in primary education.

Keywords: Multilingual Education, Student Skills, Primary Schools, Stakeholder Perceptions, Dera Ismail Khan

Introduction

The concept of multilingual education in Pakistan is a dynamic and diverse environment, which is determined by the diversity of the Pakistani language environment and the desire to become a competitive nation worldwide. The existing conditions are marked by a combination of the English-mediated education, the Urdu-mediated education, and the Multilingual education based on the mother tongue (MTB-MLE) (Cansino, 2023). Pakistan, as a country, suffers the challenge of having to find a fine line between global competitiveness and cultural continuity in the changing environment of multilingual education. The pressure is to develop an inclusive and adaptive system of education that will embrace the multicultural nature of language in the country, and equip students to handle a fast-changing world. The combination of tradition and innovation is also an important part of the course, as Pakistan finds its way into the complicated world and designs the system of education that would not only empower students but also praise the great diversity of linguistic backgrounds (Manan and Hajar, 2022).

English-Medium Education

EME is common in the private schools, particularly in urban centres, and is commonly perceived to be one of the pathways to social mobility and better employment opportunities. Nonetheless, EME has been criticized because it is believed that EME is disadvantageous to the low-income students and widens the language gap between the elite and the masses. Although EME might present some benefits like the availability of global opportunities and an improved learning environment, it can also create discrepancies in educational achievement because of the financial issues linked to the cost of sending them to a private school. Critics claim that EME focuses too much on English at the expense of students who do not speak English at home and creates a tradition of privilege that puts more value on the linguistic abilities of the privileged. Also, English-mediated education is another source of restricted access by poor families to further affirm social disparities. Some of the measures taken to curb these issues are the promotion of bilingual education models that appreciate linguistic diversity and the promotion of policies that will enhance accessibility of quality education to all socio-economic groups. With the need to tackle the obstacles of EME and the opportunity to realize its potential, stakeholders may strive to create a more diverse and fair education system that can support the needs of various learners in the entire Pakistani territory (Dafouz and Smit, 2020).

Urdu-Medium Education

Urdu- medium education (UME) is the dominant type of education in the government schools in Pakistan and is used as the main language of instruction for the core subjects such as science, mathematics, and social studies. Nevertheless, Urdu, even though the national language, does not cease to be challenged because of strong regional identities that are spread across the country. The strong identities that are heavily entrenched in different cultural histories and language heritage challenge how the Urdu language and culture dominate the educational domain. The conflict between the national status of Urdu and the diverse linguistic fabric of Pakistan is indicative of more issues in the sociopolitical context of the Pakistani nation. Although Urdu is the glue at the national level, the regional languages are vital to the maintenance of local heritage and community sense. In this way, the controversy of Urdu-based education highlights the complex dilemma of national unity and local diversity in the Pakistani system of education. To work on this challenge, there should be a delicate strategy that supports the linguistic diversity but still urges the significance of the Urdu language as an element of national unity (Arshad, Murtaza, Arshad, and Sanaullah, 2025).

Mother Tongue-Based Multilingual Education (MTB-MLE)

Mother Tongue-Based Multilingual Education is becoming increasingly popular as a more equitable and effective approach to multilingual education in Pakistan, and is also known as MTL. This style includes the application of the native language of the child as the main one, and then delivery of English and Urdu applies as they move to higher grades. Studies show that the use of MTB-MLE also positively influences the literacy levels, academic success, and cognitive development in a multilingual setting. With the adoption of MTB-MLE, Pakistan will have an opportunity to offer a more diverse and culturally sensitive learning process to its multiethnic population. This strategy takes into consideration the role of linguistic diversity and embraces the need to maintain and encourage indigenous languages alongside providing students with the skills of both national and international languages, such as Urdu and English. MTB-MLE not only promotes the understanding and communication of the students but also creates a sense of identity and belonging in students and thus builds robust foundations to lifelong learning and success (Akram, 2024).

Statement of the Problem

The increasing linguistic diversity in classrooms poses a challenge, as instruction in a single language may not fully support the skill development of all learners. While multilingual education is theoretically promising, there is limited empirical clarity on how its actual implementation impacts students' core competencies. Inconsistent application of these policies often leads to fragmented learning experiences rather than meaningful cognitive and communicative growth. The core problem, therefore, lies in the uncertainty of whether current multilingual approaches are genuinely enhancing essential skills like critical thinking and literacy. This study aims to investigate the tangible effects of multilingual education on student abilities to inform more effective educational practices.

Research Objectives

1. To find out the views of stakeholders (Heads and Teachers) towards the use of multilingual education from the perspective of students' skills.
2. To compare the views of stakeholders (Heads and Teachers) towards the use of multilingual education from the perspective of students' skills.
3. To check the impact of multilingual education use on the students' skills.

Research Question

1. What are the views of stakeholders (Heads and Teachers) towards the use of multilingual education from the perspective of students' skills? (Align with Obj#1)

Research Hypotheses

H_{01}: There is no significant difference between the views of stakeholders (Heads and Teachers) towards the use of multilingual education from the perspective of students' skills. (Align with Obj#2)

H_{02}: There is no significant impact of multilingual education use on the students' skills. (Align with Obj#3)

Significance of the Study

- **For Policymakers:** It will provide evidence-based insights to design more effective language policies and curricula that truly enhance student skills.
- **For Teachers:** It will offer practical strategies on using multiple languages in the classroom to improve critical thinking and literacy.
- **For Students:** It will promote more equitable learning opportunities by identifying approaches that support skill development for all linguistic backgrounds.

- **For Researchers:** It will fill a gap in existing literature and serve as a foundation for future studies on multilingual education and competency building.

Delimitations

The study is delimited to:

1. Only District Dera Ismail Khan, KP.
2. Only Government Primary Schools.
3. Only Heads and Teachers.

Literature Review

The Impact of Multilingual Education

Multilingual education has a complex effect. It promotes cognitive, intercultural, and global citizenship. We prepare students with the skills to operate in more than one language, and this will help them to be good communicators, overcome cultural barriers, and live in a globalized world. This allows improving their grades and career prospects and makes them more aware of the variety and richness of human experience (Eslit, 2023).

Multilingual Merit of Pupils in Primary School

First grade is a sensitive phase of language acquisition, and being a multilingual child, one has a different set of resources to contribute to the classroom. Their cross-linguistic competence is not an ordinary communication ability, but a treasure trove that is to be unlocked. Such young brains have an amazing talent for sucking languages, and thus they become natural code-switchers and can easily navigate their way through complicated structures of grammar. It not only helps them to improve their own language acquisition but also provides their peers with numerous opportunities and their teachers (Jaumont, 2017).

Primary School Student Competencies

The foundation of lifelong learning is in the primary school. This is the place where the critical academic skills such as reading, writing, and math flourish. High reading fluency means that the students can get information on any topic, and writing skills are the means through which they communicate their ideas and perceptions. Math prepares a foundation for logical thinking and problem solving, not only in calculations but also in real life. Learn deeper by learning to do these 5 essential things, the students of primary schools will be able to approach the academic future with a feeling of empowerment (Bellanca, 2015).

Enhances Cognitive Performances of Students

No flashcards, no drills. Primary school could also be an exercise for the mind in the form of gamified education. Consider educative applications where students overcome difficulties by solving puzzles, strengthening mathematical ideas, or constructing vocabulary. Games involving movement and problem-solving are interactive and hence bring about an engaging learning environment that keeps the student active. Such playful style not only enhances the memory and processing of information but also sparks a passion to learn that drives curiosity and a wish to learn something new (Joy and Chiramel, 2017).

Problem-Solving Skills

Good problem-solving skills can be planted in primary school. Give age-relevant challenges to present students instead of giving them instant answers. Perhaps it is the construction of the highest tower using a few blocks, or the arrangement of the playground swing equally. Students are taught to think critically and creatively by making them experimental and exploratory. They become resourceful since they will experiment with various strategies and change their approach depending on the outcomes. This builds a culture of can-do and prepares them to face the challenges that might come their way in the future with strength and confidence (Sahlberg and Doyle, 2019).

Culture Insight

Intelligence in primary school is not knowledge retention but a relationship-building process. Envision the classroom as a thought gym so that pupils would be transformed into intellectual architects. The actions include the construction of bridges, both literal and metaphorical, between apparently noncomparable ideas. Maybe they relate the butterfly life cycle to changing seasons, or they are able to investigate the impact of music on emotions. This play-based method stimulates the lateral thinking of the students, finding quite unexpected associations and developing a stronger perception of the world in which they live (Sprenger, 2018).

Various Languages and Cultures

Primary school may be a picture of the global village. Consider a classroom in which there is a chorus of greetings in many languages, and on which are hung bulletin boards displaying the rich cultural practices. Students get a chance to explore the folktales of the whole world and learn the themes of friendship, bravery, and tenacity. This language and cultural exposure inculcate a feeling of empathy and value for different lifestyles. It destroys stereotypes and establishes an atmosphere of celebration of the diversity of human experience in the classroom (Good, 2020).

Effective Communication

In primary school, it involves not only grammar exercises but also communicating well. Think of a classroom that is turned into a mini-theater. Students act out the roles of historical figures and give speeches or produce public service announcements on why it is important to recycle. This interactive method will enable them to train on effective, concise communication, gain confidence, and improve their speech presentation. When students learn to express themselves, they will take a more active part in their learning process, which will create a more energetic classroom setting (Bonn, 2020).

Students' Creativity

Young inventors may take off in primary school. Scrap the standard curriculum and propose so-called Innovation Stations. Considering the classroom as a mini-maker space, there would be recycled materials such as cardboard tubes, bottle caps, and yarn. Students are confronted with trying to come up with solutions to everyday problems, such as constructing the strongest bridge using few resources or how to construct a contraption to pick up dropped pencils. This practical method allows them to get to practice, take a risk, and even enjoy the fun of failing as a means to success. It makes them love to solve problems by inventing and developing their creativity (Krebs, 2025).

Flexibility in Thinking

Mental agility can be trained in primary school. Rather than feeding clients solutions on a silver platter, present them with the challenge of the Think Tank. Students are given a problem of a situation in the real-world with various possibilities of solutions. Perhaps it is how best to fit in the small classroom area or how to plan a school fundraiser on a small budget. This collaborative strategy will motivate students to think of a wide range of solutions, evaluating the advantages and disadvantages of each one of them. It creates the spirit of thinking on their feet and enables them to change their style depending on emerging information or unexpected conditions (Gipps, Hargreaves, and McCallum, 2015).

Teamwork and Cooperation Between Students

Still imagine a classroom where it is not a bunch of desks, but it is a constellation. Every pupil, being a brilliant beacon of light, has their own knowledge and views. Teamwork and collaboration are the unseen forces that hold these stars together, making it a bright entity

that is much brighter than one of the stars. By collaborating, students have the opportunity to pool their strengths, such as the supernovas that create new ideas. The different opinions will lead to innovative ideas, and the presentation of ideas to other people will solidify the knowledge for all parties. This cooperative learning set-up encourages not only academic success, but also compassion, trust, and the skill to coexist within a wide range of personality types, all the keys to unlocking the great universe that can be found outside of the classroom (Devlin, 2023).

Trustworthiness and Multilingualism

Suppose that you are going through a crowded market, and every booth is filled with colorful fabrics. The multiple languages would enable you to sail through in this marketplace. You can talk with the silk dealer in their own language and enjoy the elegant work. When you have a baker, you share with him about the special tastes of his bread, in his words, and you understand better his culture. Mastery of more than one language opens up these diversified exchanges, and communication is turned into a cacophony of knowledge. It also allows you to build relationships with individuals of different cultures, creating an understanding and establishing cross-cultural connections (Jaiswal, 2024).

Global Citizenship

Global citizenship goes beyond the concept of one passport. It is about the reality of being astronauts on a spaceship with one another and the Earth. We might belong to other cabins (countries), but it is a common struggle that will guarantee our survival and welfare. A global citizen develops a sense of interconnectedness and knowledge in the sense that when something goes wrong in one part of the world, the effect will be felt in other parts of the world, or when economic policies in a particular country affect individuals in other countries. This realization creates the desire to contribute to a better and more sustainable world by creating a sense of responsibility (Gerzon, 2010).

Connection among Young Learners

Visualize a playground as an interactive web, not as a series of disjointed swings and slides, but as a living, breathing system. The young learners are in a wonderful environment through which they can be connected. It does not only lie in physical proximity, but in building emotional relationships, having a sense of belonging, and developing the capacity to work together. By interacting with other young learners and educators, young learners develop the social and emotional framework into which they can flourish. This feeling of belongingness drives them to be curious and, therefore, explore and get the opportunity to take the risk and learn through errors (Navarro, 2018).

Primary Schools Promote Inclusivity

Think about a schoolyard as not a black and white playground, but an Arabesque, with each tile a student. This type of environment is developed in the primary schools that embrace inclusivity. In this case, the dissimilarities in the learning styles, abilities, backgrounds, and cultures are not shunned; rather, they are praised. This creates a feeling of belongingness to all the students that enables them to feel secure, treasured, and confident enough to achieve their potential (Elizabeth and Young, 2018).

Transition to Higher

Consider the event of the shift to higher education not as a caterpillar throwing a clumsy foot forward into a cocoon, but as a magnificent butterfly in the midst of a magnificent transformation. The traditional high school set-up has been changed into a more open-ended and dynamic learning process. Students lose the status of passive students and become active participants, the subjects of their academic paths. This metamorphosis needs strength,

flexibility, and the ability to take risks, but the payoff is enormous intellectual development, autonomy, and the opportunity to explore deeper into the topics that arouse your interest (Braunstein, 2019).

Enhances Professional Opportunities Among Students

Think of a career springboard not as a wobbly wooden board, but as a rocket that is ready to take off. The engine of higher education enables graduates to reach full and thrilling lives. A college degree opens a broader scope of employment opportunities and serves as a golden ticket to initial screening procedures of a good number of jobs. Graduates usually have an advantage over others because employers tend to select those candidates who have particular knowledge and skills acquired during specialized courses. However, there are some more advantages than simply checking a box during a job application (Pyle, 2019).

Different Linguistic Backgrounds

Instead of seeing a lecture hall at the university as a room full of the same faces, envision it as an orchestra of different students, each of whom has a melody of their own through their native tongue. Colleges and universities that adopt multicultural linguistic diversity help to make the learning process more diverse and empowering. Multilingual students have a diverse array of views and cultural backgrounds to contribute. Such a rich mosaic of languages creates the skills of critical thinking because students have difficulties in articulating complex ideas in various languages. It is also associated with tolerance and understanding, which prepares the graduates to survive in a globalized world (Brett and Thomas, 2013).

Critical Thinking

Suppose that a college is not a dumb storehouse of knowledge, but a raging furnace where the ideas are smelt, molded, and hammered into critical thought. At its finest, higher education does not feed the information to the students; it provides them with the means to analyze, deconstruct, and critique what they come across. Professors do not teach, but are intellectual blacksmiths who teach the students the process of being skeptical, finding bias, and creating sound arguments. This cauldron of critical thinking can ensure graduates are prepared to deal with the information age and its multifaceted challenges, discern between facts and fiction, and make sound decisions in a constantly evolving world (Robbins, 2019).

Various Structures of Languages

The universities that embrace different language structures do not end at providing courses in languages. These variations are explained and implemented by professors in the classroom and emphasize that meaning can be formed by sentence structure, verb tense, and even the use of articles. The study of comparative literature provides a trip into the soul of other cultures, and how the selection of the language may mirror the cultural values and views of the world. Whenever possible, collaborative work with students of different backgrounds can be converted into an opportunity not only to share information, but also to wrestle with the problem and the pleasure of trying to translate meaning across structural lines. This leads to the spirit of teamwork that endorses the strength of mutual understanding, even when there is a language barrier (Akmajian, Farmer, Bickmore, Demers, and Harnish, 2017).

Communication Styles

Think of a university lecture, but instead of it being a boring speech, think of it as an energetic symphony. Each of the students, with his or her unique communication styles, brings his/her own instruments: some loud, demanding, others quiet and introspective. Higher education at its finest creates an atmosphere that glorifies this diversity. The students are taught to identify their own communication style, understand the strengths of other people, and change to avoid various situations. Such an orchestra of styles will prepare graduates to cooperate in the

workplace, establish relationships with a more extensive audience, and be comfortable about sharing ideas in any environment (Zimmerman, 2020).

Cultural Sensitivity

Cultural awareness does not even mean whether one knows facts or traditions. It is all about being truly interested in the world around you. Consider yourself as an immigrant who is going to a foreign country. Each time you come in, you hear and learn as the locals talk to you, and you want to learn their traditions, jokes, and lifestyles. Cultural sensitivity is based on this curious attitude. It will enable you to enjoy the diversity of human experience and leave stereotypes behind. Embracing the unknown also helps you open your mind and realize that we are all the same and appreciate each other more (Means and Mackenzie Davey, 2023).

The School as an Inclusive Environment

Think of a classroom that is busy and not dull. Every student has his own melody, some ruder and louder, some softer and no less beautiful. This orchestrated learning is encouraged by an inclusive school environment. It further glorifies how different it is that students have different learning styles, and visual learners will follow well with colorful charts, auditory learners with interesting lectures, and the kinesthetic learner with practical activities. With these different learning styles being accommodated, the classroom is turned into an environment where all students feel empowered to contribute and make a difference (Jones, 2022).

Research Methodology

This study employed a descriptive research design to systematically examine stakeholder attitudes toward multilingual education implementation in Dera Ismail Khan. The population comprised 1,231 primary school heads (761 male, 470 female) and 3,704 teachers (2,269 male, 1,435 female), from which a sample of 297 heads (174 male, 123 female) and 351 teachers (210 male, 141 female) was drawn using stratified random sampling based on gender and professional roles, following Krejcie and Morgan's formula. Data were collected through a five-point Likert scale questionnaire measuring levels of agreement from strongly disagree to strongly agree. The analysis involved both descriptive statistics, including mean and standard deviation, and inferential statistics such as t-tests to compare group attitudes, along with correlation and regression to examine relationships and impacts among variables. The procedural framework ensured structured execution of tasks and defined responsibilities, while the theoretical framework provided a conceptual lens for interpreting findings within the broader context of multilingual education research.

Figure#1: Conceptual Model
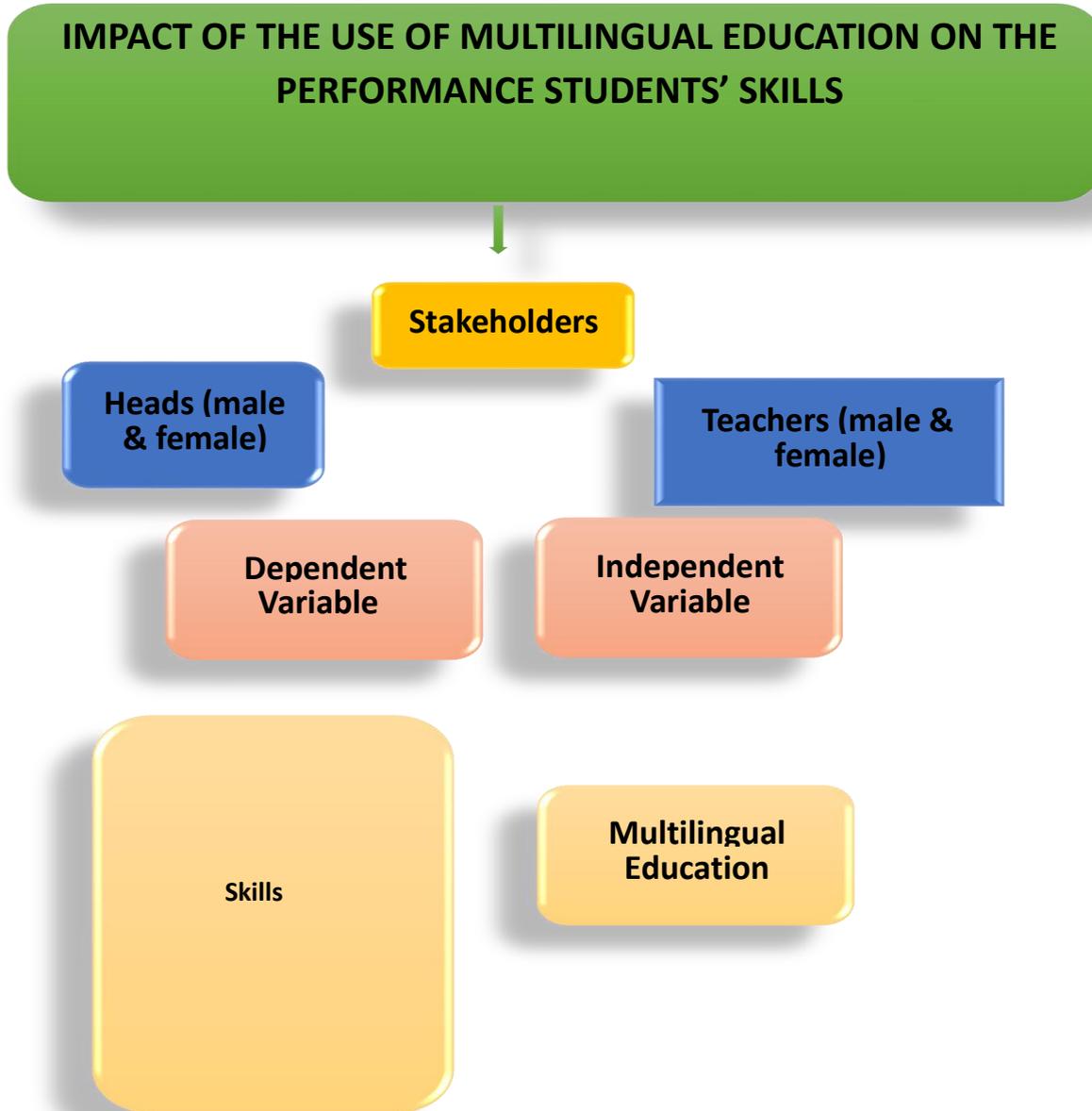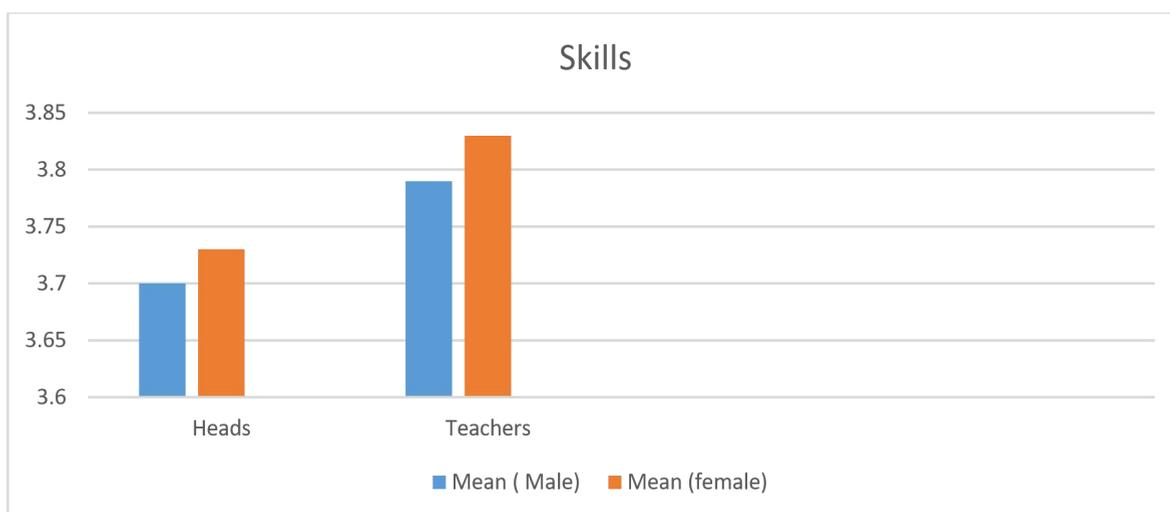
Figure#2: Procedural Framework
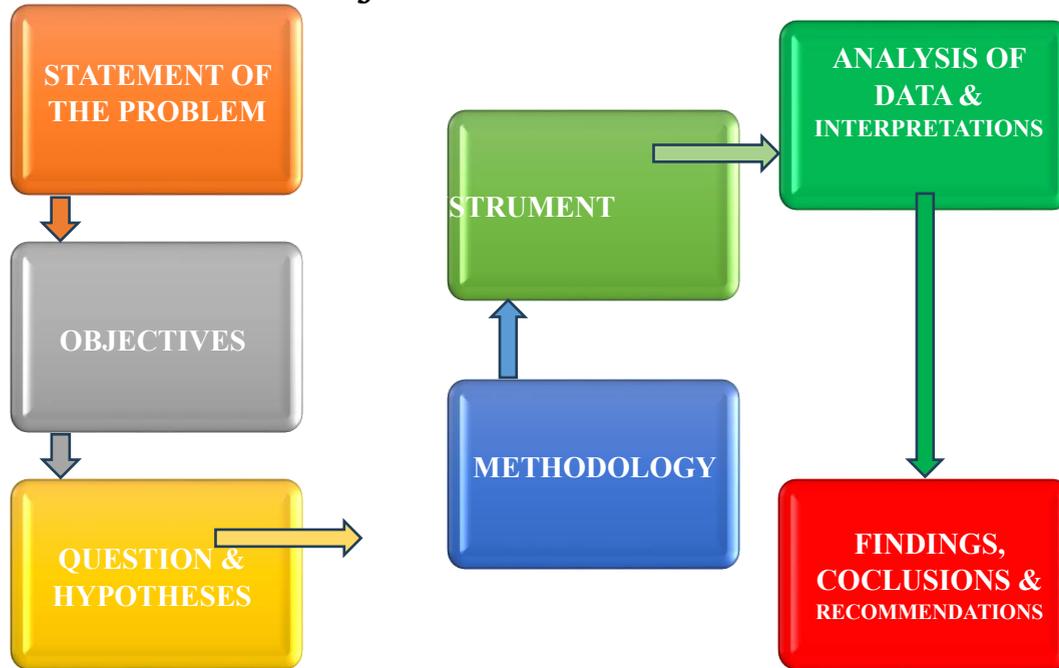
Results and Discussions

Table#1: Views of Stakeholders Regarding the Use of Multilingual Education from the Perspective of Students' Skills (Align with Q#1)

| Stakeholders	Gender	C. Skills		
		"N"	"Mean"	"S.D"
Heads	Male	174	3.70	0.965
			3.71	0.9685
	Female	123	3.73	0.972
Teachers	Male	210	3.79	0.911
			3.81	0.889
	Female	141	3.83	0.867

Skills

Mean score of Heads male is 3.70 and female is 3.73, whereby the standard deviation of male heads is 0.965 and female is 0.972. The Skills of teachers mean male and female are 3.79 and 3.83, respectively, where the standard deviation of male teachers is 0.911, and that of female teachers is 0.867. In the case of total numbers (N) of male heads, 174, and female heads, 123, the male teacher is 210, and the female is 141. The average score of Heads in average is 3.71 with a standard deviation of 0.9685, the average score of teachers in average is 3.81 with a standard deviation of 0.889.

Table#2: *Compare the Views of Stakeholders Regarding the Use of Multilingual Education from the Perspective of Students' Skills (Align with H_{o1})*

Students' Skills

Stakeholders	Gender	N		Mean	Std. Deviation	T-Value	P-Value
Heads	Male	174	297	3.71	0.968		
	Female	123					
Teachers	Male	210	351	3.81	0.889	1.369	0.171
	Female	141					
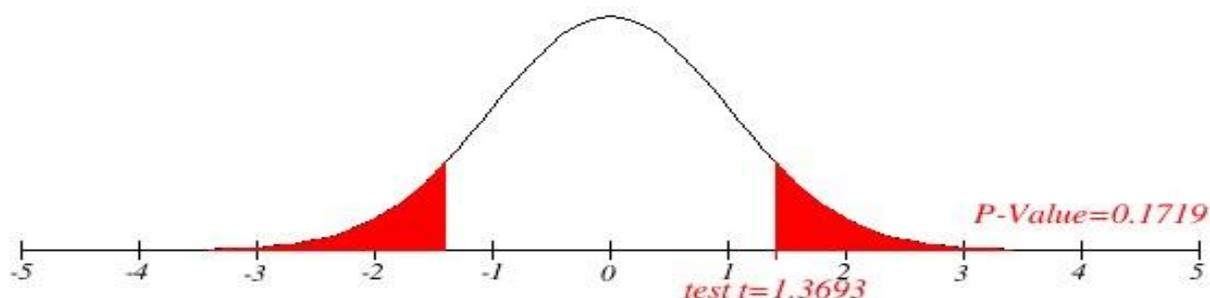
The sum total of the stakeholders was 297 heads on the male side and 351 teachers of both sexes. Whereas the means of Heads (3.71) and St. Deviation (0.9685), and the means of Teacher (3.81) and St. Deviation (0.889). Contrary to the T-value of 1.3693 and P-value of 0.1714, less than 0.05, which is the rejection level of the hypothesis, the difference in opinion between the stakeholders is not significant.

Table#3:   Impact of Multilingual Education Use on The Students' Skills (Align with H_{o2})

Coefficient	Standard Error	T-Statistic	P-Value	R (correlation)	R² (Regression)
0.52	0.07	7.43	<0.001	0.64	0.41

- **Coef. (0.52):** This shows that a one-unit rise in multilingual education will cause the skills to rise by 0.52 units.
- **Standard Error (0.07):** This is used to show accurate estimates that have low and relatively low variability.
- **T-Statistic (7.43):** The effect has a t-value of 7.43, which is very significant.
- **P-value (0.001):** The value is statistically significant, and it is highly unlikely that it is a result of chance.
- **R (0.64):** The value represents a strong positive relationship between multilingual education and skills.
- **R² (0.41):** This indicates that multilingual education can explain 41 percent of the variation in the skills.

Findings

1.   Skills among Heads show that the mean score of males (3.70) is slightly less than that of females (3.73), with the SD of the same being comparable for both genders. The average score of Skills in males (3.79) and females (3.83) does not exceed the minimal difference, and, therefore, the result shows that the attitude of male teachers to the multilingual education skills aspect is a bit more positive. Nevertheless, the standard deviation of the male teachers (0.911) is a bit less compared to the female teachers (0.867), which means that there is a bit less variation in the attitudes of male teachers. (Align with Table#1)

2.   The comparison of the average scores of the attitudes shows that the heads (3.71) and teachers (3.81) have slightly lower scores regarding multilingual education. The standard deviations indicate a moderate variation in the responses of all the groups. The T -value 1.3693 associated with the P -value of 0.1714, exceeding the level of significance 0.05, shows that there is no statistically significant difference in the stakeholder views. Therefore, the null hypothesis

is not rejected, and it can be assumed that the attitude of both heads and teachers to multilingual education in this case is similar. (Align with Table#2)

3.   The regression analysis interpretation has shown considerable results about the effects of multilingual education on the skills of the students. The coefficient of 0.52 is found to be greater in skills, which implies a positive addition of 0.52 units for every unit of increase in multilingual education, and the correlation of skills is quite strong (R = 0.64), and the percentage of the variance covered is quite high (R 2 = 0.41). The p-value (<0.001) and t-statistic (Skills: 7.43) are very high, implying that there is compelling evidence against the null hypothesis. The results suggest that multilingual education has a statistically significant positive impact on the skills of primary school students in Dera Ismail Khan, which is important to consider the beneficial role of multilingual approaches in the educational process to improve the total academic performance and socio-cultural level. (Align with Table#3)

Discussions

The combination of theoretical frameworks of the success factors made it possible to analyze multilingual education systematically and comprehensively by confirming that the schools have addressed the extent to what extent the key factors were present at the individual schools, but Brisk also admitted that a step-by-step process where the schools adhere to a plan of improvement is also a possibility. School systems design their activities in reverse based on the outcomes by altering the school practices with the ultimate outcomes solidly in mind (the consistency of the outcomes-processes-inputs) (Kirss, Saeelik, Leijen, and Pedaste, 2021).

The functional applicability of home languages in the classroom is a relatively new area of scientific research that promises results. The case studies of different nations find that upon schools recognizing and exploiting the multilingual profiles of the students, they place them in greater opportunities for educational achievement (UNESCO, 2025).

Also, considering the heterogeneity of the study population, not to mention evidence of a BA in the literature, it would have been extremely unlikely that in such a heterogeneous population, effects such as general observations of multilingualism would be obtained. Accordingly, our results follow a meta-analysis of the positive impacts of bilingualism on EF (which are predominantly driven by small and underpowered studies), which the authors find indicate that there are no systematic differences between bi- and monolinguals when considering such generic factors (early/late, balanced/unbalanced). In fact, according to the PLS regression, other, individually specific variables that are covariant with the measures of multilingualism include some personality traits and increased education (Paap, 2019).

Conclusions

1.   The analysis of attitudes toward multilingual education skills reveals a subtle but meaningful difference between male and female teachers. Overall, both groups hold positive views, with female teachers expressing a slightly more favorable attitude on average. However, the attitudes of male teachers are marginally more consistent, showing slightly less variability among individuals. This suggests that while female teachers may be somewhat more positive as a group, male teachers demonstrate a more uniform perspective. These nuanced differences indicate that gender plays a minor role in shaping attitudes toward multilingual education skills, with both groups maintaining a generally supportive stance. (Align with Obj#1)

2.   When comparing the perspectives of heads and teachers, the findings reveal a close alignment in their attitudes toward multilingual education. Both groups exhibit moderate diversity in their individual views, yet their overall stances are remarkably similar. The statistical analysis confirms that any minor differences between the two are negligible and not meaningful, indicating that professional role does not significantly influence one's outlook.

This consistency suggests a shared understanding and collective disposition toward multilingual education across these stakeholder groups, reinforcing the idea that heads and teachers are largely in agreement on this educational aspect. (Align with Obj#2)

3.   The regression analysis provides compelling evidence of the powerful role multilingual education plays in shaping student development. The findings reveal a strong, positive relationship between exposure to multilingual approaches and the enhancement of student skills. This indicates that as the implementation of multilingual education increases, student competencies improve correspondingly at a substantial rate. The strength of this connection is underscored by the data, which shows that a significant portion of the variation in student skills can be directly attributed to multilingual education. The high level of statistical significance confirms that this is not a random occurrence but a reliable and impactful dynamic. Consequently, these results highlight the critical importance of integrating multilingual strategies within the primary curriculum, demonstrating their effectiveness not only in boosting academic abilities but also in enriching students' broader socio-cultural development. (Align with Obj#3)

Recommendations

• Conduct joint professional development sessions to align teaching strategies and minimize attitudinal variations between male and female teachers. (Align with Finding#1)

• Establish collaborative platforms for heads and teachers to translate positive perceptions into more consistent classroom application of multilingual approaches. (Align with Finding#2)

• Prioritize formal policy integration and resource allocation to ensure consistent, high-quality implementation of multilingual education across all primary schools. (Align with Finding#3)

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