

An Analytical Study of the Impact of Katz's Three-Skill Model on Teachers' Job Performance in Secondary Schools of District Mastung

Mahzaib Sattar¹, Shahida Sajjad²

¹Ph.D. Scholar, Department of Education, Metropolitan University Karachi, Pakistan

²Professor of Education, Metropolitan University Karachi, Pakistan

Correspondence: Mahzaibsattar@gmail.com¹

ABSTRACT

Aim of the Study: This quantitative study examined the relationship between Robert Katz's Three-Skill Model and teachers' job performance in secondary schools in District Mastung, Balochistan, to determine which of the three skills has the greatest impact on teachers' job performance.

Methodology: This study adopted the philosophy of "Positivism" and a quantitative design. Through proportional stratified random sampling, (n=350) teachers (59.1% male, 40.9% female) were selected from government secondary schools of District Mastung. A self-administered questionnaire was used to collect data, with a reliability of .714.

Findings: The results of the One-sample t-test showed that all three skills were significantly present among teachers, with technical skills (M=3.96) the most prevalent, followed by human skills (M=3.86) and conceptual skills (M=3.60). This indicates that teachers are experts in their subject and teaching, but lag in long-term planning. However, the results of multiple linear regression surprisingly revealed that technical and conceptual skills had no statistically significant effect on teachers' job performance. On the contrary, human skills proved to be the strongest factor ($\beta = .381, p < .001$), leading to improved teachers' job performance.

Conclusion: The study concluded that teachers' success in Balochistan's social context depends on their ethical attitudes and interpersonal relationships. The study recommended that the Balochistan Education Department should organize teacher professional development programs that focus on improving "soft skills" and interpersonal relationships rather than solely on technical training.

Keywords: Teachers' Job performance, Katz's Three-Skill Model, Technical Skills, Conceptual Skills, Human Skills, Secondary Schools, Mastung.

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1. INTRODUCTION

In 1955, Robert Katz introduced the "Three-Skill Model" to understand management skills. This model, also called the "Skills Approach," is a valid means of measuring leadership skills. According to Katz, three basic skills are necessary for effective management: technical, human, and conceptual. Technical skill refers to the skill and correct use of tools in a specific task or activity. Human skill refers to the ability to work with people and promote teamwork. Conceptual skill refers to the ability to work on complex ideas, strategies, and future visions. This model helps clarify the need for skills across different management levels in any organization. Although this model was designed for administration, modern research shows that it is also fully applicable to the teaching profession. For teachers, technical competence means mastering their subject matter and mastering pedagogy. Lesson planning and the use of classroom technology are part of teachers' technical competence. Human skills enable a teacher to build trusting relationships with students, fellow teachers, and parents. As a facilitator, a teacher needs human skills to motivate diverse learners (Ayyaz et al., 2025; Obilor et al., 2022). Through conceptual skills, teachers and school leaders focus on the institution's broader educational vision and curriculum development. These skills guide teachers at every stage, from daily teaching practices to the institution's overall improvement.

The present study examines the use of these three skills by teachers in secondary schools in District Mastung. The research aims to determine the extent to which teachers utilize technical skills in performing their professional duties. The focus of this research is to examine the importance of human skills and their impact on the rural and backward educational environment of District Mastung. The process by which teachers understand the school's overall policies and vision (conceptual skills) was analyzed. Furthermore, this research clarifies the balance found between these skills and their impact on teachers' job performance. Integrating these skills has become a necessity to adapt to the dynamic, modern educational environment. The ultimate aim of these points is to provide a clear action plan to improve teachers' professional skills in District Mastung.

1.1 Research Objectives

1. To assess the technical, human, and conceptual skills from Katz's three-skill model used by teachers in the secondary schools of District Mastung, Balochistan.
2. To evaluate the mutual influence of technical, human, and conceptual skills on teachers' job performance.

1.2 Significance and Scope of the Study

The current study provides a solid foundation for improving school administration and addressing teachers' job performance issues in rural areas such as District Mastung, thereby strengthening the education system in those areas. The study provides guidelines for policymakers and stakeholders, using data to tailor teacher training and leadership development programs to local needs, specifically for the Balochistan Education Department.

The study's scope offers a practical application of Katz's three-skill model, which is not only theoretical but also identifies new avenues for professional development, directly connecting teachers' technical, human, and conceptual skills to their job performance. This research will serve as a reference for similar studies in other districts and at other educational levels in Balochistan and other provinces, thereby promoting a research-based culture across the education system.

2. REVIEW OF RELATED LITERATURE

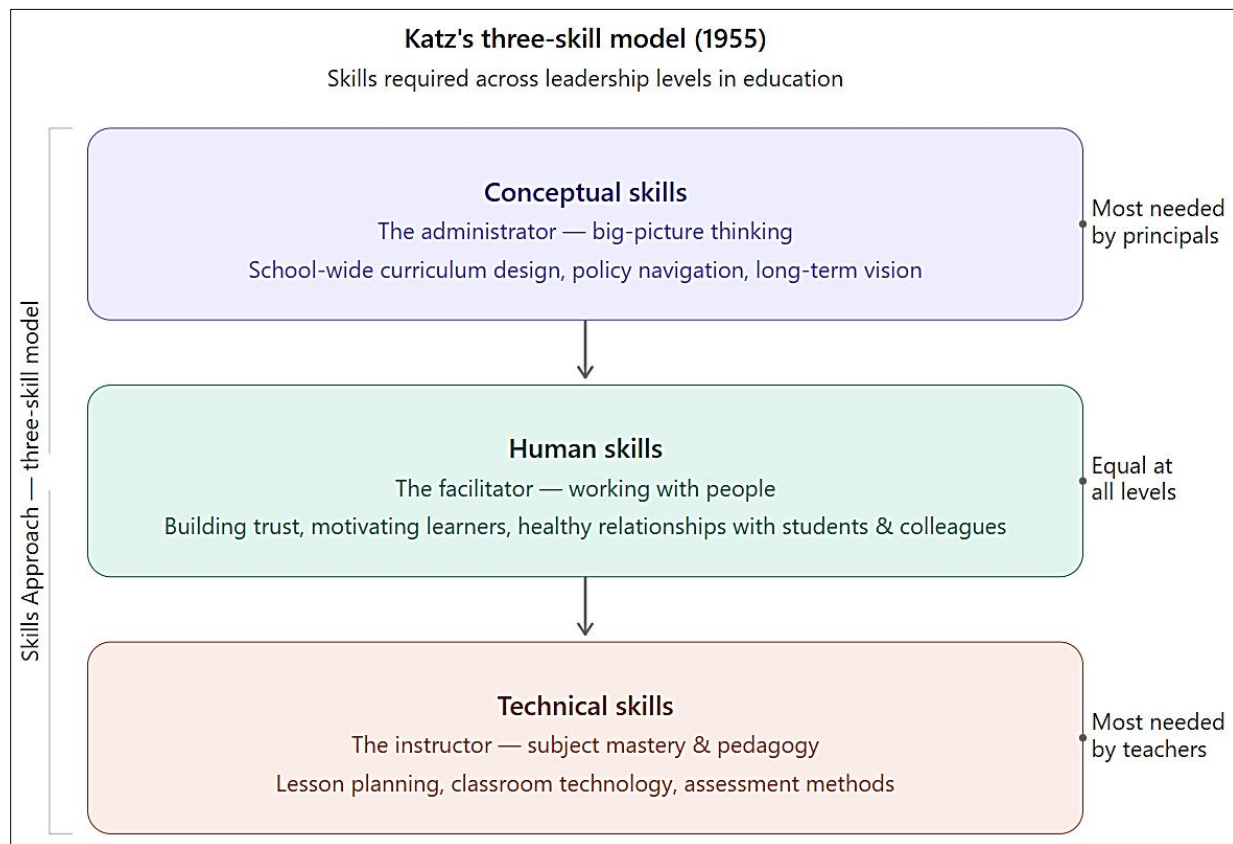
Globally, education experts agree that teachers' job performance is directly related to their diverse skills. According to recent literature, technical skills make teachers confident in modern teaching technology and classroom management (Aslam et al., 2021; Balouch et al., 2025; Saleem et al., 2025). Human skills help teachers understand students' psychology and foster a compassionate learning environment (Malik &

Risambessy, 2023). Furthermore, research demonstrates that conceptual skills enable teachers to understand the school's overall vision and curriculum goals (Bano et al., 2024). However, the interrelationship among these skills moves teachers away from traditional teaching methods and towards innovative, creative teaching. Brezicha et al. (2020) cited that the lack of these skills in the South Asian education system is a major reason for the decline in student learning outcomes. Moreover, the literature highlights that at the secondary level, teachers must serve as both 'instructor' and 'administrator' simultaneously (Chang et al., 2014; Martin et al., 2019; Mehmood et al., 2023). Therefore, to address the educational gap, the literature review for areas such as District Mastung suggests that applying these skills to local challenges is essential.

Ahmad and Aziz's (2021) study shows that content knowledge alone is unsatisfactory to make a teacher effective and operative. When deprived of human skills, the transfer of technical knowledge to students becomes difficult, ultimately affecting the teaching process. The literature emphasizes that conceptual skills help teachers make better decisions in difficult situations and administrative complexities (Dong et al., 2026; Robertson, 2016). In Pakistan, the use of these skills by teachers in rural schools has seen a clear improvement in the overall school climate (Rehman et al., 2023). Yakubov and Egamova (2021) believe that the combination of technical, human, and conceptual skills creates 'professionalism' in teachers. According to a recent study by Nadeem and Ahmad (2020), teachers who are strong in human relations have better academic performance for their students than others. Similarly, Matumbi (2025) indicates that the lack of these skills leads to teacher demotivation and reduced performance in rural districts. Finally, this study advances the literature on how the balance of these three skills may transform the education system in the context of District Mustang.

Though Katz's three-skill model was originally designed for management, it is directly applicable to the roles within the teaching profession (Laghari et al., 2024). Technical skills (of the instructor) focus on mastery of subject matter and pedagogical techniques, such as lesson planning, classroom technology, and assessment methods (Sajjad et al., 2019). It is the most critical ability for teachers who are 'hands-on' with the daily process of student learning. However, technical competence is more important in lower and middle management and less important in senior management (Amjad et al., 2024; Sudirman et al., 2019). However, human skills (of the facilitator) focus on building healthy relationships with students, colleagues, and parents by fostering an atmosphere of trust and motivating diverse learners (Rehman & Sajjad, 2024; Rosabela et al., 2024). These skills are equally important at all levels, whether for teachers in the classroom or the school principal. The last conceptual skills (the administrator) focus on designing school-wide curricula, navigating district policies or economic changes, and setting a long-term educational vision (Gordon & Solis, 2018; Shah et al., 2023). These are the primary skills for school principals who must look beyond individual classrooms to the "big picture" of the institution as a whole. Numerous studies have shown that modern workplaces are dynamic and require more integrated skills that go beyond category boundaries to adapt to diverse team needs and rapid change (Ineme et al., 2025; Rosabela et al., 2024). Therefore, Katz's (1955) three-skill model offers an organized approach to understanding leadership skills in diverse organizational settings. Figure 1 demonstrates Katz's three-skill model in detail for academic settings and shows the skills required across leadership levels in schooling.

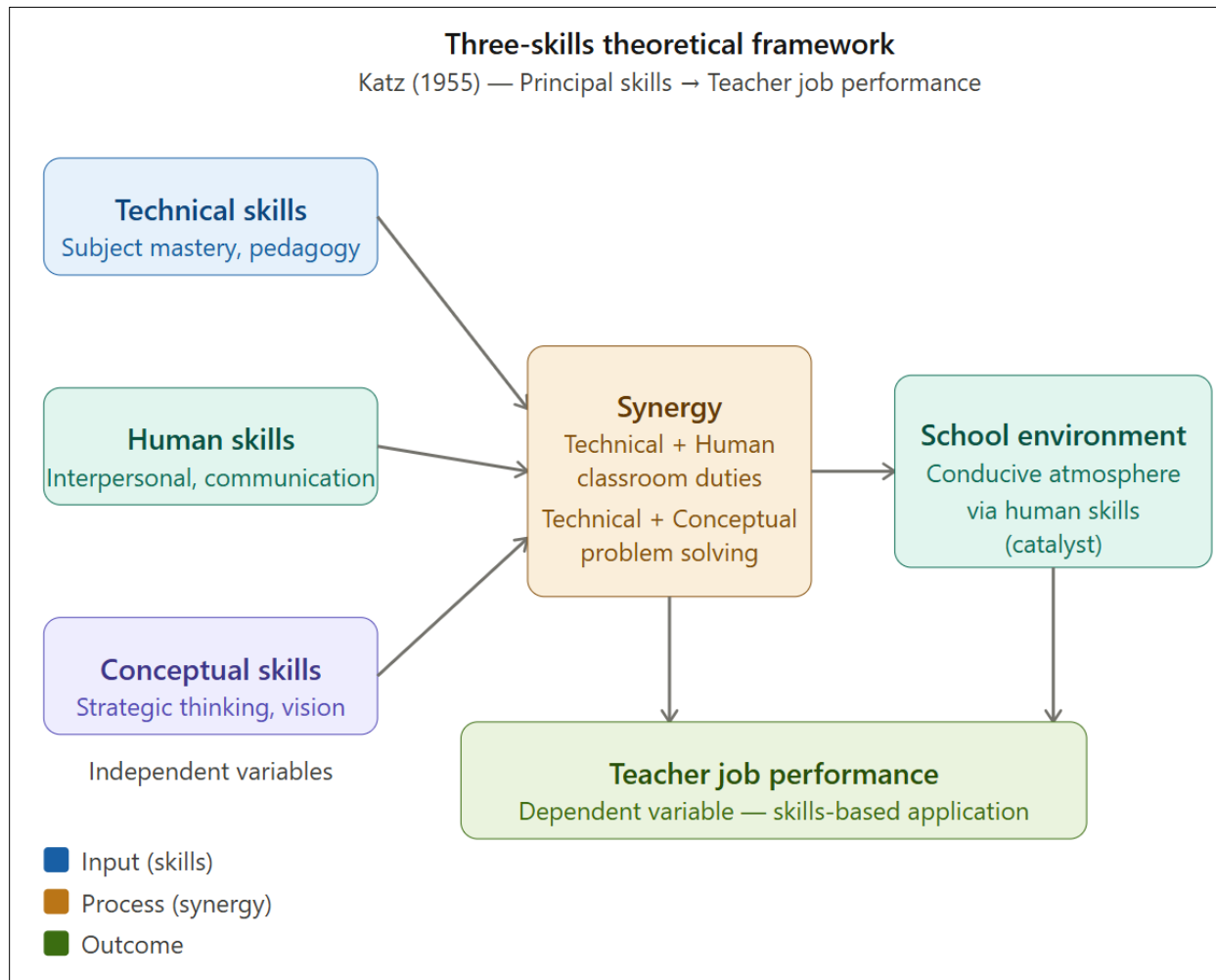
Figure 1: *Katz's Three-Skill Model and Education Settings*



2.1 Theoretical Framework

The theoretical framework, drawing on Katz's three-skill model, suggests that teachers' job performance does not depend on a single skill; rather, a balanced combination of these three skills is necessary for professional success, as highlighted in Figure 2. According to Katz's three-skill model (1955), secondary school teachers need more technical and human skills for lower- and middle-level administrative responsibilities, which directly affect their job performance. Similarly, the combination of conceptual and technical skills helps teachers solve teaching and administrative problems quickly, thereby saving time and improving teachers' job performance and institutional outcomes (Mbua et al., 2024). Katz's three-skill model explains that human skills are very important for interpersonal relationships and the professional environment. For this, teachers' positive relationships with colleagues and leaders create a conducive school environment, which ultimately results in high teacher performance. Under this theoretical framework, teachers' job performance is judged not only by test results but also by skills-based performance measures that assess how they apply their technical, human, and conceptual skills to professional challenges.

Figure 2: Theoretical Framework



3. METHODOLOGY

This study is based on the positivist philosophy, which believes in scientific observation and objective reality. The current study has adopted a quantitative research methodology to clarify the relationship between the study variables (Katz's three-skill model as the independent variable and teachers' job performance as the dependent variable) using data. Teachers of all government high and higher secondary schools in District Mastung, Balochistan, have been declared the target population for this study. Using the proportional stratified random sampling technique, a total of 350 teachers were selected through simple random sampling and proportional allocation to ensure fair representation of boys' and girls' schools. A self-structured instrument was used to collect data, comprising three sections: section one, demographics; section two, which covers Katz's three-skill model; and section three, which comprises teachers' job performance. The reliability of the research instrument was confirmed by Cronbach's alpha test ($\alpha = .714$). Data were analyzed using advanced statistical techniques and software to examine the interrelationships among variables. Table 1 shows the demographic statistics of the participants ($n = 350$).

Table 1: Demographic Characteristics of the Participants

	N	%
Gender		
Female	143	40.9%
Male	207	59.1%
Age		
25-30	96	27.4%
31-35	97	27.7%
36-40	88	25.1%
41-45	59	16.9%
46-50	10	2.9%
Qualification		
Master	181	51.7%
MS/ M.Phil.	142	40.6%
Ph.D.	27	7.7%

4. FINDINGS

Research Question 1: What are the technical, human, and conceptual skills from Katz’s three-skill model used by teachers in the secondary schools of Mastung, Balochistan?

Research Hypothesis (H₁): Technical, human, and conceptual skills from Katz’s three-skill model are significantly used by teachers in the secondary schools of District Mastung, Balochistan.

Table 2 demonstrates the one-sample t-test for Katz’s three-skill model. Results showed that all three skills were statistically significant ($p < .001$), indicating they were used significantly above the neutral midpoint of 3. Among the three skills, technical skills had the highest mean ($M = 3.96$, $SD = .47$), with a 95% CI [.91, 1.00], confirming it as the most utilized skill among teachers. However, human skills were the second most utilized ($M = 3.86$, $SD = .72$), with a significant t-value ($t(349) = 38.42$, $p < .001$, $MD = .96$), and 95% CI [.78, .93], and conceptual skills had the lowest mean ($M = 3.60$, $SD = .52$), yet remained statistically significant ($t(349) = 22.33$, $p < .001$, $MD = .60$), with 95% CI [.54, .65]. Overall, Katz’s three-skill model ($M = 3.80$, $SD = .43$) was statistically significant ($t(349) = 21.57$, $p < .001$, $MD = .80$), confirming that all three skills are meaningfully utilized. The ranking from most to least utilized skill was: Technical ($M = 3.96$) > Human ($M = 3.86$) > Conceptual ($M = 3.60$), suggesting that teachers are more technically and interpersonally skilled than conceptually skilled. Thus, the research hypothesis 1(H₁), which states that “technical, human, and conceptual skills from Katz’s three-skill model are significantly used by teachers in the secondary schools of District Mastung, Balochistan”, is accepted.

Table 2: One-Sample t-test for Three Skills (Test Value = 3)

	M	SD	t	df	Sig. (2-tailed)	Mean Diff.	95% Confidence Interval	
							Lower	Upper
TECHNICAL SKILLS	3.9554	.46525					.9065	1.0043
HUMAN SKILLS	3.8571	.71828	38.419	349	.000	.95543	.7816	.9327
CONCEPTUAL SKILLS	3.5960	.51686	22.325	349	.000	.85714	.5417	.6503
THREE SKILLS	3.8029	.42516	21.573	349	.000	.59600	.7582	.8476

Research Question 2: Do technical, human, and conceptual skills mutually influence teachers' job performance?

Research Hypothesis 2 (H₂): Technical, human, and conceptual skills mutually influence teachers' job performance.

Table 3 presents the results of a multiple linear regression analysis of technical, human, and conceptual skills and teachers' job performance. Results from the model explained 12.2% of the variance in teachers' job performance ($R^2 = .122$), with an adjusted $R^2 = .114$, indicating modest predictive power. Overall, the regression model was statistically significant ($F(3, 346) = 15.98, p < .001$), confirming that Katz's three-skill model collectively predicted teachers' job performance. However, human skills were the only significant predictor ($\beta = .381, t = 6.33, p < .001$), with a positive effect on teachers' job performance ($B = .043$). Technical skills ($\beta = -.059, t = -.990, p = .323$) and conceptual skills ($\beta = -.025, t = -.485, p = .628$) had negative, non-significant effects on teachers' job performance. Thus, only human skills emerged as the strongest and only significant predictor. Thus, the research hypothesis 2 (H₂), which states that "technical, human, and conceptual skills mutually influence teachers' job performance", is only accepted for human skills, not for technical and conceptual skills.

Table 3: Multiple Linear Regressions

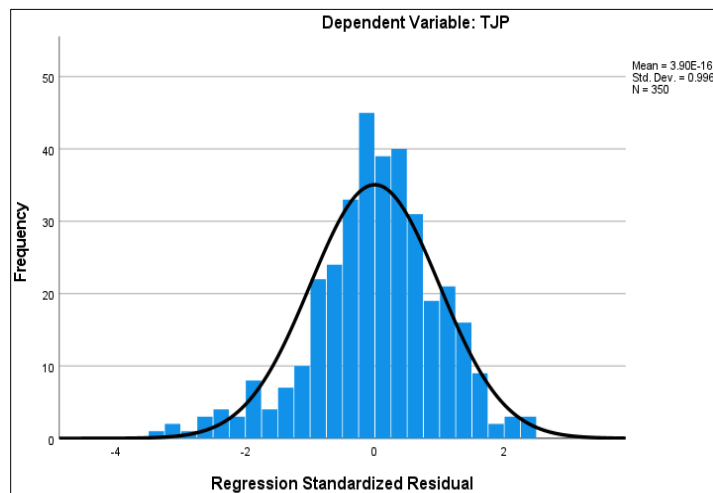
Change Statistics									
Model			Adj.	Std. Error	R ²				
Summary ^b	R	R ²	R ²	Estimate	Change	F Change	df1	df2	Sig. F Change
1	.349 ^a	.122	.114	.38037	.122	15.977	3	346	.000
ANOVA ^b		Sum of Squares		df	Mean Square	F	Sig.		
Regression		6.934		3	2.311	15.977	.000 ^a		
Residual		50.059		346	.145				
Total		56.993		349					
		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics			
Coefficients ^b		B	Std. Error	Beta	t	Sig.	Tolerance	VIF	
(Constant)		3.169	.206		15.378	.000			
Technical Skills		-.010	.010	-.059	-.990	.323	.715	1.399	
Human Skills		.043	.007	.381	6.332	.000	.700	1.429	
Conceptual Skills		-.004	.008	-.025	-.485	.628	.935	1.069	

a. Predictors: (Constant), Conceptual Skills, Technical Skills, Human Skills

b. Dependent Variable: Teachers' Job Performance

Figure 3 illustrates the histogram of standardized residuals for teachers' job performance. The distribution follows an approximately normal bell-shaped curve with a mean ($M = 3.90, E-16$) that is nearly zero, confirming that the residuals are centered around zero. Standard deviation is very close to 1 ($SD = .996$), indicating a standard normal distribution. However, the data were slightly right-skewed, but they did not violate the normality assumption. Overall, residuals are approximately normally distributed, confirming that the regression assumption is met.

Figure 3: Histogram of Regression Standardized Residual



5. DISCUSSION

The results of the present study clearly show that the use of Katz's three-skill model (technical, human, and conceptual skills) is significantly prevalent among secondary school teachers in District Mastung. According to the results, technical skills topped the list with the highest score. This indicates that teachers are fully proficient in instructional planning and methods, curriculum knowledge, and classroom management. These results are consistent with the study by Khan et al. (2020), which found that, in the Pakistani context, secondary-level teachers place the greatest importance on technical skills for their professional survival. Similarly, Ahmad and Aziz (2021) reported that training programs have increased teachers' technical skills, directly affecting students' academic performance.

Human skills ranked second, reflecting teachers' ability to interact effectively with students, colleagues, and parents. Ali (2018) noted that interpersonal skills are of utmost importance for teachers in tribal and socially disadvantaged areas, such as Balochistan, because promoting education there is not possible without social provision. Furthermore, according to Malik and Risambessy (2023), teachers with strong interpersonal skills can create a more conducive learning environment in the classroom. The high scores on human skills in the current study demonstrate that teachers from District Mastung value social cohesion alongside teaching. Although the score for conceptual skills was lower than the other two skills, it remained statistically significant. The relatively low level of conceptual skills suggests that teachers are more focused on day-to-day teaching and practical issues than on long-term planning and solving complex organizational problems. Ullah and Skelton (2015) also identified a trend in the education systems of developing countries: teachers are mostly considered "executors" rather than "visionary designers", which does not fully exploit their conceptual abilities. However, a recent study by Bano et al. (2024) suggests that it is essential for educational reforms to develop critical thinking and conceptual skills in teachers so that they may play a better role in policy-making at the school level.

Furthermore, the regression analysis in the present study indicates that Katz's three-skill model accounts for only 12.2% of the variation in teachers' job performance ($R^2 = .122$). Furthermore, surprisingly, among these three skills, only human skills were the strongest predictor of teachers' job performance ($\beta = .381, p < .001$). This means that, in the educational context of District Mastung, teachers' attitudes and interpersonal relationships with their colleagues and students play the most important role in enhancing their overall job performance. In this context, these results support the findings of Malik and Risambessy (2023), who demonstrated that soft skills and human relationships enhance teacher productivity. In contrast, technical and conceptual skills had no statistically significant effect on teachers' job

performance, an unexpected result. According to Ullah and Skelton (2015), in developing regions, technical skills are often considered part of teachers' duties, so they do not explain additional variance in job performance and are merely a basic requirement. Moreover, research by Bano et al. (2024) suggests that the impact of conceptual skills is reduced when teachers are not involved in management decisions, as was also observed in the current study. The results indicate that the assumption of normality in the data is correct, which strengthens the credibility of these findings. Consequently, the research hypothesis (H2) was accepted only for human skills and rejected for technical and conceptual skills. To conclude, this discussion emphasizes the need for special attention to teacher training in interpersonal and human skills to improve their job performance.

Essentially, Aslam et al.'s (2021) research supports the conclusion that teachers' technical skills in South Asian countries are embedded in their daily responsibilities; hence, they play a fundamental role rather than merely enhancing job performance. Moreover, scholars Nadeem and Ahmad (2020), in their study of secondary schools in Punjab, found that human skills promote work ethic and professional ethics among teachers, which directly lead to better teaching outcomes. Similarly, Qureshi's (2019) literature suggests that, due to the socio-cultural complexities in rural areas, maintaining social connections (human skills) is more difficult and important for teachers than curricular knowledge (technical skills). Furthermore, Hussain and Ayub (2022) observed that although conceptual skills are essential for leadership, secondary school teachers are generally not given autonomy over administrative decisions, making the impact of these skills on their individual performance unclear. In fact, recent research by Sajjad et al. (2019) indicates that human factors, such as empathy and teamwork among teachers, are more effective at increasing students' academic engagement than modern technology. Khosa et al. (2023) highlighted the importance of human skills in regions like Khyber Pakhtunkhwa and Balochistan. They mentioned that teachers' job performance is largely dependent on their connections with the community. Eventually, all these studies agree that human skills make teachers' work environments enjoyable and have a more profound impact on teachers' job performance than other technical skills.

6. CONCLUSION

The most important conclusion of the research is that in the educational context of Mastung district, positive attitudes and "human skills" of teachers towards their colleagues and students play the most crucial role in improving their performance. Although the technical skills score was the highest among teachers, the regression results showed that it is considered only a basic professional requirement rather than an enhancement of performance. The relatively low score for conceptual skills among teachers shows that they consider themselves only "executors" implementing the curriculum, and that their role in long-term vision or administrative policymaking is limited. However, given Balochistan's tribal and social context, social cohesion and interpersonal skills are more important for teachers than curricular knowledge, as achieving teaching goals is difficult without social support. The study concluded that to enhance teachers' job performance, it is imperative to pay special attention to "soft skills," empathy, and teamwork in future training programs, rather than focusing solely on technology or curriculum.

This study further highlights that the success of any educational institution does not depend solely on teachers' technical or bookish skills, but rather on their positive human attitudes and interpersonal relationships, which are the real drivers of educational quality and professional performance. Additionally, the research concludes that in a specific socio-cultural environment, such as Balochistan, achieving educational goals is not possible unless school leadership and teachers integrate their technical skills with stronger social connections and farsighted management thinking.

6.1 Recommendations

The study recommends specialized training workshops and seminars for teachers to improve their interpersonal skills, empathy, and teamwork, as these skills are the primary drivers of improved job performance. Furthermore, rather than restricting teachers to completing the curriculum, they should be included in school administrative decisions and long-term educational planning to develop their

conceptual skills. Moreover, community engagement programs should be implemented in schools to establish strong relationships between teachers and parents, which are essential for improving the quality of education, with particular attention to the tribal and social structure of District Mastung.

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Conflict of Interest

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ORCID iDs

Mahzaib Sattar¹  <https://orcid.org/0009-0005-9929-9245>

Shahida Sajjad²  <https://orcid.org/0000-0003-1300-0053>

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