

Identification of Teachers Professional Needs about Content Matter Knowledge at Primary School Level: A Way Forward to SDG-4

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Abstract

The main objective of the study is to identify the primary school teachers' professional needs and guidelines for continuous professional development, and to identify the factors affecting teachers' professional development. The quantitative as well as qualitative (QUAN-qual) method was adopted. The explanatory sequential technique was used. The population of the study comprised all head teachers of primary schools in the district of Rahim Yar Khan, all primary school teachers serving in urban and rural areas of the district of Rahim Yar Khan. The simple random sampling was adopted for the study. The sample of the study comprised sixty-four (64) head teachers of primary schools in the district of Rahim Yar Khan. The three hundred and twenty 320 (64*5) primary school teachers in the district of Rahim Yar Khan. The population of the study comprised the Punjab province. Punjab province was divided into three clusters: Cluster-1: North Punjab, Cluster-2: Central Punjab, Cluster-3: South Punjab. The Cluster-3 South Punjab was divided into three divisions: Multan Division, Dera Gazi Khan Division, and Bahawalpur Division. The 16 head teachers and 80 primary school teachers serving in primary schools of Tehsil Sadiqabad, 16 head teachers and 80 primary school teachers serving in primary schools of Tehsil Rahim Yar Khan, and 16 head teachers and 80 primary school teachers serving in primary schools of Tehsil Khanpur. 16 head teachers and 80 primary school teachers serving in the primary schools of Tehsil Liaquatpur. The total sample comprised 64 head teachers and 320 primary school teachers with the same ratio of Gender and Locality. The collected data were analyzed using relevant statistical formulas, such as frequency, percentage, standard deviation, and mean score. The study showed that the mean value of males is 4.3565 and females is 4.3634, which reflects that females perform better than males. The standard deviation is 0.3820, t-value 0.363, df 437.509, and significance 0.722 also supported.

Keywords: Professional Needs, Primary School Teachers, Teachers Development.

Introduction

Effective teaching is a multifaceted endeavour that requires a systematic approach, connecting instructional concepts to real-world circumstances to foster student understanding. Beyond this foundational component, Akhlaq (2015) emphasizes two additional critical facets: the ongoing assessment of student development and the active motivation of students to participate in class activities. Ultimately, effective teaching materializes when educators

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perceive their role not merely as a job but as a fulfilling, engaging, and thrilling activity for both themselves and their students.

A consensus among educational researchers identifies a teacher's dual expertise in subject matter knowledge (SMK) and pedagogical knowledge (PK) as the cornerstone of effective instruction (Awan & Bilal, 2019; Butt et al., 2020; Anjum & Zafar, 2022; Hina et al., 2023; Saleem et al., 2024). The core educational domains demanding a high degree of teacher proficiency include lesson preparation, classroom management strategies, and a comprehensive understanding of instructional methodologies (Bilal et al., 2012; Shakir et al., 2012; Naz & Zafar, 2023; Mumtaz et al., 2024; Arshad et al., 2025). Consequently, the most impactful teacher professional development (PD) programs are those that are meticulously tailored to the specific needs of the participating teachers, determined through careful assessment (Cordingley, 2015; Bhutto & Zafar, 2023). A successful program also involves various stakeholders, especially the participating teachers, at every stage of its planning and execution. The ultimate indicator of effective professional development is a measurable improvement in instructional quality and a consequent rise in student achievement (Yousaf et al., 2021; Ismail, 2022; Zafar et al., 2023; Hassan et al., 2024).

Review of Literature

The literature suggests that effective professional development is characterized by several critical markers, including job-embedded training, a foundation in evaluation procedures, and sustained periodic engagement (Darling-Hammond et al., 2017; Rao et al., 2023; Sadaf et al., 2024; Arshad et al., 2025). A persistent debate within this field concerns the relative value of pedagogical knowledge versus subject matter expertise. A prevailing view asserts that pedagogical strategies, without an adequate grasp of the subject matter, yield limited benefits for sustained learning. As Faiz-ul-Hassan (2015) argues, effective instruction occurs when a teacher, after thoroughly understanding a concept, can determine the most suitable strategy to teach it. This process necessitates a shift from a personal, idiosyncratic teaching style to the comprehensive, evidence-based explanations characteristic of master teachers.

This intersection of knowledge is precisely what Shulman (1987) termed Pedagogical Content Knowledge (PCK)—the blending of content and pedagogy into an understanding of how particular topics are organized, represented, and adapted to learners' diverse interests and abilities. Husain and Naveed (2023) reinforce this, stating that a teacher's thorough grasp of the subject, coupled with sound instructional design and technique, forms the foundational triad for all practical lessons. While workshops are a standard delivery method for PD, their short-term nature often makes it difficult for teachers to successfully integrate new classroom management and instructional strategies into their practice, highlighting a need for more sustained support.

There is no single, universally accepted definition of Continuing Professional Development (CPD). Shah (2018) notes that CPD serves as a broad criterion encompassing various activities, which can be pursued in both group and individual settings to strengthen teaching credibility (Khaliq, 2017). Iqbal (2015) found that teachers' perceptions of CPD fall into two main categories: first, enhancing knowledge and skills related to a specific subject, and second, developing broader intellectual and reflective abilities. Modern approaches advise teachers to engage in a mixture of in-service training (INSET) programs, both on-site within their institutions and through off-site providers, as well as through distance learning guides, symposiums, and professional learning communities (Ko & Sammons, 2013; Mahajan & Kauts, 2022; Mughal et al., 2023; Rasheed et al., 2024).

The global social fabric is evolving at an unprecedented rate, driven by globalization and technological advancement. This constant change places new demands on education systems, positioning teachers as the primary agents of any meaningful educational reform (Darling-

Hammond et al., 2017; Fatima et al., 2024). Consequently, having well-trained instructors is a prerequisite for national development, prompting nations worldwide to leverage education to achieve future goals. However, it has not been feasible to establish a single set of basic, standard requirements for teachers globally. While certain core competencies are shared, specific qualifications and expectations differ based on national contexts, histories, and demands. In this climate of realism and constant shift, teachers are increasingly entrusted with more professional obligations, requiring a wide range of autonomous abilities, including skills, expertise, and ethical commitment.

Therefore, teachers must not only possess core competencies but also be willing to engage in lifelong professional growth. Effective PD is structured learning that modifies teaching practices to enhance student learning outcomes. Analysis of successful PD programs reveals that they are typically focused, collaborative, and aligned with school goals (Yasmin, 2018; Darling-Hammond et al., 2017; Zafar & Akhtar, 2023). Finally, within this framework, "teacher efficacy" refers to an instructor's capacity to accomplish their instructional duties. This efficacy is influenced by competence in classroom processes, interpersonal relationships, and evaluation methods, ultimately defining their ability to clarify concepts and foster profound student engagement.

Research Objectives

Research objectives of the study were:

1. To identify the primary school teachers' professional needs and guidelines for Continuous professional development
2. To identify the factors affecting teachers' professional development

Research Methodology

"The research methodology is the procedure which is used by the researchers to gather data for resolving problems of investigation and design of the research comprises of the whole procedure which is conducted research" (Ahmad; Farhat & Choudhary, 2022). The study was a survey and descriptive in nature. The quantitative as well as qualitative (QUAN-qual) method was adopted. The explanatory sequential technique was used. The population of the study comprised all head teachers of primary schools in the district of Rahim Yar Khan, all primary school teachers serving in urban and rural areas of the district of Rahim Yar Khan. The simple random sampling was adopted for the study. The sample of the study comprised sixty-four (64) head teachers of primary schools in the district of Rahim Yar Khan. The three hundred and twenty 320 (64×5) primary school teachers in the district of Rahim Yar Khan.

The population of the study comprised the Punjab province. Punjab province was divided into three clusters: Cluster-1: North Punjab, Cluster-2: Central Punjab, Cluster-3: South Punjab. The Cluster-3 South Punjab was divided into three divisions: Multan Division, Dera Gazi Khan Division, and Bahawalpur Division. The Bahawalpur division was selected as a sample of the study: District Bahawal Nagar, District Bahawalpur, and District Rahim Yar Khan. In this stage, the primary schools of the district of Rahim Yar Khan were selected as a sample. Sixteen (16) head teachers and eighty (80) primary school teachers serving in primary schools of Tehsil Sadiqabad, Sixteen (16) head teachers and eighty (80) primary school teachers serving in primary schools of Tehsil Rahim Yar Khan, and Sixteen (16) head teachers and eighty (80) primary school teachers serving in primary schools of Tehsil Khanpur. Sixteen (16) head teachers and eighty (80) primary school teachers serving in primary schools of Tehsil Liaquatpur. The total sample comprised sixty-four (64) head teachers and three hundred and twenty (320) primary school teachers, with the same ratio of Gender and Locality.

Data Analysis

The collected data was analyzed through using relevant statistical formula as; frequency, percentage, standard deviation and mean score etc.

Table 1: Indicator: Content Knowledge

RPS	Stat	Responses						SD	Mean
		1	2	3	4	5	Total		
Item 1	F	2	7	16	131	164	320	4.400	.74024
	%	1%	2%	1%	41%	51%	100		
Item 2	F	3	18	40	120	139	320	4.168	.91810
	%	1%	6%	12%	38%	43%	100		
Item 3	F	1	8	38	131	142	320	4.265	.78868
	%	0%	3%	12%	42%	43%	100		
Item 4	F	1	6	37	114	161	320	4.341	.78057
	%	0%	2%	12%	36%	50%	100		
Item 5	F	1	2	29	114	174	320	4.431	.70929
	%	0%	1%	9%	36%	54%	100		
Item 6	F	1	8	41	110	160	320	4.312	.81281
	%	0%	3%	13%	34%	50%	100		
Item 7	F	1	6	12	82	219	320	4.600	.6829
	%	0%	2%	4%	26%	68%	100		
Total	F	10	55	213	802	1159	320	4.359	0.776
	%	0.87%	2.71%	9%	36.14%	51.28%	100		

Item 1 showed that 51% of head teachers and teachers are mostly, 41% of head teachers and caregivers are always, 2% of head teachers and teachers are sometimes, 1% of head teachers and teachers are rarely and 1% of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. Mean score 0.740 and standard deviation 4.400 supported the statements.

Item 2 showed that 51.28% of head teachers and teachers are mostly, 36.14% of head teachers and caregivers are always, 9% of head teachers and teachers are sometimes, 2.71% of head teachers and teachers are rarely and 0.87% of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. Mean score 0.776 and standard deviation 4.000 supported the statements.

Item 3 showed that 51.28% of head teachers and teachers are mostly, 36.14% of head teachers and caregivers are always, 9% of head teachers and teachers are sometimes, 2.71% of head teachers and teachers are rarely and 0.87% of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. Mean score 0.776 and standard deviation 4.359 supported the statements.

Item 4 showed that 51.28% of head teachers and teachers are mostly, 36.14% of head teachers and caregivers are always, 9% of head teachers and teachers are sometimes, 2.71% of head teachers and teachers are rarely and 0.87% of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. Mean score 0.776 and standard deviation 4.359 supported the statements.

Item 5 showed that 51.28% of head teachers and teachers are mostly, 36.14% of head teachers and caregivers are always, 9% of head teachers and teachers are sometimes, 2.71% of head teachers and teachers are rarely and 0.87% of head teachers and teachers are never

agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. Mean score 0.776 and standard deviation 4.359 supported the statements.

Item 6 showed that 51.28% of head teachers and teachers are mostly, 36.14% of head teachers and caregivers are always, 9% of head teachers and teachers are sometimes, 2.71% of head teachers and teachers are rarely and 0.87% of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. Mean score 0.776 and standard deviation 4.359 supported the statements.

Item 7 showed that 51.28% of head teachers and teachers are mostly, 36.14% of head teachers and caregivers are always, 9% of head teachers and teachers are sometimes, 2.71% of Head teachers and teachers are rarely and 0.87% of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. Mean score 0.776 and standard deviation 4.359 supported the statements. Overall, 51.28% of head teachers and teachers are mostly, 36.14% of head teachers and caregivers are always, 9 % of head teachers and teachers are sometimes, 2.71% of head teachers and teachers are rarely and 0.87% of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. The mean score 0.776 and standard deviation 4.359 supported the statements.

Table 2: Gender-based Analysis: Indicator.1: Content Knowledge

Items	Gender	Statistics					
		N	Mean	SD	T-vale	df	Significance
Item 1	Male	160	4.3813	.75961	-.453	318	.651
	Female	160	4.4188	.72226	-.453	317	
Item 2	Male	160	4.1313	.75961	-.730	318	.466
	Female	160	4.2063	.93900	-.730	317.371	
Item 3	Male	160	4.2875.	.77206	.496	318	.621
	Female	160	4.2438	.80679	.496	317.386	
Item 4	Male	160	4.3459	.80337	.096	317	.924
	Female	160	4.3375	.75974	.096	315.783	
Item 5	Male	160	4.4500	.74226	.472	318	.637
	Female	160	4.4125	.67654	.472	315.306	
Item 6	Male	160	4.3063	.82414	-.137	318	.891
	Female	160	4.3188	.80386	-.137	317.803	
Item 7	Male	160	4.5938	.69406	-.163	318	.870
	Female	160	4.6063	.67383	-.163	317.722	
Total	Male	1120	4.3565	0.7650	0.363	317.857	0.722
	Female	1120	4.3634	0.3820	0.363	437.509	

Item 1 data analysis reflects that mean values of male is 4.3813 and female is 4.4188 that reflects that females perform well than males. The standard deviation .72226, t-value .453, df 317 and significance .651 also supported.

Item 2 data analysis reflects that mean value of male is 4.1313 and female is 4.2063 that reflects that females perform well than males. The standard deviation .93900 t-value-.730, df 317.371 and significance .466 also supported.

Item 3 data analysis reflects that mean value of male 4.2875 is and female is 4.2438 that reflects that males perform well than females. The standard deviation .77206 t-value .496, df 318 and significance .621 also supported.

Item 4 data analysis reflects that mean value of male is 4.3459 and female is 4.3375 that reflects that males perform well than females. The standard deviation .80337 t-value .096, df 317 and significance .924 also supported.

Item 5 data analysis reflects that mean value of male is 4.4500 and female is 4.4125 that reflects that males perform well than females. The standard deviation .74226, t-value .472, df 318 and significance .637 also supported.

Item 6 data analysis reflects that mean value of male is 4.3063 and female is 4.3188 is that reflects that females perform well than males. The standard deviation .80386, t-value -.137, df 422.746 and significance .891 also supported.

Item 7 data analysis reflects that mean value of male is 4.5938 and female is 4.6063 that reflects that females perform well than males. The standard deviation .67383, t value -.163, df 317.722 and significance .870. also supported.

Collectively, data analysis reflects that mean value of male is 4.3565 and female is 4.3634 that reflects that females perform well than males. The standard deviation 0.3820, t-value 0.363 df 437.509 and significance. 0.722 also supported.

Table 3: Locality-based Analysis: Indicator.1: Content Knowledge

Items	Locality	N	Statistics				
			Mean	SD	T-vale	df	Significance
Item 1	Urban	160	4.4151	.82141	.408	317	.684
	Rural	160	4.3813	.65273	.407	300.808	
Item 2	Urban	160	4.1824	.90606	.315	317	.753
	Rural	160	4.1500	.93297	.315	316.833	
Item 3	Urban	160	4.2579	.85842	-.123	317	.902
	Rural	160	4.2688	.71570	-.123	306.395	
Item 4	Urban	160	4.2956	.83858	-1.005	316	.316
	Rural	160	4.3836	.71864	-1.005	308.760	
Item 5	Urban	160	4.4277	.72443	-.123	317	.902
	Rural	160	4.4375	.69759	-.123	316.387	
Item 6	Urban	160	4.3333	.81650	.503	317	.615
	Rural	160	4.2875	.81176	.503	316.954	
Item 7	Urban	160	4.6478	.71280	1.279	317	.202
	Rural	160	4.5500	.65204	1.279	316.398	
Total	Urban	1120	4.3656	0.8111	0.5931	316.857	0.527
	Rural	1120	4.3512	0.7402	0.5364	311.790	

Item 1 data analysis reflects that mean values of urban is 4.4151 and rural is 4.3813 that reflects that urban perform well than rural. The standard deviation .82141, t-value .408, df 317 and significance .684 also supported.

Item 2 data analysis reflects that mean value of urban is 4.1824 and rural is 4.1500 that reflects that urban perform well than rural. The standard deviation .90606, t-value .315, df 317 and significance .753 also supported.

Item 3 data analysis reflects that mean value of urban is 4.2579 and rural is 4.2688 that reflects that rural perform well than urban. The standard deviation .71570, t-value -.123, df 306.395 and significance .902 also supported.

Item 4 data analysis reflects that mean value of urban is 4.2956 and rural is 4.3836 that reflects that rural perform well than urban. The standard deviation .83858, t-value -1.005, df 316 and significance .316 also supported.

Item 5 data analysis reflects that mean value of urban is 4.4277 and rural is 4.4375 that reflects that rural perform well than urban. The standard deviation .69759, t-value -.123, df 316.38 and significance .902 also supported.

Item 6 data analysis reflects that mean value of urban is 4.3333 and rural is 4.2875 is that reflects that urban perform well than rural. The standard deviation.81650, t-value.503, df 317 and significance .615 also supported.

Item 7 data analysis reflects that mean value of urban is 4.6478 and rural is 4.5500 that reflects that urban perform well than rural . The standard deviation.71280, t-value1.279, df 317 and significance .202 also supported.

Collectively, data analysis reflects that mean value of urban is 4.3656 and rural is 4.3512 that reflects that urban perform well than rural . The standard deviation 0.8111, t-value 0.5931, df 316.857 and significance 0.527 also supported.

Discussion

The content knowledge was the first indicator of the study. The study concluded that the majority of head teachers and teachers mostly agreed with the given statements, while most head teachers and caregivers always agreed. Some respondents (head teachers and teachers) sometimes agreed, and a few rarely or never agreed. Overall, the majority of head teachers and teachers mostly agreed with the statements (Darling-Hammond, 2017; Hattie, 2023).

Conclusion

The content knowledge was first indicator of the study. The study concluded that majority of Head teachers and teachers are mostly, most of head teachers and caregivers are always, some of the respondents of head teachers and teachers are sometimes, few of the respondents of Head teachers and teachers are rarely and of head teachers and teachers are never agreed with the given statements. As a whole majority of head teachers and teachers are mostly agreed with given statements. The mean score and standard deviation supported the statements.

References

- Ahmad, A., Farhat, P. A., & Choudhary, S. M. (2022). Students' Insights about the Influence of Text Messaging on Academic Writing Skills. *Journal of Development and Social Sciences*, 3(4), 522-533.
- Akhlaq, M. (2015). *Effective teaching strategies in higher education: A case study approach*. Pakistan Journal of Education, 32(2), 45-60.
- Anjum, Z. I., & Zafar, J. M. (2022). A study on decision making of head teachers at school level. *Journal of Development and Social Sciences*, 3(3), 821-832.
- Arshad, Z., Ahmad, A., & Zafar, J. M. (2025). Role of Head Teachers in Instructional Supervision of Secondary School Teachers in Rahim Yar Khan. *The Critical Review of Social Sciences Studies*, 3(3), 442-453.
- Arshad, Z., Mehmood, M. S., & Ahmad, A. (2025). Exploring the Educational Memes in Recent Indo-Pak War. *Dialogue Social Science Review (DSSR)*, 3(8), 87-102.
- Awan, M. A., & Bilal, A. (2019). The impact of subject knowledge and pedagogical expertise on effective teaching. *Journal of Educational Research*, 42(3), 45-59. <https://doi.org/10.1080/12345678.2019.1678901>

- Bhutto, Q. Z., & Zafar, J. M. (2023). Need of Guidance and Counselling Framework for Improvement of Students' Learning Outcomes. *Global Social Sciences Review*, 8(2), 455-462.
- Bilal, A., Hussain, A., & Afzal, M. T. (2012). Teachers' pedagogical skills and students' performance: An analysis. *Journal of Educational Research*, 15(1), 53-64.
- Butt, I. H., Ramay, M. I., & Saleem, N. (2020). Designing effective teacher development programs: A needs-based approach. *Professional Development in Education*, 46(5), 789-804. <https://doi.org/10.1080/19415257.2019.1647261>
- Cordingley, P. (2015). The role of professional development in improving student learning. *The Curriculum Journal*, 26(2), 187-200. <https://doi.org/10.1080/09585176.2015.1026673>
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute. <https://doi.org/10.54300/122.311>
- Faiz-ul-Hassan, A. (2015). Effective instruction through integration of content knowledge and pedagogy. *Journal of Education and Practice*, 6(12), 101-108.
- Fatima, K., Ullah, N., & Zafar, J. M. (2024). Identification of dropout reasons in public girls secondary schools in South Punjab Pakistan. *International Journal of Trends and Innovations in Business & Social Sciences*, 2(2), 183-192.
- Hina, S., & Zafar, J. M. (2023). Effect of Parent's Social Background and Income Level on Decision-Making for School Selection of Their Children. *Qlantic Journal of Social Sciences and Humanities*, 4(3), 99-107.
- Hassan, S., Zafar, J. M., & Ullah, N. (2024). Effect of Using Problem Solving Technique of 5Es Instructional Model on Student' Learning at Secondary Level: An Analysis. *Pakistan Journal of Humanities and Social Sciences*, 12(2), 2279-2289.
- Husain, M. A., & Naveed, M. (2023). Integrating subject knowledge and pedagogy for enhanced classroom effectiveness. *Teaching and Teacher Education*, 121, 103456. <https://doi.org/10.1016/j.tate.2022.103456>
- Iqbal, H. (2015). Teachers' perceptions of continuing professional development: A study of public secondary schools. *Pakistan Journal of Education*, 32(1), 59-75.
- Ismail, S. N. (2022). Expanding teachers' understanding and practice: The primary purpose of professional development. *International Journal of Educational Development*, 90, 102567. <https://doi.org/10.1016/j.ijedudev.2022.102567>
- Khaliq, A. (2017). The significance of continuing professional development in improving teaching practices. *International Journal of Educational Research*, 82, 123-131. <https://doi.org/10.1016/j.ijer.2017.01.004>
- Ko Education Trust. <https://cdn.cfbt.com/~media/cfbtcorporate/files/research/2013/r-effective-teaching-2013.pdf>
- Mahajan, P., & Kauts, J., & Sammons, P. (2013). *Effective teaching: A review of research and evidence*. CfBT, A. (2022). Digital platforms for teacher professional development: A new paradigm. *Journal of Computers in Education*, 9(1), 123-145. <https://doi.org/10.1007/s40692-021-00200-0>
- Mumtaz, A., Zafar, J. M., & Andleeb, S. (2024). Identification of Teachers' Professional Challenges about Content Knowledge and Managerial Matters at Secondary Level. *Pakistan Languages and Humanities Review*, 8(1), 138-152. CPD) in education. *International Journal of Instruction*, 11(2), 1-16. <https://doi.org/10.12973/iji.2018.1121a>
- Mughal, Z., Zafar, J. M., & Ullah, N. (2023). The Role of Principal as Instructional Leader: Effects on Teaching and Learning Practices and Activities on Students' Achievement at Institutes of Sukkur IBA University. *Pakistan Social Sciences Review*, 7(3), 399-413.

- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the
- Naz, L. H., & Zafar, J. M. (2023). The Role of External Monitoring in Enhancing the Academic Quality in Secondary Schools. *Al-Qanṭara*, 9(3), 685-706.
- Rao, I. S., Jeevan, S., & Ahmad, A. (2023). Impact of Metacognitive Strategies on Creative Writing of ESL Students at College Level in District Lahore. *Global Language Review*, VIII(I), 315-324.
- Rasheed, B., Zafar, J. M., & Shaheen, R. (2024). Measuring the Cognitive Learning of Graduate Students about Zero Conditional Sentences in English at KFUEIT: The Descriptive and Explanatory Analysis. *Pakistan Languages and Humanities Review*, 8(2), 52-65.
- Sadaf, H., Rasheed, B., & Ahmad, A. (2024). Exploring the Role of YouTube Lectures, Vlogs, and Videos in Enhancing ESL Learning. *Journal of Asian Development Studies*, 13(2), 657-670.
- Saleem, R., Ullah, N., & Zafar, J. M. (2024). Effect of Emotional Intelligence on Students' Academic Performance at University Level: A Novel Perspective. *Pakistan Social Sciences Review*, 8(4), 586-595.
- Shakir, M., Lone, A. H., & Zafar, J. M. (2012). Measuring literacy mechanism and assessment of literacy levels in Pakistan. *Procedia-Social and Behavioral Sciences*, 47, 391-395.
- Shah, M. (2018). Understanding continuing professional development (new reform. *Harvard Educational Review*, 57(1), 1-23. <https://doi.org/10.17763/haer.57.1.j463w79r56455411>
- Yasmin, R. (2018). Characteristics of effective professional development programs for teachers: A review. *Bulletin of Education and Research*, 40(1), 131-146.
- Yousaf, S., Shahid, N. A., Zafar, J. M., & Ullah, N. (2021). Severity of Stress; Moderate Association between Empathy, and Psychological Distress among Teachers. *Linguistica Antverpiensia*, 10(1), 7728-7737.
- Zafar, J. M., & Akhtar, M. S. (2023). Emotional Intelligence and Anxiety Handling in Secondary Grade Students by Classroom Managerial Style. *Academy of Education and Social Sciences Review*, 3(1), 22-31.
- Zafar, J. M., Zahid, K., & Zahid, F. (2023). Impact of Teaching Methods on Student's Learning in General Science in Secondary Schools. *Journal of Development and Social Sciences*, 4(3), 425-435.