

TEACHERS' COLLABORATION AND EFFECTIVE SCHOOL MANAGEMENT: AN INVESTIGATION INTO THE ROLE OF TEACHERS IN MANAGEMENT OF SECONDARY SCHOOLS

Mian Said Farooq¹, Dr. Ihsan Ullah Khan², Dr. Alam Zeb³

¹Senior Subject Specialist, E&SE, KPK

²Assistant Professor, Department of Social and Gender Studies, University of Swat

³Assistant Professor, Center for Education and Staff Training, University of Swat

¹farooqsaid.31@gmail.com, ²ihsanullah@uswat.edu.pk, ³alamzeb@uswat.edu.pk

DOI: <https://doi.org/10.5281/zenodo.16748250>

Keywords

Teachers' collaboration, Effective school management, Role, Secondary schools

Article History

Received on 05 May 2025

Accepted on 19 July 2025

Published on 05 August 2025

Copyright @Author

Corresponding Author: *

Dr. Alam Zeb

Abstract

Teachers are significant stakeholders in the enterprise of education with responsibilities of teaching, leading and management. The study investigated teachers' collaboration for effective school management at secondary level in Khyber Pakhtunkhwa, Pakistan. Research objectives were to; find out the role of teachers' collaboration in management of secondary schools and provide strategies for achieving teachers' collaboration in management of schools. Design of study was quantitative. Its population was 3419 secondary school teachers. A sample of 346 was selected using simple random sampling. A questionnaire was developed, validated and piloted for collecting data. Self-administered questionnaires were used to gather data and mean scores, standard deviations and chi-square test were applied for analyses. The study found that teachers collaborate in managing academics, co-curriculum and finances of schools. Manage material and human resources, maintain schools' hygiene and manage emergencies. The study recommends the professional development in collaboration both for teachers and heads of secondary schools to improve teachers' collaboration in management of secondary schools.

INTRODUCTION

Effective school management is prominent in achieving good quality education and collaboration of teachers ensures effective school management (Hargreaves & Fullan, 2012). The theory of transformational leadership put forth by Leithwood et al. (2020), focuses on shared leadership and school management. A collaboration by teachers encompasses joint decision-making, professional assistance, and solution of common problems and can enhance operations in the school and workability of teachers (Guskey, 2002). The secondary education sector of Khyber Pakhtunkhwa (KP) Pakistan is faced with the issues of resource constrains, cultural

plurality and the challenges in terms of security issues with quality education, teachers would be able to adhere through collaborative processes that would have increased the efficiency of administration and heightened the educational achievements (Shaheen, 2013). The issue of collaboration in the school management becomes important in KP as the secondary schools are available both in public and private sectors and cater to needs of different people (Tahir et al., 2020). Efficient school management presupposes that the stakeholders are coordinated in their effort, and teachers are at the center of policies' implementation and creation of positive environment

of learning (Siddiqui, 2016). Collaborative work can help fill the gap between administration and teachers and foster common objectives, as well as responsibility (Nawab, 2020). The tools to effectively manage school can be used in determining the kind of education that can be administered to the students of secondary schools, the back bone to successfully accomplish effective management of the school at secondary level is teachers' cooperation since they are the major stake holders with regards to achieving the vision and mission of the school as well as the principal. If principal is the captain of the ship of school it is the team of the teachers who work as sailors and takes the ship of school to its destination through collaboration for effective school management (Hargreaves & O'Connor, 2018).

In Khyber Pakhtunkhwa (KP), Pakistan, the secondary education sector is faced with multiple challenges like the insufficiency of financial resources, ineffective management and administration, average performance of students and ineffective supervision of schools, therefore; collaboration of teachers for the effective management of secondary schools is a key factor that may produce collaborative leadership for effective management of secondary schools (Khan et al., 2022). The findings of multiple research studies have highlighted the significance of teachers' collaboration for the effective management of the schools which results in better achievement of the vision and mission of the school, teachers' efficiency, financial management and ultimately quality academic achievement of students (Louis et al., 2016). Collaboration among teachers at secondary level enables the teachers to bring in their potentials and abilities for the solution of schools' administrative and instructional issues and work for the effectiveness of the school management (Vangrieken et al., 2017). In the context of Pakistan, development of collaboration among teachers in secondary schools is not focused due to the reason of bureaucratic control of the educational authorities and heads of the schools, therefore; teachers in secondary schools lack motivation for the team work and there is absence of teachers' collaboration for the management and administration of the schools. This demands for the increasing focus on teachers' collaboration for achieving effectiveness in the management and administration of the school (Ali & Rizvi, 2020).

The secondary education sector in Khyber Pakhtunkhwa has witnessed significant reforms in the teachers' training, recruitment policies and professional development of teachers that has led to the induction programs of newly recruited teachers (Government of KP, 2021). The objective of such reforms are aimed at improving the pedagogical and administrative efficiency of the teachers to promote a collaborative culture in schools to help achieve teachers' collaboration for the effective management and administration of the schools at secondary level (Harris & Jones, 2020). Research studies also recommend the development of collaboration among teachers in secondary schools for the development of pedagogical practices, shouldering administrative responsibilities, provide support in strategic decisions' making and effective management of the schools (Hargreaves, 2019). In secondary schools of Khyber Pakhtunkhwa, there is lack of collaboration among teachers in secondary school due to heavy teaching assignments of teachers, absence of coordination among teachers, lack of collaboration between teachers and schools' administration and little or no focus for the positive interactions among secondary schools' teachers that results in the absence of teachers' collaboration for the effective management and administration of the schools at secondary level (Ullah & Ali, 2021). Moreover, the traditional management model of secondary schools becomes a barrier for the autonomy of teachers and becomes an obstacle in the way of teachers' collaboration for the effective management of the schools. Therefore; creating a collaborative model of management in place of bureaucratic model of management is the need of the hour to achieve teachers' collaboration for administration and management of the schools at secondary level (Shah, 2022).

In the global context, countries with secondary schools having excellent educational systems like Japan, Finland and Singapore there are positive schools' cultures with teachers' collaboration for achieving excellence in academics and administration of the schools (Sahlberg, 2015). However, in the context of Pakistan with a developing background, collaboration and team work among teachers is neglected and hardly encouraged in the administrative affairs of secondary schools that results in poor administration of schools at secondary (Qureshi &

Janjua, 2023). Though teachers and administrators of secondary schools agree with the significance of collaboration for the effective management of school in secondary sector but they don't adopt it due to the bureaucratic styles of leadership in schools, lack of human and financial resources and absence of healthy collaborative culture in the schools (Malik & Hussain, 2020). There are also socio-cultural constraints due to societal mindset that discourages teachers to play active and vibrant role in administration of the schools. Therefore, the clear analyses of societal factors need to be considered for realizing the objective of developing collaboration among secondary school teachers (Khattak et al., 2021). As the administration of the school is determined with effective management of the affairs of the school, therefore; it is imperative to investigate the perceptions of teachers for achieving their collaboration in effective school management of the schools at secondary level. The study aimed to investigate teachers' collaboration for better and effective management of secondary schools and suggest strategies to achieve this significant factor for the betterment of the secondary education sector.

Literature Review

Teachers' collaboration refers to cooperative practices among educators, such as joint planning, peer observation, and shared decision-making, to achieve common educational goals (Hargreaves & Fullan, 2012). Collaboration enhances school management by fostering communication, aligning teaching practices with administrative goals, and promoting professional growth (Guskey, 2002). Conversely, the problem in traditional hierarchical models of management tends to restrict the role of teachers and make them less efficient (Siddiqui, 2019). Cooperation is not fully utilized in Pakistani schools because of the centralized systems and cultural preferences of top-down approaches (Nawab, 2020). Yet, according to the results of global research, the collaborative cultures create a better school performance through increased morale and coherence of teachers and the administration (Darling-Hammond et al., 2017). The cooperation of schools in KP could patch up the differences between teachers and administrators in the process of promoting management practices because schools have varying issues to solve (Ahmed et al., 2022).

School management is a process through which resources may be organized, policies applied, and there is the creation of favorable atmosphere for learning (Leithwood et al., 2020). The collaboration of teachers adds to the teachers sharing responsibility and solving problems together. Goddard et al., (2015) found that schools with collaboration are more effective in their teacher efficacy and student success. A study conducted by Gopang et al. (2016) in Pakistan shows that teachers attach importance to collaborative opportunities, however, they reported such obstacles as time shortage and a lack of training. Efficiencies in administrative processes and curriculum-related work may be achieved through collaborative practices in instruction, including the usage of team teaching and curriculum planning (Sharma, 2022). Nevertheless, management may be ineffective due to hierarchical structures in KP schools that provide limited input of teachers and therefore, cannot be effective (Ur-Rahman et al., 2021).

Teamwork or collaboration is of several advantages to the management of schools. To begin with, it increases confidence for communication in teachers and administration so that all of the activities are directed to a shared vision (Hargreaves & Fullan, 2012). Second, it grows teachers professionally due to peer learning, which enhances practices of instruction (Guskey, 2002). Third, it enhances the results of students by providing the consistent educational environment (Goddard et al., 2015). In KP, there are recommendations based on the research that collaboration could enhance the motivation of educators and lower educator turnover, which is one of the most burning issues in the area (Tahir et al., 2020). The participatory management style resulted in high educational results in such countries as Finland due to collaborative management models (Darling-Hammond et al., 2017). Initiatives to encourage teacher collaboration in South Asia have enhanced the active interaction in classrooms and effectiveness in administration (Sharma, 2022). Projects such as training supported by international aid agencies in KP have demonstrated but there are problems on the side of implementation (Arshad et al., 2023).

A major component of the successful management of the school at secondary level that ensures improvement in the quality of teaching, management of the schools and overall achievement in academics

by the students is collaboration among teachers (Hargreaves & O Connor, 2018). The collaboration of teachers is an idea that teachers are involve teachers in the strategic decision making of the school, they are mentors and they work collectively to manage the school's affair (Vangrieken et al., 2017). The secondary education sector of KP, Pakistan is faced with challenges of financial difficulties, poor management, absence of cooperation among teachers and the quality of instruction offered. In an attempt to improve this situation, there is the need to create collaborative culture among teachers and the schools' administration at secondary level (Khan et al., 2022). For achieving teachers' collaboration to improve the management of the schools at secondary level, the social interdependence theory by Johnson and Johnson (2018), and professional learning communities DuFour et al. (2016), give a frame work for the understanding of collaborative practices among teachers to work for the effective schools' management and own the administrative affairs of the school through collective sharing of responsibilities. Teachers' collaboration at secondary level needs a positive school culture with support, encouragement and leadership that promotes teamwork among teachers in schools (Louis et al., 2016). But in Pakistani schools there is administrative structure that is focused on centralization of powers in few hands and hardly encourages collaboration and teamwork among teachers in secondary schools (Ali & Rizvi, 2020). Research studies have identified that when there is a collaborative culture among teachers in secondary schools there is high job satisfaction among teachers, they work as a team, learn from one another and ensure the effective and sustainable management of the administrative affairs of the school. Therefore, for the improvement of the administration of the schools at secondary level, there is the need to integrate the culture of collaboration among teachers to achieve the institutional objectives of secondary schools (Harris & Jones, 2020).

In the international arena, research studies have established the role of teachers' collaboration for the effective management of the schools at secondary level and there is active focus on the development of collaboration, mentoring, team work and distributive leadership skills among teaches of secondary schools to achieve teachers' collaboration for sustainable

school management of the schools (Darling-Hammond et al., 2017). In the global context, educational institutions where there is collaboration among teachers at secondary level, students normally show better performance with respect to achievement in assessment and the societies are more satisfied with the performance of the schools, moreover; this collaboration among teachers also significantly contribute to the sustainability and effectiveness of the management of the schools (Sahlberg, 2015). As an example of such collaborative models the education system in secondary schools of Singapore is based on the concept of professional learning communities which enables teachers to participate in the designing of curricula, students' assessment and management of the schools. This provide support for the collaboration of teachers and they own the school and its administration and work for the effective management of the school (Darling-Hammond et al., 2017).

On the contrary, the secondary education sector of Pakistan is characterized with centrality of powers and administrative powers in the hands of few that hardly encourages the collaboration and participation of teachers in the administrative affairs of the schools at secondary level (Qureshi & Janjua, 2023). Malik and Hussain (2020) demonstrated that teachers in developed countries are focused on collaborative activities in secondary schools while in the Pakistani teachers are only dedicated to teaching tasks and assessment activities. The centralization of powers in the hands of schools' heads and bureaucrats in secondary schools hinders the autonomy of teachers and they don't have their active role in collaborating for the effective management of the schools. There is a need for encouraging teachers' collaboration for improving the management of secondary schools (Shah, 2022). In secondary schools of Pakistan, collaboration among secondary school teachers is limited. Though secondary school teachers and heads of secondary schools realize the significance and need for the promotion of teachers' collaboration for effective school management at secondary level but there are hurdles in the way of its realization due to the bureaucratic model of administration in secondary schools that encourages the centrality of administrative powers in the hands of selected few and the power of decisions' making with the

designated authorities and left teachers disinterested in the administrative affairs of the schools at secondary level (Ullah & Ali, 2021). There are also socio-cultural barriers to teachers for collaboration in the administrative affairs of the school (Khattak et al., 2021).

Though there are challenges in the way of teachers' collaboration for the effective management of the schools at secondary level, but the government is taking multiple initiatives for the development of school based management and teachers' professional development to help encourage teachers' collaboration in the effective management of the schools (Government of KP, 2021). Though policies for the promotion of teachers' collaboration are formulated by the government but there is lack of political will on the part of government to implement the recommendations of the policies for achieving teachers' collaboration to ensure sustainable school management at secondary level (Khan et al., 2022). Research studies recommended that there is the need of shift to distributive models of management at secondary level in place of centralized model which will encourage teachers' collaboration and will enable them to participate in the administrative affairs of the schools (Shah, 2022). Moreover, at the level of secondary schools, for promoting teachers' collaboration, there is the need of school base approaches to enable teachers to have team work both in the academic and administrative sectors of the school (Qureshi & Janjua, 2023).

In secondary education sector of Pakistan, there cultural and systematic challenges in the way of achieving teachers' collaboration for the effective management of the schools. One such challenges are the authoritative mindset of the society and the dedication of teachers only to the teaching tasks in schools instead of room for collaboration in the administrative affairs of the schools (Malik & Hussain, 2020). It is contrary to the school cultures of the developed nations that are focused on collaboration in the academic as well as the administrative spheres of the schools (Ullah & Ali, 2021). The centrality of administrative powers in the hands of single individuals rarely encourage teachers to participate and collaborate in the administrative affairs of the the schools and they are only limited to their classrooms (Shah, 2022). There is also the

absence of professional development opportunities for teachers that may develop collaborative skills among the teachers at secondary level. Majority of secondary school teachers in Pakistan, lack the skills of mentoring, peer learning, conflict management and team work and they cannot perform well for collaboration in the administrative affairs of the schools (Ali & Rizvi, 2020). Therefore, there is the need of focused professional development interventions in collaboration both for the teachers and the heads of secondary schools (Khattak et al., 2021).

The administration of the school plays a significant role in the development of collaborative leadership practices among teachers in secondary schools and there is the need of adopting transformational leadership at secondary level to develop collaborative practices among teachers of secondary level for better and effective management of the schools. Such teachers will have collective vision of the schools, collaborate for achieving this vision and will put their energies in the proper direction to achieve the effective management of the schools (Harris & Jones, 2020). On the other hand, there is the dominant culture of centrality and authoritarianism in Pakistani schools which discourages teachers' participation in the affairs of the schools' management and leads to non-cooperation and lack of teamwork among teachers (Shah, 2022). The findings of research studies suggest that school administration where collaboration of teachers is encouraged and promoted involves teachers in the instructional and administrative decisions' making and lead to effective instruction and management of the schools (Louis et al., 2016).

In Khyber Pakhtunkhwa Pakistan, the secondary education sector is characterized with the centralized administration of schools and there is little or no room for teachers' participation in the administrative affairs of the schools. This leads to inefficiency in the management of the schools at secondary level due to absence of teachers' collaboration. Therefore, the study investigated teachers' collaboration for effective school management at secondary level. This will help improve the current situation of teachers' collaboration in management of the schools at secondary level and will provide recommendations for policy initiatives to help improve the situation.

Methodology

The design of the study was quantitative. The population of the study was 3419 male secondary school teachers in government secondary schools of district Swat, KP, Pakistan (District Educational Management Information System, 2025). Using simple random sampling procedure due to the homogeneous nature of the population, a sample of

346 teachers was selected. A questionnaire about teachers’ collaboration for management of schools was developed, validated and piloted for collecting data. Self-administered questionnaires were used to gather data and mean scores, standard deviations and chi-square test were applied for analyses. Research ethics were observed for the research project.

Results

Table 1 Role of Teachers’ Collaboration in Effective Management of Schools

Statements	Number	Mean	S. D	χ^2	P
Preparing schools’ vision	346	2.47	.83	34.43	.000
Developing schools’ strategic plan	346	2.35	.52	45.49	.000
Preparing daily time table	346	3.85	.76	59.12	.000
Maintaining books’ distribution record	346	3.77	.82	43.67	.000
Maintaining Admission withdrawal register	346	3.63	.23	69.45	.000
Arranging of schools’ exams	346	3.91	.54	53.73	.000
Preparing schools’ results	346	3.59	.31	28.05	.000
Arranging co-curricular activities	346	3.87	.08	37.91	.000
Preparing schools’ budget	346	2.37	.36	56.89	.000
Maintaining pupils’ fund register	346	3.58	.69	87.78	.000
Maintaining PTCs fund register	346	3.61	.74	38.27	.000
Maintaining stock register	346	3.72	.84	49.21	.000
Managing students’ misbehavior	346	3.80	.98	89.24	.000
Orienting newly admitted students	346	3.56	.04	58.33	.000
Supporting newly arrived teachers	346	2.23	.44	34.09	.000
Mentoring for junior teachers	346	2.46	.68	62.78	.000
Maintaining schools’ hygiene	346	3.64	.32	39.56	.000
Arranging of healthy food for students	346	2.36	.94	44.25	.000
Communicating with community/parents	346	3.75	.54	45.23	.000
First aid and emergency management	346	3.54	.23	32.34	.000
Guiding to solve students’ problems	346	3.64	.62	21.65	.000

Table 1 provides the role of teachers’ collaboration in effective management of secondary schools. The mean scores of 3.63, 3.91, 3.59, 3.87, 3.58, 3.61, 3.72, 3.80, 3.56, 3.64, 3.75, 3.54 and 3.64 highlighted that teachers agreed that they collaborated in preparing daily time table, maintaining books’ distribution record, maintaining, admission withdrawal register, arranging of schools’ exams, preparing schools’ results, arranging co-curricular activities, maintaining pupils’ fund register, maintaining PTCs register, maintaining stock register, orienting newly admitted students, maintaining schools’ hygiene,

communicating with community and parents, providing first aid and emergency management and guiding students for solution of students’ problems. However, teachers disagreed about their role in preparing of schools’ vision, developing of schools’ strategic plan, preparing of schools’ budget, supporting of newly arrived teachers, mentoring of junior teachers, and arrangement of healthy food for students in schools. It is shown with the mean scores of 2.47, 2.35, 2.37, 2.23, 2.46 and 2.36. It demonstrated that teachers collaborate in managing academics, co-curriculum and finances of schools.

Manage material and human resources, maintains schools' hygiene and manage emergencies. They collaborated in preparing daily time tables, maintaining books' distribution records, maintaining, admission withdrawal registers, arranging of schools' exams, preparing schools' results, arranging co-curricular activities, maintaining pupils' fund registers, maintaining PTCs fund registers, maintaining stock registers, orienting newly admitted students, maintaining schools' hygiene, communicating with community and parents, providing first aid and emergency management and guiding students for solution of students' problems. However, teachers disagreed about their role in preparing of schools' vision, developing of schools' strategic plan, preparing of schools' budget, supporting of newly arrived teachers, mentoring of junior teachers, and arrangement of healthy food for students in schools. This may be due to the schools of government sector as they get ready made vision from the department and moreover, for the preparation of budget there is also supporting staff and in-service training for professional development of new teachers.

Discussions

The study found that secondary school teachers collaborate in managing academics, co-curriculum and finances of schools. Manage material and human resources, maintains schools' hygiene and manage emergencies. They collaborated in preparing daily time tables, maintaining books' distribution records, maintaining, admission withdrawal registers, arranging of schools' exams, preparing schools' results, arranging co-curricular activities, maintaining pupils' fund registers, maintaining PTCs fund registers, maintaining stock registers, orienting newly admitted students, maintaining schools' hygiene, communicating with community and parents, providing first aid and emergency management and guiding students for solution of students' problems. However, teachers disagreed about their role in preparing of schools' vision, developing of schools' strategic plan, preparing of schools' budget, supporting of newly arrived teachers, mentoring of junior teachers, and arrangement of healthy food for students in schools. This may be due to the schools of government sector as they get ready made vision from

the department and moreover, for the preparation of budget there is also supporting staff and in-service training for professional development of new teachers. These findings are similar to (Leithwood et al. (2020) who found that collaboration of teachers adds to the teachers sharing responsibility and solving problems together at school. Similarly, Goddard et al. (2015) found that schools with collaboration of teachers are more effective in their teacher efficacy and student success. In the same vein, Gopang et al. (2016) efficiencies in administrative processes and curriculum-related work may be achieved through collaborative practices of teachers in instruction, including the usage of team teaching and curriculum planning (Sharma, 2022). Similarly, Hargreaves and Fullan (2012) identified that collaboration ensures effective administration of schools. Similarly, Lousi et al. (2016) found that school administration where collaboration of teachers is encouraged and promoted involves teachers in the instructional and administrative decisions' making and lead to effective instruction and management. In the same vein, Harris and Jones (2020) found that teachers' in secondary schools collaborated in academic and management spheres of the schools and made schools effective. The findings of the study are contrary to the findings of Shah (2022) who found the discouraging situation for teachers' collaboration in secondary schools. Malik and Hussain (2020), also found the lack of teachers' collaboration in secondary schools due to authoritative mindset of heads in such schools. The findings are also contrary to the findings of Khattak et al. (2021) who found the lack of collaboration in secondary schools.

Conclusion

The study found that secondary schools' teachers collaborate in managing academics, co-curriculum and finances of schools. Manage material and human resources, maintains schools' hygiene and manage emergencies. They collaborated in preparing daily time tables, maintaining books' distribution records, maintaining, admission withdrawal registers, arranging of schools' exams, preparing schools' results, arranging co-curricular activities, maintaining pupils' fund registers, maintaining PTCs fund registers, maintaining stock registers, orienting newly admitted students, maintaining schools' hygiene,

communicating with community and parents, providing first aid and emergency management and guiding students for solution of students' problems. However, teachers disagreed about their role in preparing of schools' vision, developing of schools' strategic plan, preparing of schools' budget, supporting of newly arrived teachers, mentoring of junior teachers, and arrangement of healthy food for students in schools. This may be due to the schools of government sector as they get ready made vision from the department and moreover, for the preparation of budget there is also supporting staff and in-service training for professional development of new teachers. The findings have implications for the effective administrations of schools at secondary level.

Recommendations

1. There may be professional development trainings for the teachers and heads of the schools to establish the culture of collaboration in secondary schools.
2. The head or principals need to identify the strengths of all the teachers in the school and assign responsibilities to all the staff member for the promotion of collaborative culture in schools.
3. The teachers at secondary level, need to own the schools and the works and property of the schools and need to work for the betterment of the schools.
4. The education department needs to formulate policies for the promotion of the culture of collaboration for teachers in secondary schools.
5. Teacher education may also develop courses for teaching and development of prospective teachers' skills in collaborating for the activities of the school.

Areas for Future Research

1. Future studies may be conducted on the collaboration of elementary school teachers.
2. Such studies may be conducted in institutions of higher education.
3. Similar studies may also be conducted globally and in the context of other provinces in Pakistan.

References

Ahmed, M., Ali, S., & Khan, N. (2022). Resource constraints and educational quality in Pakistan. *Journal of Educational Research*, 45(2), 123-138.

- Ali, S., & Rizvi, S. (2020). Teacher collaboration in Pakistani schools: Challenges and opportunities. *Journal of Education and Educational Development*, 7(1), 45-62. <https://doi.org/10.22555/joeed.v7i1.289>
- Arshad, M., Khan, A., & Hussain, S. (2023). A comparative effectiveness of teacher training programs in Khyber Pakhtunkhwa. *Journal of Asian Development Studies*, 12(4), 1080-1087.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? *European Journal of Teacher Education*, 40(3), 291-309.
- DuFour, R., DuFour, R., Eaker, R., & Many, T. (2016). *Learning by doing: A handbook for Professional Learning Communities at Work* (3rd ed.). Solution Tree Press.
- Goddard, Y. L., Goddard, R. D., & Tschannen-Moran, M. (2015). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement. *Teachers College Record*, 109(4), 877-896.
- Gopang, A. S., Soomro, A. F., & Bughio, F. A. (2016). Teacher attitudes toward professional development in Pakistan. *International Journal of Teacher Education*, 34(2), 56-70.
- Government of Khyber Pakhtunkhwa. (2021). *Khyber Pakhtunkhwa Education Sector Plan 2020-2025*. Peshawar: KP Education Department.
- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8(3), 381-391.
- Hargreaves, A. (2019). *Teacher collaboration in 21st-century learning: A global perspective*. Routledge.
- Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- Hargreaves, A., & O'Connor, M. T. (2018). *Collaborative professionalism: When teaching together means learning for all*. Corwin Press.

- Harris, A., & Jones, M. (2020). System improvement through collective capacity building. *Journal of Professional Capital and Community*, 5(1), 12-27. <https://doi.org/10.1108/JPCC-06-2019-0016>
- Johnson, D. W., & Johnson, R. T. (2018). Cooperative learning: The foundation for active learning. In S. Brito (Ed.), *Active learning - Beyond the future* (pp. 59-70). In tech Open. <https://doi.org/10.5772/intechopen.81086>
- Khan, A., Hussain, I., & Ahmad, N. (2022). Challenges of school management in Khyber Pakhtunkhwa: A qualitative exploration. *Pakistan Journal of Education*, 39(1), 89-104.
- Khattak, S. G., Khan, M. A., & Ahmad, S. (2021). Gender and professional collaboration: Challenges for female teachers in Khyber Pakhtunkhwa. *Pakistan Journal of Gender Studies*, 21(2), 67-84.
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5-22.
- Louis, K. S., Marks, H. M., & Kruse, S. (2016). Teachers' professional community in restructuring schools. *American Educational Research Journal*, 33(4), 757-798. <https://doi.org/10.3102/00028312033004757>
- Malik, R., & Hussain, S. (2020). Barriers to teacher collaboration in Pakistan: A case study of public schools. *International Journal of Educational Development*, 75, 102176. <https://doi.org/10.1016/j.ijedudev.2020.102176>
- Nawab, A. (2020). Monitoring and accountability in teacher professional development: Voices from the ground in rural Pakistan. *Journal of International and Comparative Education*, 9(2), 77-89.
- Qureshi, R., & Janjua, F. (2023). Teacher collaboration and school improvement: Lessons from Pakistan. *Educational Management Administration & Leadership*, 51(2), 345-363. <https://doi.org/10.1177/17411432211022789>
- Sahlberg, P. (2015). *Finnish lessons 2.0: What can the world learn from educational change in Finland?* Teachers College Press.
- Shah, S. F. (2022). Hierarchical leadership and teacher autonomy in Pakistani schools. *Journal of Educational Administration*, 60(3), 321-337. <https://doi.org/10.1108/JEA-01-2021-0012>
- Shaheen, I. (2013). Education in Khyber Pakhtunkhwa: Challenges and prospects. *Educational Research International*, 2(3), 2-10.
- Sharma, A. (2022). Teacher professional development and student achievement: Evidence from South Asia. *Global International Research Thoughts*, 10(1), 10-13.
- Siddiqui, M. (2019). Teacher training needs in Pakistan: A comparative study. *Journal of Education and Practice*, 10(4), 88-95.
- Siddiqui, S. (2016). *Education policies in Pakistan: Politics, projections, and practices*. Oxford University Press.
- Tahir, M., Khan, S., & Ali, A. (2020). Private school enrollment trends in Pakistan. *Education and Development*, 38(2), 56-71.
- Ullah, R., & Ali, K. (2021). Barriers to teacher collaboration in Pakistani secondary schools. *International Journal of Leadership in Education*, 24(3), 345-360. <https://doi.org/10.1080/13603124.2020.1770889>
- Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017). Teacher communities as a context for professional development: A systematic review. *Teaching and Teacher Education*, 61, 47-59.