SCHOOL PROFESSIONAL ENVIRONMENT AND TEACHING PRACTICE: A COMPARATIVE ANALYSIS OF PRIVATE AND PUBLIC SCHOOLS IN DISTRICT BADIN

By

SUMAYA
PIDE2021FMPHILPP04

SUPERVISOR

Dr. Muhammad Jehangir Khan

MPHIL Public Policy

PIDE School Of Social Sciences

Pakistan Institute of Development Economics,

Islamabad

2024

Pakistan Institute of Development Economics, Islamabad

PIDE School of Social Sciences

CERTIFICATE

This is to certify that this thesis entitled: **"School Professional Environment and Teaching Practice: A Comparative Analysis of Private and Public Schools in District Badin"** submitted by Sumaya is accepted in its present form by the PIDE School of Social Sciences, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Public Policy.

Supervisor: Dr. Muhammad Jehangir Khan Signature: _____

External Examiner: Dr. Saadia Abid Signature: _____

Head,
PIDE School of Social Sciences: Dr. Hafsa Hina Signature: _____

Authors Declaration

I, Sumaya Shams, hereby state that my MPhil thesis titled **SCHOOL PROFESSIONAL ENVIRONMENT AND TEACHING PRACTICE: A COMPARATIVE ANALYSIS OF PRIVATE AND PUBLIC SCHOOLS IN DISTRICT BADIN** is my work and has not been submitted previously by me for taking any degree, from Pakistan Institute of Development Economics or anywhere else in the country/world.

If my statement is incorrect even after my Graduation, the university has the right to withdraw my MPhil degree.

Date: 30-10-2024

Signature of Student

Name of Student

Dedication

I want to express my profound gratefulness to Allah Almighty, the most gracious and merciful, for granting me the capability to complete this undertaking. Without His blessings, this accomplishment would have been unattainable.

Acknowledgment

I am sincerely grateful to Almighty Allah for enabling me to complete this humble contribution within the allotted time. I hold great reverence for the Holy Prophet Muhammad (PBUH), the greatest educator and supporter of humanity, who emphasized lifelong learning.

I want to convey my deep appreciation to Dr. Muhammad Jehangir, my supervisor, for his invaluable guidance and support throughout the research process. Without his assistance, this endeavor would not have been achievable.

Throughout my academic journey, I sincerely appreciate the unwavering moral support and encouragement from my father, Shams ud Din, mother, Safiya, brother Umair, and sister Afiya. Their presence has been a constant source of strength. Furthermore, I would like to convey my profound gratitude to all my research participants, as their cooperation has played a pivotal role in completing this study.

ABSTRACT

This research is a comparative study between public and private primary school teaching practices, the school's professional environment, its impact on teaching practice, and how it affects students' learning outcomes. A mixed-method research approach is used. The qualitative approach includes structured interviews with principals, DEOs, and TEOs, further analyzed by thematic analysis. For quantitative analysis of the objectives, student achievement tests were conducted on 5th-class students, and teachers filled out Likert scale-based questionnaires. The gathered data was analyzed using descriptive analysis and multiple regression. Statistical analysis reveals that the school's professional environment positively affects teaching practice in all primary schools in Badin.

Along with Other factors, such as teacher assessment, professional development, order, and discipline, the school's professional environment depends on the principal's role and the teacher's collaboration. A principal is an instructional leader and can cultivate a collaborative environment among teachers that significantly improves teaching practices and student outcomes. Conversely, a poorly defined role or a principal's leadership style that does not support collaboration can negatively impact student achievement. Findings show that, with good teaching practice and a professional school environment, students have good reading and arithmetic scores in private schools compared to public schools because private schools often have advantages such as resource availability and a robust examination system that can contribute to better teaching practices and potentially better academic performance than public schools. Even government school teachers are highly qualified and have extensive teaching experience, but results reveal that experienced teachers don't teach very well because they don't use new approaches; men and women have the same teaching methods.Besides, these private schools perform well because they typically have more financial resources than public schools. Resource availability allows the private to provide facilities with updated technology. Private schools adopting activity-based and technology-based teaching methods can enrich students' learning achievements.

Moreover, it has been noted that an increase in the quality of teaching is connected to higher student learning achievements, whereas an increase in the quantity of teaching[1] is linked to lower student learning achievements. The reason behind this is that increasing the duration of class

[1] The quantity of teaching is the duration of classroom instruction dedicated to learning the subject matter, specified as the number of hours per day and the number of days per year

without improving the quality of teaching methodologies doesn't make any improvement. The factors at the school level that influence students' learning include assessments, which the examination system can do.

Keywords: Professional School Environment, Teaching Practice, Principal's Role, Teacher Collaboration, Quality of Teaching, Quantity of Teaching, Student Learning Outcomes, Primary Education.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ASER	Annual status of education report.
CPD	Continuous professional development
DCAR	Directorate of Curriculum, Assessment & Research.
DEO	District Education Officer
MQI	Mathematical Quality of Instruction
PITE	Provincial Institute of Teachers Education
PR	Principal's role
QNT	Quantity of Teaching
QOT	Quality of Teaching
SDG's	Sustainable Development Goal
SESLOAF	Sindh Education Student Learning Outcome Assessment Framework
SESP&R	Sindh Education Sector Plan and Reform
SLO's	Students Learning Outcomes
TC	Teachers Collaboration
TEO	Taluka Education Officer

CHAPTER 1

INTRODUCTION

The role of education is paramount in determining the success or failure of nations, especially in the 21st century. Primary education is typically the initial phase of compulsory education. Awan and Zia (2015) argue that Pakistan's education system is divided into two school systems: private and public. Private schools are getting accepted, and parents prefer to send their children to private schools over public schools due to their updated education system, examination system, and facilities compared to public schools. Even public schools are free but inefficient. Both sectors face issues that negatively affect students. Students' achievement at the primary level can be influenced by various factors, including their overall well-being, the quality of their teachers, the prevalence of poverty, and the level of support they receive from their parents, as Hainey et al. (2016) noted. Nazneen and Ahmad (2020) assert that private schools typically have more resources, such as technology, extracurricular activities, and support services. The private sector can afford modern facilities and initiatives that improve educational prospects. On the other hand, budget limits and a lengthy process may make it difficult for public schools to allocate resources, limiting the quality of education provided.

Nayyar et al. (2017) argue that many social, economic, and demographical factors affect education quality along these school levels, and teacher-related factors severely influence students learning. Darling-Hammond (2014) investigated the impact of a teacher's educational background, level of education, certification status, and years of teaching experience on student success and consistently demonstrated that these factors determine teacher performance and student achievement.

Mahaputra and Saputra (2021) added that many factors other than the teacher herself determine a teacher's effectiveness, such as principal leadership, administration and teacher commitment, work discipline, and school culture. Chetty et al. (2014) draw attention to over and above everything an individual teacher does, the environment in which they work, whether defined by the activities of school leaders, their fellow teachers, other staff, students, parents, the larger community, and context, makes a significant difference in how much students learn. Even the best teacher is unlikely to succeed if placed in an unsupportive environment.

According to Omotere (2013), the school environment includes good student-teacher interactions, high-quality school leader, a library and laboratory, proper planning and distribution of tasks, effective pedagogy, the availability of teaching tools, and managerial forecasting; all of these play an essential part in the teaching-learning process.

Johnson et al. (2012) state that the working environment significantly affects teachers and students. Teachers seek to remain in environments that cultivate a healthy work atmosphere. Additionally, although various factors within the workplace are essential to teachers, they are not exclusively limited to defined workplace factors such as access to cutting-edge educational technology or well-maintained facilities. In addition to the impact of an individual teacher's efforts, the overall environment within which they work plays a crucial role in determining the educational outcomes of students. In other words, elements of the environment include policies and practices set by school leadership, how teachers and fellow staff members work together (or not), the extent to which students (and their particular needs) are accommodated, how parents are made to feel welcome implement inclusionary policy; things right down to dynamics between schools in a community as well as more significant social issues, socioeconomic context, community

expectation, etc. How these elements interact produces a dynamic environment that significantly affects students' ability to learn and achieve academically.

Supporting a working space can boost a teacher's effectiveness so that they can successfully channel their talents and aptitude in ways that would fulfill the needs of all students. On the other hand, a less supportive setting can obstruct even the most driven and capable teachers' ability to reach out to student's needs. The bottom line is that without appreciating the fundamental importance of an overall environment for educating, it is impossible to create a well-organized learning space that makes teaching and learning productive.

The difference in the professional environment of private and public schools, noted by ul Hassan et al. (2021), is that the professional atmosphere in private schools emphasizes responsibility and performance with greater autonomy. However, it can be stressful owing to job instability. Public schools provide a supportive community climate and employment stability, but they may lack the resources and flexibility of private institutions. These inequalities substantially influence teachers' experiences and educational achievements in both sectors.

Further, Subedi (2021) highlights that private schools have strict recruiting requirements and continuous chances for professional development, which frequently lead to the perception that private school teachers are more qualified or committed; it can lead to better teaching approaches, which increase student learning results. For comparative analysis of private and public schools' professional environment and teaching practice and their impact on students' learning outcomes, English, Urdu, and Sindhi reading and basic maths concepts such as addition, subtraction, and division were taken as a scale. Several studies and reports, such as (Bryck, 2010; Hauser, 2021) and ASER Pakistan (2021), have investigated students' learning achievement levels by taking English, Sindhi/Urdu, and Mathematics results concerning social, cultural, and economic aspects.

Also, the studies reveal that various federal, provincial, and district stakeholders are taking proactive measures and devising policies to improve the quality and effectiveness of teaching. These efforts have a direct influence on the academic performance of students. However, it is essential to acknowledge that these policies primarily focus on the individual level, disregarding the pivotal role played by the school as an organization.

Consequently, the capacity of the school environment to facilitate and enhance teaching quality has not been adequately recognized. The current results of students' learning in district Badin show a need to focus on primary education. As Sindh can achieve international standards, many studies have been conducted. However, they only examined one aspect of teacher quality concerning student outcomes or several indicators of formal competence (such as teacher education level and certification status). This study focused on factors affecting teacher and student learning outcomes, such as school professional environments, principal's role, and collaboration. Also, it compared the school's professional environment and private and public primary school teaching practices. Some studies have been conducted in the Badin district, but this is the first study focusing on the school's professional environment and teaching practices.

1.1 Significance of study

The comprehensive study played an instrumental role in pinpointing the strengths and weaknesses in both private and public schools within District Badin and explaining the factors that impact the overall quality of education in this region. Policymakers and stakeholders can subsequently use this invaluable information collected from the study to craft and implement effective policies and strategic interventions to enhance education. Additionally, the study was a pivotal reference point for exploring the intricate factors influencing parental decision-making when choosing between private and public schools. Such profound insights empower education policymakers to make well-

informed decisions regarding resource allocation and policy formulation, catalyzing positive transformations within the education sector. Ultimately, the study gave a significant step towards developing and understanding the educational framework operative in district Badin, not only in Badin but also in Sindh. It provides insights that improve the quality of education for students in the region.

1.2 Statement of Problem

Khan et al. (2016) shed light on the fact that the education sector faces challenges such as limited economic resources, ineffective program implementation, deficient administrative and managerial capabilities, and inadequate monitoring, evaluation, teaching, and supervision in Pakistan.

According to the ASER (2021), 76% of 6-16-year-old students are enrolled in schools in Sindh. Of these, 94% are in government and 6% in private schools. Learning levels of students of class 5 declined in the percentage of children who could read class 2 level stories in their mother tongue, Urdu/Sindhi, from 44% in 2019 to 40% in 2021. Only 40% can read a passage, 22% can read a sentence,16.8% can read a word,14.3% can recognize the letters, and 6.6 % are students unable to do anything. English reading fluency decreased from 27% in 2019 to 24% in 2021. From these, 23.9% and 30.6% can read the sentences and words. The last learning outcomes report highlights arithmetic learning levels (Addition, Subtraction, and Division). The report shows a decline from 32% in 2019 to 28% in 2021. Only 28 % can do two-digit division, 21.3% can solve 2-digit subtraction, and 5.9% can recognize numbers. Report theme 5 shows students' learning level by school type (public vs. private), and it concluded that private school children perform well compared to government schools. Statistics show that 42% of students in 5th-class private schools can read stories in Urdu and Sindhi, compared to 41% of government school students. 24% of students can read English sentences, and 21% of government school 5-class students can do the

same. The arithmetic learning of students reflects the same approach; 32% of private school students (class 5) can do primary division compared to 23% of government school students.

The statistics above show that the learning level or learning outcomes of 5th-grade students of Sindh are shallow compared to Punjab. Acknowledging the necessity of improving education quality, the Sindh government has undertaken numerous initiatives, yet Sindh as a whole, specifically district Badin, has not come close to achieving the SDGs' goal. The one factor that impacts students' learning outcomes is ineffective teaching practice, which is further evidenced by Williams (2022) that teachers in public schools may have fewer or less organized professional development options than private school teachers. Public school teachers sometimes struggle to obtain continual training relevant to their teaching needs. At the same time, there are mentorship programs and collaborative practices among private school teachers to promote professional development. This emphasis on ongoing development might increase teaching effectiveness and work satisfaction.

It is imperative to focus on the various factors that impact students, teachers, and the overall professional school environment. While numerous studies have delved into the reasons behind the subpar education quality and inadequate student learning outcomes, none have specifically explored the school's professional environment within the context of district Badin. This oversight has downplayed the significance of the school's professional environment concerning teacher effectiveness and student achievement.

Therefore, this study sheds light on the vital role of the professional school environment, focusing on principal and teacher collaboration, teacher-oriented factors such as teaching quality and quantity, and their direct influence on students' reading and arithmetic competencies. By conducting a comparative analysis between private and public primary schools, the study identified

how these aspects impact the overall educational landscape, paving the way for targeted interventions to enhance student's learning experience and outcomes in district Badin.

1.3 Research Question

- Does the performance of public schools differ from private schools?
- How does the school's professional environment impact teaching practice and students' learning outcomes?
- How does teaching practice affect student learning outcomes?

1.4 Objectives

- To compare the school professional environment of public and private primary schools**.**
- To study the relationship between school professional environment and teaching practice.
- To study the effect of a school's professional environment and teaching practice on students' learning outcomes.

1.5 Key Terms Explanation

The concept of a school professional environment is multilayered, encompassing various elements like the collective beliefs, attitudes, and interactions between teachers and students, as well as the values and norms that direct the conduct of the school community.

Kraft and Papay (2014) explain the school professional environment as a positive collaborative learning culture and trust among teachers, school leaders, and students. Within such a well-structured environment, teachers are encouraged to share in ongoing professional growth, persistently enhancing their methodologies and broadening their understanding through peer-based learning. A well-supported teacher is more likely to create exciting and effective learning

environments for students, which improves student learning outcomes. Schools with favorable work cultures retain good teachers and increase student accomplishment.

Teacher collaboration is central to modern educational practices, highlighting the worth of teamwork and assistance among teachers. By merging viewpoints, proficiency, and experiences, teachers create an environment that encourages exchanging ideas, exploring innovative, valuable methods, and improving student learning outcomes. Teachers can collectively identify improvement areas and generate solutions by engaging in collaborative problem-solving sessions.

Commonly, principals, known as school leadership, hold a fundamental position in setting a favorable school climate and improving the academic accomplishments of teachers and students. These skills include providing instructional leadership, engaging in effective interactive communication, conflict resolution, and participating in strategic planning.

Teaching Practice includes various activities and strategies teachers implement in the classroom. Teaching practice combines teaching methods, communication styles, and evaluation methods to ensure a comprehensive and fulfilling academic journey.

Recognizing the relationship between quality and quantity within the school is imperative. Combining these two essential components establishes a dynamic and inspiring atmosphere, nurturing an environment favorable to academic success.

Student learning outcomes can describe what students are expected to know, understand, or be able to do by the end of a particular learning experience, such as a course, lesson, or educational program. They articulate the intended learning outcomes and serve as a guide for teachers to design instruction, assess student progress, and evaluate the effectiveness of the learning experience.

1.6 Policy Context

Various departments, including the School Education & Literacy Department, the Special Education Department, the College Education Department, and the Higher Education Department, oversee educational services in Sindh. The School Education & Literacy Department is primarily tasked with administrating primary and secondary government schools.

The Sindh Education Sector Plan and Reform (SESP&R) for the period 2019-2024 aims to shift the paradigm and bring about a transformation in the education sector of the province. To accomplish this, SELD is moving away from capacity-building programs and focusing on teachers' continuous professional development (CPD) while also establishing a link between training teacher performance and career progression through designing a career ladder for public school teachers. The education sector in Sindh requires reevaluating its governance and management strategy, emphasizing the delegation of authority to the district level.

For this study, Programs 4,5 and 6 of the Sindh Education Sector Plan and Reform (SESP&R) were focused as these three programs are related to research questions and objectives. Program 4 is merit-based teacher recruitment, qualifications, and professional development, and the goal of Program 4 is to improve the capacity of quality delivery systems at the district level, such as commendable teacher hiring, teacher training, and professional development. The program's 4-second objective is implementing a cluster-based continuous professional development policy for teachers, head teachers, and administrators.

The SESP&R is committed to implementing the newly devised CPD model, a fundamental strategy to enhance teaching practices and enrich students' learning experiences. This

comprehensive model encompasses teachers, head teachers, and administrators, ensuring its widespread application across all primary and elementary schools within the province.

The model depends on the collaborative approach of peer-to-peer coaching among teachers to facilitate the development process. The plan's implementation of this model involves several key activities. These activities include carefully selecting and training guide teachers based in cluster/hub schools—additionally, school-based subject coordinators selected and trained in science, mathematics, and language. Furthermore, one-week CPD courses were conducted, encompassing socio-emotional skills training for all teachers in primary and elementary schools. Regular school visits were also undertaken as part of the implementation process. Lastly, a comprehensive monitoring and evaluation plan for CPD was developed, including a system for assessing teachers' performance after the training sessions.

Under Program 5, Quality Inputs and Processes, the objective I of this program aligned with this study is the student assessment and reporting system. And make a quality assessment of class 5 to 8th. It focuses on enhancing the quality of curriculum revision and assessment inputs. It involves creating strategies to strengthen the reporting of students' learning outcomes. The goal was to establish effective assessment procedures that enable students to showcase their skills and competencies using a technology-enhanced assessment system.

SESP&R 2019-24 aims to implement technology-enhanced assessment for grades V and VIII, starting with a pilot program in 6 regional headquarters within the province. The initiative anticipates that providing better support to teachers, enhancing their assessment skills, and improving monitoring practices will gradually improve student learning outcomes.

Additionally, the decentralized execution of the Sindh Education Student Learning Outcome Assessment Framework (SESLOAF) is set to increase. Over the five years (2019-2024), learning evaluations for grades IV to VIII will be done through a reinforced DCAR.

Quality Assurance serves as an initial stage towards achieving Quality Improvement. By monitoring data, the level of quality can be determined. On the other hand, the diagnostic assessment carried out by DCAR. Through the diagnostic evaluation, the department can review the content in textbooks and implement necessary measures to enhance the quality of students' learning outcomes. Consequently, the report generated from the diagnostic assessment highlights teachers' training needs assessment, which was linked to Continuous Professional Development and Career Pathways for teachers in public schools within the province. Program 6 is Professional Educational Leadership and Management. Objective J is to establish management mechanisms to strengthen performance and accountability.

The Instructional Leadership approach in governance aims to enhance the capabilities of school leaders and local education managers to effectively fulfill leadership responsibilities, including monitoring and supporting learning outcomes, enhancing teaching practices, and promoting student retention initiatives. The primary aim of this priority program is to establish management mechanisms that will improve accountability.

This review concludes that one of the primary focuses of the plan is on Teacher Training and Professional Development. The plan underscores the importance of continuous professional development for teachers, encompassing pre-service and in-service training programs that aim to improve pedagogical skills, subject knowledge, and the utilization of modern teaching methodologies.

Moreover, the plan proposes Assessment and Examination Reforms to transition from rote learning to a more comprehensive evaluation of students' comprehension and application of knowledge. This reform is essential for assessing genuine learning outcomes. Additionally, the Provision of Learning Materials is highlighted as another crucial aspect, with the plan ensuring the availability of high-quality textbooks and supplementary learning materials, including digital resources.

Furthermore, the Capacity Building of Education Administrators is addressed through programs designed for their professional development, aiming to enhance their management and leadership skills. Strengthening the capacities of education administrators is fundamental for ensuring effective governance. Lastly, the plan proposes Monitoring and Accountability Systems to establish robust mechanisms for monitoring progress, ensuring accountability, and facilitating data-driven decision-making. Effective monitoring and accountability play a pivotal role in the successful implementation of education reforms.

1.7 Ethical Consideration

The study complied with research ethical guidelines. Before participating, all individuals were provided with detailed information about the study, and their consent would be obtained. To protect their identities, the participants remain anonymous throughout the research process. The collected data was confidential and only used for research purposes. The research findings were shared with relevant stakeholders, such as policymakers, Education Officers, school owners, administrators, principals, and teachers, to contribute to evidence-based policy and practice.

CHAPTER 2

LITERATURE REVIEW

The literature review inspects the existing work on the school professional environment and teaching practice and their effect on students, teachers, and overall school performance. It included studies related to the professional school environment, principal, and teacher collaboration and their impact on teachers' effectiveness, teaching methodologies, and the overall effect of teaching practice on students' learning outcomes.

2.1.1 School Professional Environment

The school professional environment is a multifaceted concept that contains various aspects of the progress and success of individuals within an academic setting. It is the collective impact of shared beliefs, attitudes, school values, norms, and ways of interaction among teachers and students. It represents a dynamic network where educational beliefs, teaching methodologies, and interpersonal relationships shape the learning experience. Teachers and students contribute to a vibrant range of ideas in a rich and diverse environment, fostering a culture of collaboration, respect, and continuous improvement. The professional environment nurtures intellectual development and teaches essential life skills and values by cultivating a positive and engaging atmosphere. Encouraging creativity, critical thinking, and empathy, it serves as a foundation for building a community of learners committed to academic excellence, personal growth, and social responsibility added by Wang and Degol (2016). Kraft and Papay (2014) define a school professional environment as collaboration, mutual respect, and trust among teachers, principals, and stakeholders. This culture of collaboration encourages open communication, shared decision-making, and a sense of community within the educational setting. Teachers exchange ideas, best practices, and resources, contributing to a supportive and enriching work environment. Principals

play a decisive role in cultivating this culture by valuing the input of all staff, empowering teachers to take on leadership roles, and promoting a shared vision of excellence. Teachers are motivated to collaborate as it enables them to enhance their teaching methods. They can exchange their experiences, expertise, and abilities for impactful learning.

The study by Wibowo and Hasanah indicates that the principal's role in increasing teacher motivation is to optimize supportive elements while reducing obstacles to motivate teachers by applying strategies such as awarding, encouragement, direction, appreciation, training, innovation, creativity, and fulfillment of facilities and infrastructure.

In particular, in schools, it has been observed that teachers reveal varying performance levels, with some teachers excelling more than others. This difference in performance can attributed to the quality of the professional environment within the school where they are employed. Studies such as McChesney and Cross (2023) have shown that elements of the professional environment, such as leadership engagement, supportive relationships, and shared vision among staff, positively impact individual teachers' growth and their students' academic achievements. Consequently, there has been a debate among scholars regarding the importance of fostering a supportive school community that can facilitate changes aimed at enhancing teacher effectiveness. By investing in creating a conducive and stimulating professional atmosphere within schools, it is believed that teachers are more likely to thrive in their roles, and students benefit from improved learning outcomes.

It includes many factors stimulating teaching and learning outcomes, spreading beyond individual classroom teachers' control. These elements include the institution's administrative structure, organizational policies, curriculum design, and overall school culture, all essential for ensuring a school community's effective functioning and success. Kraft and Papay (2014) acknowledge that

these school-level elements play a critical role, and teachers and administrators can create an environment that supports student growth, fosters academic excellence, and promotes a positive and engaging learning experience for all stakeholders involved in the educational journey. Understanding and optimizing the school's professional environment is fundamental to the holistic development and well-being of students, teachers, and the broader school community.

Various research studies have delved into the intricate relationship between the school environment and the prevalence of teacher dissatisfaction, specifically within the realm of public school teachers across the United States. Moore (2012) used the 2007-2008 School and Staffing Survey to examine the association between the school environment and teacher dissatisfaction. The results consistently emphasize the importance of cultivating a positive and nurturing school environment as a keystone for teacher satisfaction and overall well-being. In exploring the nuanced dynamics, many significant factors emerge as fundamental pillars in shaping such an environment. Supportive and active supervision acknowledges and creates an atmosphere that enhances effective teaching practices and ideal learning experiences.

Teachers operating in favorable work environments tend to express higher job satisfaction and lower turnover intentions than those in less favorable conditions, even when accounting for student demographics and other school and teacher attributes. Notably, the variations in the work context play a substantial role in the relationship between student demographics and teacher turnover. These findings are consistent with an expanding body of literature investigating the organizational characteristics of the schools where teachers are employed.

Johnson et al. (2012) suggest that working conditions significantly impact their professional satisfaction, which causes teachers to stay in school. It also found that Teachers who

communicated a more significant presence of favorable working conditions, including supportive guidance and a favorable school atmosphere, exhibited increased satisfaction in their profession.

Also, Boyd et al. (2011) strongly support the notion that the high turnover rates of teachers in schools with large numbers of low-income and minority students were predominantly influenced by teachers seeking to leave the dysfunctional and unsupportive work environments commonly found in schools serving these student populations. Transferring a teacher from a school environment that thrives on a robust and constructive school culture to one that lacks such a supportive atmosphere might lead to a decline in her effectiveness, not because her instructional prowess diminishes.

2.1.2 Principal's Role

The study by Nzambi (2012) offers valuable insights into the principal's role in instructional supervision, as perceived by teachers in secondary schools located in Kitui District. It examines principals' strategies to enhance instructional supervision, such as implementing measures to eliminate cheating during examinations and promoting new ideas and professional growth among teachers. The study sheds light on the challenges principals face in providing adequate instructional supervision, including failing to cover the syllabus adequately. Research consistently shows a strong link between effective principals and positive student outcomes. A crucial discovery has been that successful principals can significantly impact students' educational experience. One key finding Robinson & Gray (2019) highlight is that durable leadership positively affects student achievement, engagement, and overall well-being.

Lydiah and Nasongo (2009) show that a school's efficacy mainly depends on the principal, who is responsible for implementing quality enhancement strategies, promoting teamwork among staff

members, and the presence of a proficient faculty, which were identified as pivotal factors contributing to academic success.

School improvement was examined by Bryck (2010) in Chicago, who identified five essential supports for improving elementary schools. He argued that improving schools requires a coherent and coordinated effort across these five areas: effective leadership, Professional capacity, Parent-community ties, student-centered learning climate, and Instructional guidance. Effective principals are characterized by the capacity to set ambitious yet achievable goals, foster a culture of continuous improvement and innovation, and establish efficient structures and processes to ensure that all stakeholders are engaged and supported in pursuing educational excellence. Furthermore, impactful school leaders must demonstrate strong communication skills to clearly convey their vision and expectations, listen attentively to feedback and concerns, and facilitate open dialogue and collaboration among all school community members. Conclusion is schools that successfully improve their performance by working across all five of these areas in a coordinated and strategic way. Schools that neglect one or more of these supports will likely struggle with improving student outcomes.

The direct and indirect impact of principals on teachers' and students' learning outcomes were highlighted by Firdaus et al. (2022). It was observed that principals who observe, discuss, and have knowledge of students learning progress can push teachers toward betterment. Also, effective school principals provide guidance and assistance to improve good learning practices. An impactful Principal leadership involves developing and communicating a coherent vision and mission for schools, allocating resources, and providing necessary support to teachers to ensure the delivery of exceptional learning opportunities for students. The principal evaluates teaching effectiveness, pinpointing areas of strength and weakness among teachers and organizing or

helping to organize professional development initiatives to enhance teachers' abilities in delivering instruction and facilitating student learning.

2.1.3 Teachers Collaboration

Teacher collaboration is central to modern educational practices, highlighting the worth of teamwork and assistance among teachers. Previous studies highlight the result that there is a noticeable influence of the quality of the principal's behavior on teacher's performance, with an estimated rate of 0.89, -t = 3.23>1.96, and also a significant influence on student achievement, estimated rate of 0.77, -t =2.86 >1.96, Also teachers' performance has a considerable impact on student's achievement estimated rate of 0.92 -t= 4.45> 1.96 Pardosi and Utari (2021) concluded teacher in supportive environment teach and engage students more confidently and provide a positive learning environment. Teacher performance is greatly influenced by the quality of the principal's leadership behaviors. It has been observed that there is a significant positive correlation between the two. Moreover, it is evident that as the principal's leadership behaviors improve, so does the teacher's performance. Effective leadership behaviors of the principal involve cultivating positive relationships with followers, establishing unambiguous task frameworks, and productively employing positional power.

Teamwork among teachers has a notable impact on students' academic achievements. It highlights the significance of teachers collaborating to boost student outcomes and integrate inclusive practices. Through ongoing collaboration, teachers analyze student progress data to pinpoint areas that need enhancement and adjust their teaching strategies accordingly. This collaborative approach empowers teachers to brainstorm alternative solutions to address student needs and collaborate to enrich the overall learning experience. Additionally, Hoppey and McLeskey (2013) findings by participating in cooperative planning and discussions, teachers can leverage their

expertise, exchange ideas, and support one another in implementing successful teaching techniques.

The positive impact on student learning becomes apparent when teachers collaborate and participate in professional development activities to enhance their teaching methods. Teachers can establish an environment that fosters inclusivity and productivity in learning by working together, exchanging ideas and resources, and providing each other with mutual assistance. This collaborative effort accommodates all students' diverse academic needs and cultivates a setting that promotes growth and success for everyone involved. As a result, the educational outcomes are greatly improved, demonstrating the significant influence that teacher cooperation and development activities can have on optimizing students' overall learning experience and academic achievement. Collaborative frameworks, such as chances for peer cooperation, are crucial in enhancing teacher professional growth and overall job contentment Richter et al. (2022). The study of Saka (2021) highlights the impact of teachers' group dynamics, whether collaborative or isolated, on students' achievement in mathematics. Multiple classification analyses showed that students whose teachers participated in collaborative activities demonstrated higher levels of academic success than those under teachers who worked in isolation. It concluded that teacher collaboration improved students' performance.

Furthermore, effective collaboration among teachers, which includes addressing students' learning needs during collaborative activities, has been associated with enhanced student achievement in mathematics and reading. Additionally, high-quality collaboration among teachers has been linked to improved job performance among teachers.

By merging viewpoints, proficiency, and experiences, teachers create an environment that encourages exchanging ideas, exploring innovative, valuable methods, and improving student

learning outcomes. Teachers can collectively identify areas for improvement and generate solutions by engaging in collaborative problem-solving sessions.

2.2 Teaching Practice

Teaching is a social profession, and a good teacher's relationships with those who assist students in the classroom, administrators, and workmates significantly impact their contentment and success. It's an essential factor that strongly affects students' behavior. Various studies discuss teaching practices and their effect on students' results, especially in math and language. In their research, Blazar and Kraft (2017) divide teaching practice into general and content-specific teaching practices. Also, some teaching practices such as emotional support from teachers, including their empathy towards students, consideration of students' viewpoints, and establishment of a conducive classroom environment, have been found to correlate with favorable results such as enhanced self-efficacy in Mathematics and overall happiness in the classroom. Teaching errors, the teaching way of mathematical concepts, were found to have adverse effects on students' self-efficacy in mathematics, overall happiness in the classroom, and academic performance in math.

Ukobizaba et al. (2021) highlight that engaging in continuous professional development programs can significantly enhance the teaching practices of mathematics teachers in primary and secondary schools, leading to an overall improvement in mathematics teaching and learning outcomes.

Setting clear and achievable instructional goals is vital to effective teaching practice. Additionally, teachers must excel in managing the classroom environment to ensure a conducive setting for learning and student engagement, as argued by Al Haj et al. (2023). Moreover, strong motivational skills to inspire and encourage students are essential for fostering a positive learning atmosphere. Practical communication abilities are paramount in conveying information clearly and building

strong relationships with students. Lastly, proficiency in utilizing technology is indispensable in modern education to enhance teaching methods and facilitate interactive learning experiences for students across various platforms.

Effective teachers exhibit three key attributes: professional, personality, and social characteristics. These attributes play a significant role in enhancing the overall quality of the teaching and learning experience. Effective teachers demonstrate professional characteristics through possessing essential professional skills, knowledge, and experience relevant to the field of education. It also encompasses pedagogical content knowledge, denoting a teacher's grasp of the subject matter being taught and the ability to adapt and tailor the material to suit the needs of their students (Shikalepo).

2.3 Theoretical Framework

This study examines the professional environments of public and private primary schools, focusing on the complex relationship between the professional school environment, teaching techniques, and their combined impact on students' academic results.

A set of interrelated concepts was constructed To understand the school's professional environment, such as the principal's role, teacher's collaboration, and teaching practice on student learning outcomes. The concept of a school professional environment is mentioned by DuFour and Eaker (2009) in the framework of professional learning communities. The PLC framework asserts that a constructive school professional environment, defined by cooperation, shared goals, and reflective practices among teachers, leads to improved teaching quality. Schools prioritizing professional development, open communication, and collaboration encourage ongoing

improvement in teaching techniques, improving instructional methodologies and student engagement.

The subvariable of school professional environment, the Principal's role concept, is mentioned by Nedelcu (2013) as school leadership refers to principal actions and duties in directing and managing a school to achieve educational objectives. It includes a variety of responsibilities and tasks that shape the school's culture, teaching, and learning processes. Effective leadership is crucial for developing a healthy school culture and enhancing student results. Therefore, it is a significant part of the professional environment in schools.

The communities and practice framework given by Wenger (1999) is relevant to understanding the concept of teacher collaboration, defined as a process in which teachers collaborate within a community of practice to improve their teaching abilities and student results. This collaboration is crucial for creating a learning environment.

Kraft and Papay (2014) Acknowledge the role of a school's professional environment in developing teacher effectiveness and professional options. The theory highlights a solid way to understand how many school environment characteristics, such as leadership, cooperation, and order, influence teacher effectiveness and student results. This approach is consistent with the six subcategories: order and discipline, peer cooperation, and successful leadership. The 24-item survey divided professional environment into six sub-headings:

- Order and discipline: Principals support teachers in maintaining an orderly classroom and enforcing regulations regularly.
- Peer collaboration refers to instructors' ability to improve teaching techniques and collaboratively address challenges.

- Effective principal leadership involves supporting teachers and addressing how they feel regarding school challenges.
- Professional development: How well the school allocates time and resources to improve instructors' instructional skills.
- School culture: Refers to mutual trust, respect, openness, and dedication to student performance.
- Teacher assessment provides valuable feedback to enhance instruction.

Creemers and Kyriakides (2006) highlight that quality and quantity of teaching have several dimensions that contribute to effective educational practice. Included clarity of instruction, feedback, and lesson preparation in developing an effective learning environment. The concept of quantity of teaching refers to measurable aspects of teaching practices, such as frequency of instruction, time allocation, and engagement of students, that contribute to teaching effectiveness.

Further, the Dynamic Model by Kyriakides and Creemers (2012) focuses on school policies and actions that address teaching practice and the learning environment. It highlights the leading indicators of teaching practice and learning environment. It further emphasizes how teaching methods and the learning environment influence student accomplishment. This paradigm focuses on particular indicators for teaching quality, learning opportunities, and the importance of cooperation and teacher-parent interactions.

Teaching practice with direct measures include:

- Teaching quality
- Learning possibilities.

- The quantity of teaching

The learning environment, for which direct metrics are:

- Collaboration among teachers
- Parent-teacher relationships
- Student behavior outside of class
- Resources

The framework of this study includes value-based and dynamic models of education effectiveness as the core theoretical framework. By examining theories of educational leadership, school environment, and collaboration to provide a holistic understanding of the elements that influence teaching methods and student success, the study aims to gain deeper insight. The study highlights the importance of a professional school environment and which type of school performs well in district Badin.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter includes the research methodology, research design, empirical model, data collection instruments, and process and data analysis techniques used in this study. A mixed-method approach is used to study the relationship between the school's professional environment and teaching practices and their impact on student learning outcomes in public and private primary schools. This approach allowed the researcher to compare and define their significant differences or similarities. The quantitative approach gave statistical evidence, while the qualitative approach gave a better understanding of variables. It also gained insight into the research questions and objectives by conducting qualitative and quantitative analyses.

3.1 Research Design

The research design implemented in this study is a mixed-method cross-sectional research design. It includes both quantitative and qualitative research approaches. This approach gives a complete picture of the current situation within the school system. Battista and Torre (2023), offering valuable insights into the differences and similarities between the two sectors, enabled a thorough exploration of the research topic and facilitated a deeper exploration of the relationships between variables. SPSS software is used for analyzing quantitative and thematic analysis for qualitative data.

f3.2 Sampling Methodology

3.2.1 Targeted Population

According to Sindh statistics, for 2022, the total number of primary schools in Badin is 2936, out of which 166 are private primary and elementary schools registered, as no separate private

primary school data is present. The total number of enrolled students in primary school is 186,111, of which 25053 are in private primary elementary schools. From them, 16,507 students are enrolled in class 5. As for the past two years, closed school data is unavailable, but according to Sindh's profile, in 2019, 600 schools were closed.

3.2.2 Sampling Method

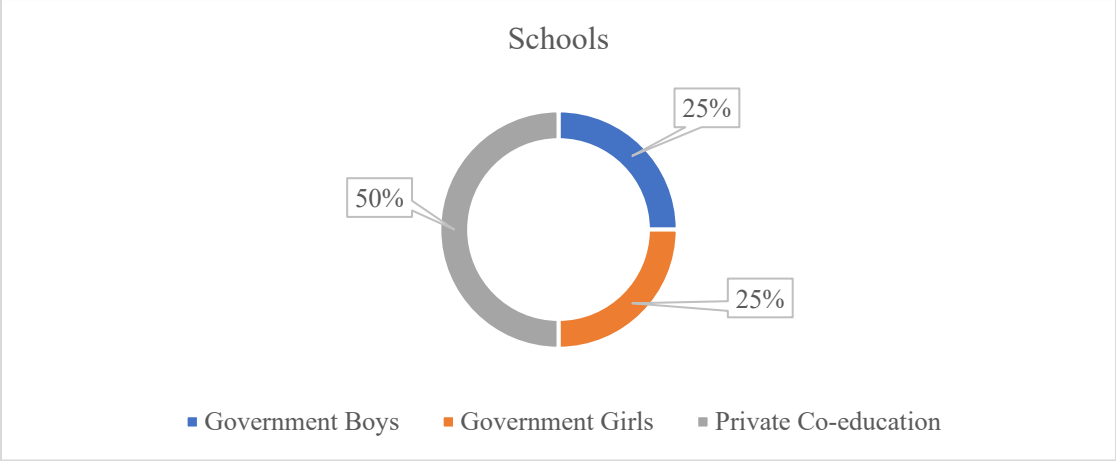
For this study, at the first stage, District Badin is selected using a multi-stage sampling approach. In this approach, sampling is done in stages, with smaller units chosen at each stage within units selected at the prior stage. It is also used to reduce data collection costs, as specified by Shimizu (2014). The reason for choosing Badin is the low level of learning in the district's primary schools and the overall low quality of schools (ASER 2021). After district selection in the 2nd stage, four tehsils out of 5 are selected as the total population by purposive sampling. All tehsils have the same demographics, socioeconomics, and education context. For the study concern, private and public schools and their principals are selected through convenience sampling techniques used in 3rd stage of sampling. This non-probability sampling method involves selecting participants based on their ease of access and willingness to participate in the study. The key idea behind convenience sampling is to have readily available individuals willing to contribute to the research process. In the 4th stage, the fifth class was selected, and students were selected using simple random sampling techniques to ensure fair student participation. Furthermore, in the 5th stage, stratified sampling is used to select specific subject teachers of English, Urdu, Sindhi, and Mathematics for respondent students. Shi et al. (2020) used stratified sampling in an education context.

3.2.3 Sample Size

Table 1 ***3.1 Tabular illustration of sample size***

Type of School	Principals	5th Class Students	Teachers
Public	10	100	12
Private	10	100	33
Total	20	200	45

The total sample size of 20 schools was selected: 10 government, ten private, 200 students in the fifth class, and 45 teachers of participant students. In the context of educational research, previous studies such as (von Oertzen et al., 2010; Zimmer et al., 2023) utilized 17 – 20 sample sizes of schools. Figure 3.1 shows the distribution of schools by education type from selected schools: 10 were co-education, 5 were girls' schools, and 5 were boy's schools.



3.1 Figure 1 Distribution of School by Education Type

3.2.4 Limitation

While the study provides insights into professional school environments and teaching practices that affect students' learning outcomes in private and public primary schools, it is essential to acknowledge certain limitations. The key areas of limitation are the selection and size of the

sample, particularly time, cost, and permission constraints. Data were collected from 4 out of five tehsils of the district due to cost and time constraints, as the 5th tehsil is difficult to approach.

3.3 Unit of Data Collection

There are three Units of data collection for this study which are:

- UDCs 1: Primary school principals for interviews.
- UDCs 2: Fifth Class students for students' assessment test
- UDCs 3: English, Math, Urdu, and Sindhi teachers who taught these subjects to selective students

Additionally, for a clear understanding of the school's situation, interviews were conducted by TEOs and DEOs. I chose a single class (class 5) because 5th grade is typically the last year of primary education and marks the transition to middle school. English, Math, Urdu, and Sindhi teachers who taught these subjects to selective students. And principals of public and private primary schools.

3.4 Locale

This study was conducted in public and private primary schools in District Badin. It is located in the southern province of Sindh, Pakistan. It is situated in the eastern part of the province. According to the 2023 census, its population is 1,947,081, the literacy rate is 36.65%, and 186,111 students are enrolled in primary schools.

3.5 Data Collection

For quantitative data collection, tests were given randomly to 200 students of the 5th class to assess their performance in reading English, their mother language, and basic mathematical skills. Furthermore, data collection from teachers of selected students questionnaires is distributed to 45

teachers to gather insights and perspectives on various aspects of the study. For qualitative data collection, schools were first contacted, and time was taken from the principals of the schools for permission and cooperation to collect the data. A total of 20 schools were selected for data collection. Interviews were collected from 20 principals. The interview method is the prime technique for gathering valuable data for this study. Through interviews, researchers have the unique opportunity to directly pose questions, guide discussions, and interact in dialogues with individuals. Interviews were also conducted with 3 TEOs and 1 DEO.

The research aims to comprehensively understand the quality of schooling by utilizing interviews and questionnaires, encompassing viewpoints from critical stakeholders and valuable feedback from teachers and students alike. This combined data collection approach gives deep insights that can inform and shape future educational initiatives and practices.

3.6 Instruments

Separate data collection instruments were used for all UDCs. The validity and reliability of all three instruments were checked by pilot testing. Cronbach's alpha is used to assess the reliability and validity of the data collection instrument. Basu (2021) states that a 0.7 or higher value of Cronbach's alpha is considered good. All instruments were valid and reliable, with a Cronbach alpha of 0.775. The value indicates that the scale the themes provided had a reasonable internal consistency.

3.6.1 Teacher Questionnaire

The questionnaire contained three parts. The first part is about the demographic information of teachers. It includes questions regarding qualifications, subjects they teach, teaching experience, salary, and language they use in class. Type of school (private and public), Type of education

(girls, boys, co-education), and Medium of schools (English, Urdu, and Sindhi). The second one focused on the professional school environment, and questions were included about the principal's role and teachers' collaboration. The third part is about the quality and quantity of teaching. It consists of a closed-ended question. All variables were measured using a 5-point Likert scale: 1 for always, 2 for often, 3 for sometimes, 4 for rarely, and 5 for never. All research instruments utilized in this study are provided in the appendix section of the thesis for refrence.

3.6.2 Students Assessment Test

Students' test scores were collected through the Students Assessment test for four subjects: English, Urdu, Sindhi, and Math. The assessment test format is based on the Annual Status Education Report Pakistan 2022. Tests have five portions, beginning with students' demographic information such as name, father's name, parents' qualifications, and how many years they study in that school. Have they attended any tuition? The same pattern of questions is asked for English, Urdu, and Sindhi, starting from alphabetic letters, words, sentences, and paragraphs. All questions were taken from 5th-class Sindh textbook boards. Math's portion has number recognition, addition, subtraction, and double then triple multiplication.

3.6.3 Interview Guide for Principals

An interview guide is a written form of an open-ended questionnaire. Six questions were included in the interview guide. Questions were divided into four sections: first, basic demographic questions; second, for teaching practice and principal's effectiveness; and third, about private and public-school education conditions, which one is better and what their problems are.

3.7 Variables Explanation

3.7.1 School Professional Environment

Johnson et al. (2012) explain that conducive social conditions, proficient leadership, and teacher-cooperative relationships characterize the school's professional environment. (Kraft & Papay, 2014) added six categories of professional school environments already discussed in a theoretical framework. Two categories, principal and teachers' collaboration, were considered sub-variables of the professional school environment. Students and Teachers flourish when they feel supported by their coworkers and school administrators or principal. This support promotes a feeling of belonging and motivates teachers to engage in professional development, which ultimately benefits student success.

3.7.2 Principal

In this study, three aspects were taken as indicators to evaluate the principal's role: principal involvement, support, and motivation. Commonly, principals, known as school leadership, hold a fundamental position in setting a favorable school climate and improving the academic accomplishments of teachers and students. These skills include providing instructional leadership, effective interactive communication with teachers and students, and conflict resolution.

3.7.3 Teacher Collaboration

Teachers' Collaboration, defined by Hargreaves (2021) as a collaboration among teachers, supports sharing ideas and resources and increases their self-efficacy. Teacher collaboration at the school level can be seen in participating in planning and discussions. Teachers can leverage their expertise, exchange ideas, and support one another in implementing successful teaching

techniques. Which enhances student's learning capacity. The frequency of teacher meetings and teamwork was used to measure teacher collaboration.

Teachers' meetings promote the sharing of innovative ideas and strategies. Teachers can cultivate collegial trust by engaging in discussions and collaborative efforts during meetings, which is fundamental for establishing strong professional relationships and providing mutual support. Weinberg (2019)

3.7.4 Teaching Practice

Teaching Practice includes a detailed method for classroom activities and strategies teachers implement. It combines teaching, communication, and evaluation techniques to ensure a comprehensive and fulfilling academic journey. The previous study by Kyriakides and Creemers (2012) distinguishes between quality and quantity of teaching. It emphasizes that while quality aspects of teaching are the way of teaching, how teachers connect previous topics to new topics, and what strategies teachers use, they considerably influence teaching practice. The quantity of teaching includes the duration of classroom instruction dedicated to learning the subject matter, specified as the number of hours per day and the number of days per year. This contrast highlights the significance of quality and quantity in assessing educational performance. Recognizing the relationship between quality and quantity within the school is imperative. Combining these two essential components establishes a dynamic and inspiring atmosphere, nurturing an environment favorable to academic success. This educational approach prioritizes student-centered learning and meaningful educational experiences.

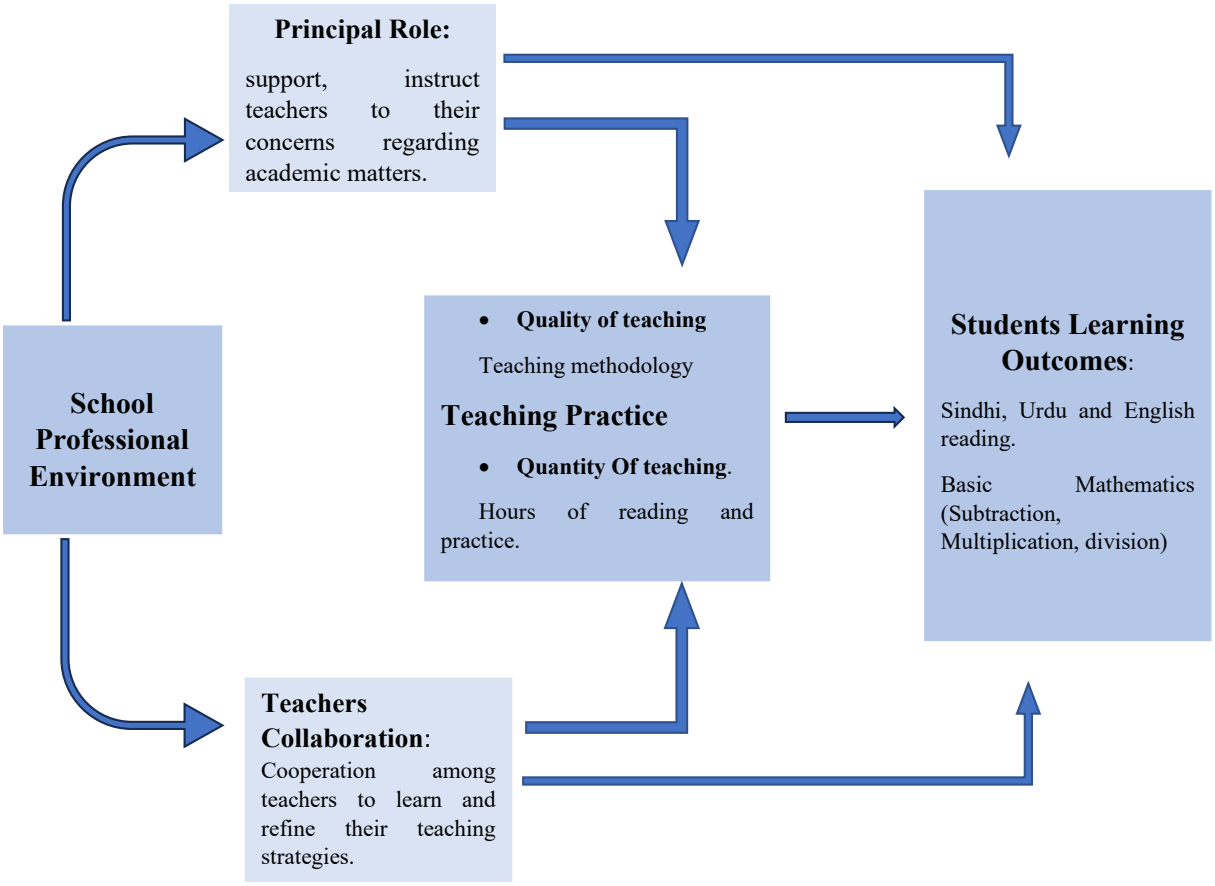
3.7.5 Student Learning Outcomes

Student learning outcomes can describe what students are expected to know, understand, or be able to do by the end of a particular learning experience, such as a course, lesson, or educational

program. They articulate the intended learning outcomes and serve as a guide for teachers to design instruction, assess student progress, and evaluate the effectiveness of the learning experience.

3.8 Conceptual Framework

This comprehensive study explores the complicated relationship between the professional school environment, teaching practices, and their combined impact on students' academic outcomes. This framework was founded on two variables from the Dynamic model of Kyriakides and Creemers (2012) and two variables from the value-added model of Kraft and Papay (2014), and it examines the pivotal role of school principals and the collaborative relationships among peers as crucial indicators of the professional school environment. Furthermore, I analyze the quality and quantity of teachers' teaching methods to enhance teaching practices. In assessing student learning outcomes, measure proficiency in various subjects, including English, Urdu/Sindhi, and Mathematics. I explored how a principal's leadership affects the performance of staff members and students. Remarkable aspects of this examination include exploring how principals impact students' reading ability and numeracy skills and how they form the quality and quantity of schooling teachers deliver. The quality of teaching, which incorporates the instructional approaches teachers adopt, is evaluated based on various factors such as assessment and teaching methodologies. Moreover, this thorough analysis aims to uncover the refined relations between principal leadership, teacher effectiveness, and student academic achievement, shedding light on the dynamics that support instructive environments and practices.



3.2 Figure 2 Conceptual Framework

Table 2 3.2 Table of Indicators

Variables	Indicators
Quality Of Teaching	Teaching Method *Do you use interactive teaching strategies (Flash Cards, Activity-Based learning) that engage students*?
	Technology-Based Teaching *How frequently do you use technology in your teaching? (Video, Audio, etc.)*
	Lesson Planning *Do you plan and prepare for your lessons?*
Quantity Of Teaching	Adequate Class Duration *To what extent do you believe the class duration is enough?*

	Student Practice Frequency H*ow frequently are students engaged in practice (Reading, Math problem solving)?*
Principal	Principals Involvement *Does the Principal know about the student's academic level?*
	Principal Support *Do you feel supported by your school principal (resource availability, initiatives)?*
	Principal Motivation *Does the principal motivate or guide the improvement of the teaching methodology?*
Teachers Collaboration	Team Work *Is there collaboration and teamwork between teachers in your school?*
	Teachers Meeting *Does your school arrange teachers meeting?*

3.9 Data Analysis

3.9.1 Quantitative Data Analysis

The first part is quantitative data analysis, which includes the quantitative research approach based on the survey to measure and provide statistical evidence of teachers' students' performance, the principal's role and teacher's collaboration, their effect on teaching practice and students' learning outcomes, and a comparative analysis of public and private schools. The quantitative approach further had two sections. At first, a closed-ended questionnaire survey was filled out by the math, English, Urdu, and Sindhi teachers of selected students. Questions are made and coded according to indicators of variables, and the Likert scale is used for gathering responses. Each Indicator has three to four questions. Quantitative data is analyzed through descriptive analysis and regression analysis using SPSS. For analysis, indexes are composed for each variable. In the second part, assessment tests are filled by students of fifth class students for analysis. Descriptive analysis is frequently used in comparison studies of private and public schools to describe and evaluate data, offering insights into each school type's patterns, trends, and features.

Alabi and Bukola (2023) give evidence that key factors in education, such as student performance, instructor abilities, and school resources, are measured using central tendency measures (mean, median, and mode). The descriptive analysis enables researchers to compare the usual values of private and public schools. Many studies use multiple regression analysis to explore the relationship among students, teachers, and the school environment Smith et al. (2020); Jackson (1986). It involved gathering data by questionnaires coding questions according to research questions and variables.

3.9.2 Empirical Model

A multiple regression analysis model is chosen to analyze the relationship between dependent and independent variables. It is constructed based on Johnson et al. (2012). It also describes the relationship between the school's professional environment and teaching practice and their impact on students' learning outcomes. Also, it compares school professional environment indicators such as the principal's role and teachers' collaboration in private and public primary schools.

A model is built using the following multiple regression equation:

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + ... + \beta kXk + \beta D + \varepsilon$$

Y= dependent variable, X1, X2, and X = Independent variables. β0= Intercept. E= Error term that cannot be explained by the independent variables β1, β2= regression coefficients for the independent variables, D= Dummy variable. Statistical software SPSS estimates the regression coefficients and generates other relevant statistics. It involves collecting and preparing data, choosing a regression model, estimating coefficients, assessing fit, making predictions, and drawing conclusions.

Empirical model for objectives

The first objective is to compare the school professional environment of public and private primary schools**.**

$$TP = \beta 0 + \beta 1*PR + \beta 2*TC + \beta 3*\text{School type} + \beta 4*PR*\text{School Type} + \beta 5TC*\text{School type} + \varepsilon$$

The second objective is to study the relationship between the school's professional environment and teaching practice.

$$TP = \beta 0 + \beta 1*PR + \beta 2*TC + \varepsilon$$

For a thorough study of the relationship between school professional environment and teaching practice, another model is run with factors that can affect teaching practice, such as gender, year of Education, and teaching experience.

$$TP = \beta0 + \beta1*PR + \beta2*TC + \beta3*Gender + \beta4*Year\ of\ education + \beta3*Experience\ \varepsilon$$

Here, gender, year of education, and teaching experience are dummy variables with male, intermediate, and 0-5 years of teaching experience as a reference category.

The third objective is to study the effect of a professional environment and teaching practice on students' learning outcomes.

$$SLOs = \beta0 + \beta1*PR + \beta2*TC + \varepsilon$$

$$SLOs = \beta0 + \beta1*QOT + \beta2*QNT + \varepsilon$$

School professional environment indicators principals (PR) and Teacher collaboration (TC), teaching practice (PC), and Student learning outcomes (SLOs). QOT is the teaching quality, QNT is the quantity of teaching, D is the dummy variable for school type (i.e., 1 for private schools and 0 for public schools), and ε is the error term. PR*School Type, TC*School Type, QOT*School Type, and QNT*School Type are the interaction terms. The interaction effect of school type is studied in the school's professional environment and teaching practices on students' learning outcomes. Students' demographic characteristics, such as race, age, gender, and teachers' qualifications, will be taken as control variables.

3.9.3 Qualitative Data Analysis

The second part of data analysis, the qualitative study, is based on interviews, which supported the quantitative results and provided a comprehensive understanding of the topic. Interviews are conducted with principals of both types of schools to study and compare the quality of the school

environment and teaching practices. Structured interviews are conducted by experts such as the district education officer and Taluka education officer better to understand the quality of private and government education.

Qualitative data analysis is conducted through thematic and descriptive analysis to thoroughly study the school's professional environment and the teaching practices of private and public primary schools. It gives readers a complete understanding and valuable insights into the data, offering a unique perspective. Firstly, descriptive themes are identified, and then coding or categorizing of identified themes is done to sort and structure the information effectively. Lastly, by interpreting, valuable meanings can be extracted from the data. In essence, the thematic analysis goes beyond surface-level observations, exploring the details of the data to show its significance and relevance within the research context.

CHAPTER 4
RESULT AND DISCUSSION

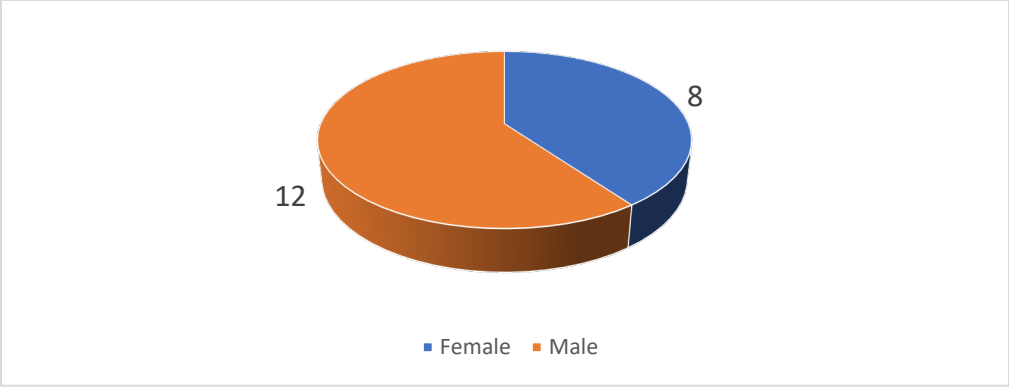
This chapter presents the findings of the data analysis gathered through the questionnaire survey, assessment test, and interviews. Further, this chapter is subdivided into respondent profiles, descriptive analysis, and quantitative and qualitative data analyses. Firstly, a detailed demographic of respondents is discussed, followed by a descriptive analysis of private and government schools; in the last part, the quantitative analysis findings are presented, followed by the qualitative findings.

4.1 Respondents Profile

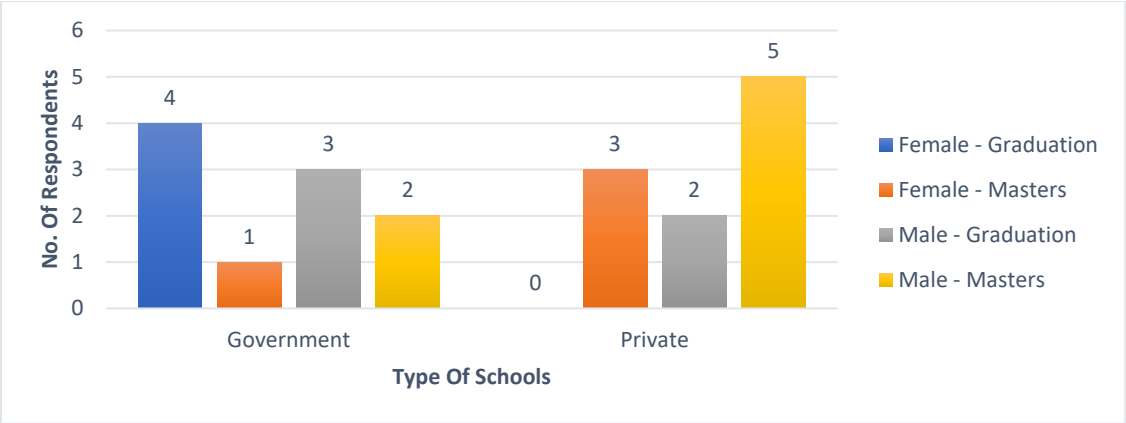
Understanding the demographic characteristics of the research participants is vital for correctly analyzing the findings and verifying the validity of the results. This section provides a complete profile of the respondents, who include principals, Teachers, and students, highlighting significant demographic parameters such as age, gender, and education level.

The demographic variables collected for each group include age, gender, educational level, years of experience, and socioeconomic status. These characteristics provide a complete overview of the participants' profiles and explain the study's findings. Interviews, questionnaires, and assessment tests were used to collect demographic data.

Principals' demographics



4.1 Figure 3 Gender of Principal

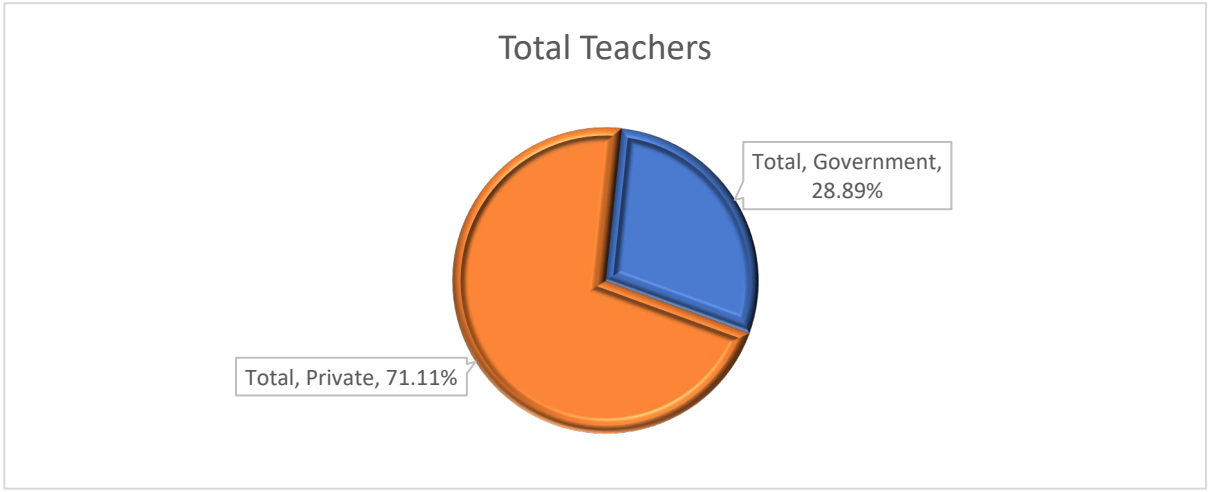


4.2 Figure 4 Qualification of Principal by School Type and Gender

The pie chart 4.1 shows that 12 male and eight female principals are the participants of this study. The other figure, 4.2, shows a trend in which private schools have more qualified principals (Master's degrees) than government schools, particularly male principals. Furthermore, there is a considerable gender gap within the same type of school, with females in government schools more likely to have merely graduation qualifications, while male principals in private schools are typically master's degree holders.

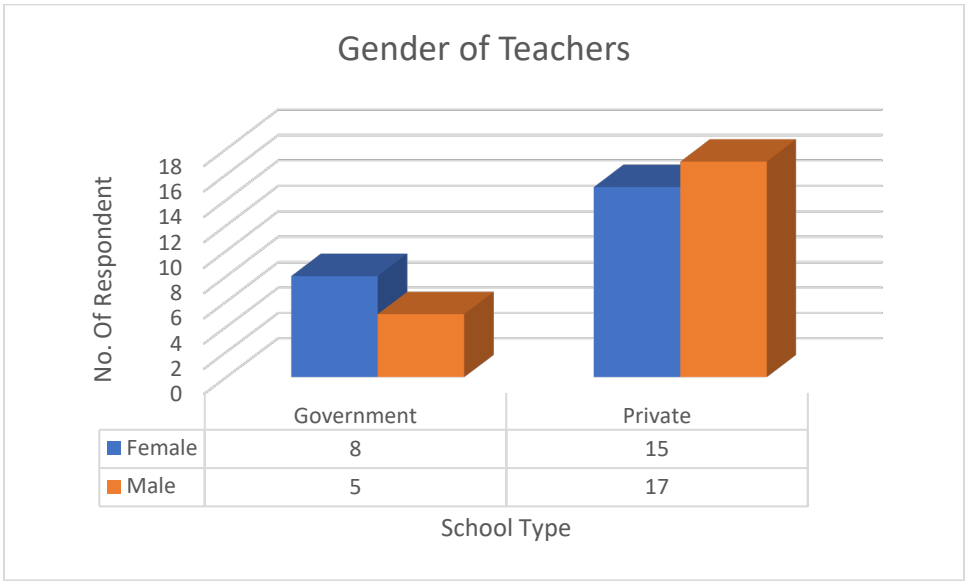
Teachers Demographics

The Figure below illustrates the profile of teachers who participated in this study.



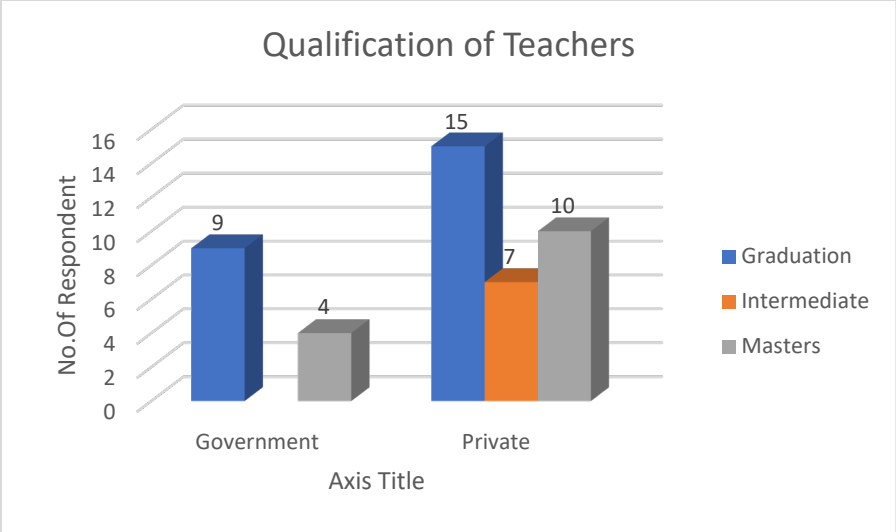
4.3 Figure 5. % of Teachers by School Type

In a Government primary school, a single teacher teaches all subjects from kindergarten till fifth class. For this study, 29% of participants are government teachers, and 71% are private teachers because single teachers teach only one subject per class in private schools.



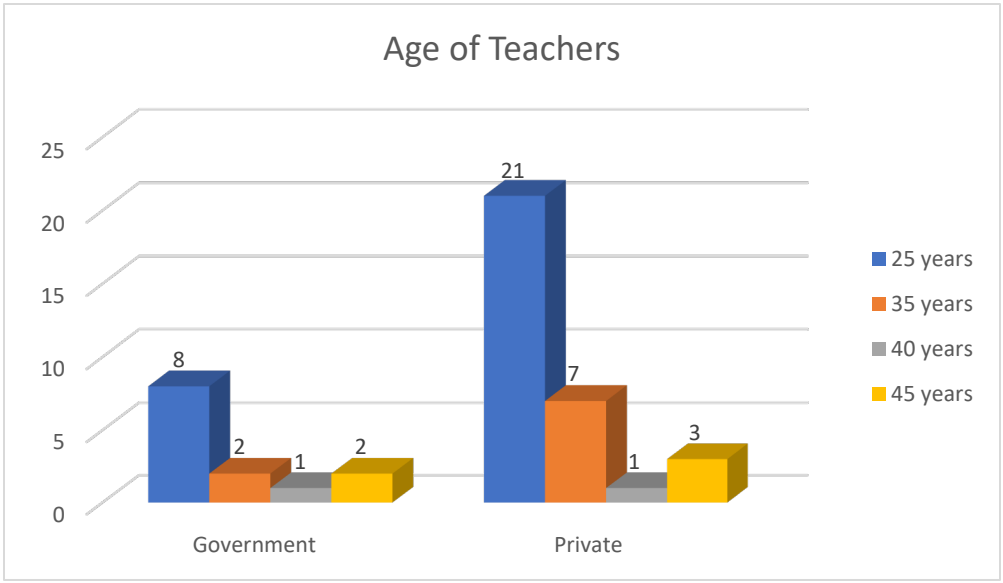
4.4 Figure 6 Gender of Teachers

The bar charts reveal that most teachers from private schools are men, while 46.8% are women. Although from government school females participates are in the majority while 38.4 are male.



4.5 Figure 7 Qualification of Teachers

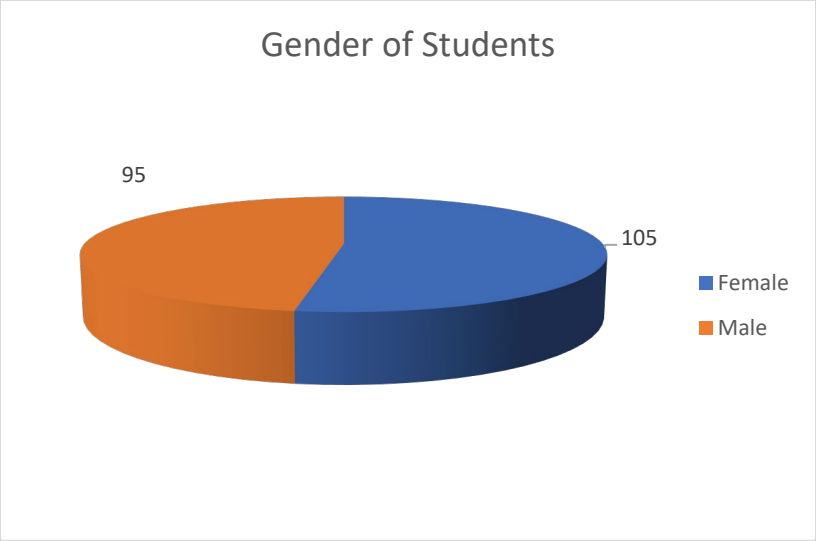
The above Figure (4.5) shows the education level of the respondents. In private schools, even intermediate pass-out teachers teach, while in government schools, almost all teachers hold a bachelor's in education degree along with their graduation and master's degrees.



4.6 Figure 8 Age of Teachers

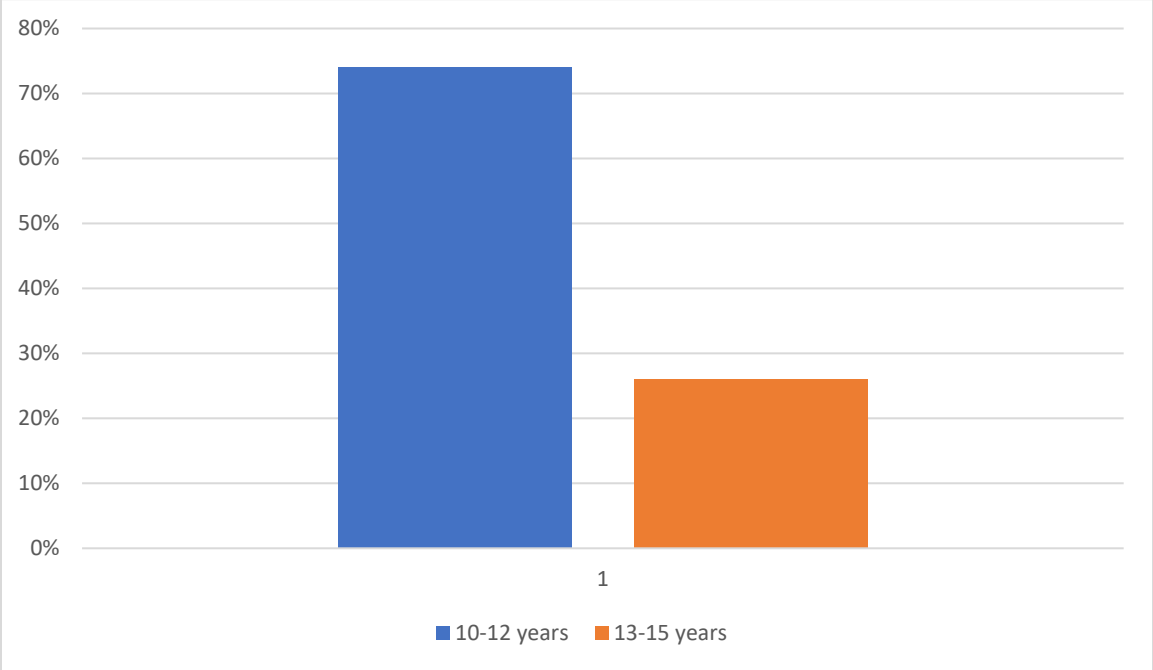
The majority of responders are between the ages of 25 and 35.

Students Demographics

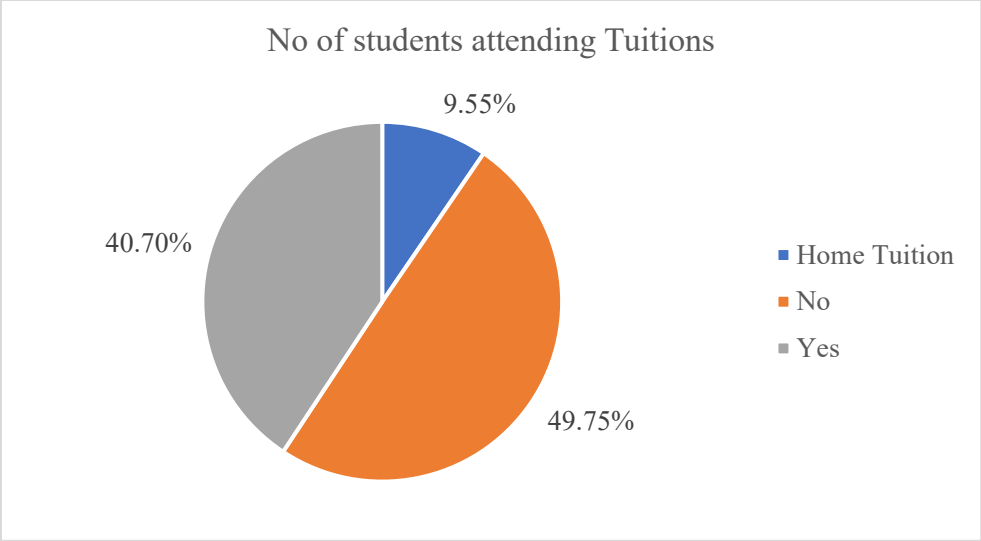


4.7 Figure 9 Gender of Students

The above figures 4.7 show that 105 are girls and 95 are boys. Figure 4.8 below shows that most students are 10-12 years old. Figure 4.9 shows that 50% of students are those who never attend tuition or do not get home tuition.



4.8 Figure 10 Age of Students



4.9 Figure 11 No of Students Attending Tuitions

4.2 Descriptive Statistics

Descriptive statistics are used to demonstrate the essential aspects of data and simplify it. Data from both sector schools are evaluated using descriptive analysis to determine mean, standard deviation, and other relevant information. The findings are presented in the form of tables. The data on the student's test scores is entered into SPSS to calculate the mean and standard deviation.

Table 3 4.1 Difference in principal's role between Government and Private Schools

Difference in Principal's role between Government and Private Schools

Type of School	Mean	N	Std. Deviation
Government	2.9231	13	1.03775
Private	3.1250	32	1.11603
Total	3.0667	45	1.08619

The above table 3 compares the principal's role of both sector schools, and results demonstrate that Private schools had a higher mean score for the principal position (M = 3.13, SD = 1.12) than government schools (M = 2.92, SD = 1.04). It suggests that principals in private schools emphasize the principal's role more than in government schools.

Thus, principals at private schools see a more vital principal's role than government schools, indicating possibly better circumstances or perceptions of the principal's participation in private institutions.

Table 4 4.2 Difference in Teacher Collaboration between Government and Private Schools

Difference in Teacher's Collaboration between Government and Private schools

Type of School	Mean	N	Std. Deviation
Government	2.1538	13	.98710
Private	2.2969	32	.70550
Total	2.2556	45	.78785

Table 4 compares teacher collaboration in both sector schools, and results show the mean score for teacher collaboration is somewhat higher in private schools (M = 2.30, SD = 0.71) than in Government schools (M = 2.15, SD = 0.99). The overall mean score for teacher collaboration across all schools is 2.26 (standard deviation = 0.79). These findings indicate that teachers at private schools report slightly higher levels of collaboration than government institutions. However, the mean score differences are minor, showing that private schools may have a slight advantage in encouraging teacher collaboration, but the difference between the two types of schools is insignificant.

Table 5 4.3 Difference in Teaching Practice between Government and Private Schools

The difference in Teaching Practice between Government and Private schools

Type of School	Mean	N	Std. Deviation
Government	3.4615	13	1.19829
Private	4.4271	32	1.32317
Total	4.1481	45	1.34944

Table 5 compares the teaching practices of both types of schools. The mean score for teaching practice is higher in private schools (M = 4.43, SD = 1.32) than in public schools (M = 3.46, SD = 1.20).

These findings suggest that private schools have greater levels of teaching practice than government schools. Teachers in private schools perceive or engage in better teaching techniques than government school teachers, as evidenced by the higher mean score.

It can be concluded from descriptive statistics analysis that private schools have better professional school environments as both the principal's role and teacher collaboration have higher SD than government schools. As well as teachers of private schools teach well compared to the government.

4.2.1 Descriptive Analysis of student's test scores

Table 6 4.4 Difference in Students English Reading Scores between Government and Private Schools

Difference in Students English Reading scores between Government and private schools

School Type	Mean	N	Std. Deviation
Government	2.9100	100	.88871
Private	4.3200	100	.86316
Total	3.6150	200	1.12387

The mean and standard deviation of students' test scores are analyzed to compare students' learning outcomes in both types of schools. Table 6 shows students' mean English reading scores in government and private schools. The results showed that students from private schools (M = 4.32, SD = 0.86, N = 100) had higher mean scores than students from government schools. The average score for both school types is 3.62 (SD = 1.12, N = 200).

Table 7 4.5 Difference in Students Urdu Reading Scores between Government and Private Schools

The difference in Students' Urdu Reading scores between Government and Private schools

School Type	Mean	N	Std. Deviation

Government	3.6500	100	1.14040
Private	4.5300	100	.83430
Total	4.0900	200	1.08988

Table 7 compares the Urdu reading scores of students of both types of schools. The analysis of student's Urdu reading scores from government and private schools indicated significant variations. Students in private schools had a higher mean score (M = 4.53, SD = 0.83, N = 100) than those who attended government schools. The mean Urdu reading score in both school types is 4.09 (SD = 1.09, N = 200). These findings show that kids in private schools exceed those in public schools regarding Urdu reading.

Table 8 4.6 Difference in Students Sindhi Reading Scores between Government and Private Schools

Difference in Students Sindhi Reading scores between Government and private schools

School Type	Mean	N	Std. Deviation
Government	4.1900	100	1.17804
Private	4.5400	100	.83388
Total	4.3650	200	1.03301

Table 8 compares the Sindhi reading scores of students in government and private schools, which revealed a minor variation in performance. Students at private schools had a mean score of 4.54 (SD = 0.83, N = 100), whereas those in government schools had a mean score of 4.19 (SD = 1.18, N = 100). The aggregate mean score for all students is 4.37 (SD = 1.03; N = 200). These statistics show that private school students did slightly better in Sindhi reading than their government school.

Table 9 4.7 Difference in Students Basic Arithmetic Scores between Government and Private Schools

Difference in Student's Basic Arithmetic Score Between Government and Private school students.

School Type	Mean	N	Std. Deviation
Government	3.5000	100	1.91485

Private	5.0600	100	1.07139
Total	4.2800	200	1.73396

Table 9 compares the students' basic arithmetic scores between government and private schools and reveals a significant difference. Students from private schools had a higher mean score (M = 5.06, SD = 1.07, N = 100) than government school students (M = 3.50, SD = 1.91, N = 100). The overall mean score for all students is 4.28 (SD = 1.73, N = 200). These results suggest that private school students outperform government students in basic arithmetic skills.

4.3 Regression Analysis

4.3.1 Regression Analysis of the school professional environment of public and private primary schools

Multiple regression analyses examined the effects of school professional environment indicators, principal's role, and teachers' collaboration on teaching practice. For analyzing regression co-efficient output, the p-value for an independent variable is less than the significance threshold (e.g., 0.05), and the link between that variable and the dependent variable is considered statistically significant. The unstandardized coefficient (B) is the predicted change in the dependent variable for a one-unit increase in the independent variable, assuming all other variables remain constant. The standard error of the unstandardized coefficient quantifies the uncertainty associated with the coefficient and is used to calculate its statistical significance.

The coefficient of the first model is overall significant ($p < .05$). The principal's role (B = 0.395, p = 0.006) is an essential positive predictor, suggesting that an increase in the principal's role increases teaching practice by 0.395 units. The teacher collaboration B = -0.568 p =0.046) is a significant negative predictor, indicating that an increase in teacher collaboration is associated with a decrease in teaching practice by 0.568 units.

Additionally, private schools are a significant positive predictor, suggesting that teaching practices are better in private schools than in public schools.

The second model is also overall significant, and the principal's role remained (B = 0.518, p = .013) a significant positive predictor of teaching practice. Teachers Collaboration (B = -0.552, p = .041) remained a significant negative predictor.

The interaction term for the principal's role and private school (Dummy variable) (B = -0.244, p = .413) is insignificant, indicating no significant moderation effect of school type on the relationship between the principal's role and teaching practice. Similarly, the interaction term for teacher collaboration and school type (B = 0.065, p = .922) is insignificant. Overall, the results highlight the significant positive impact of the principal's role on teaching practice, the differential effects of teacher collaboration, and the notable advantage of private schools in predicting higher teaching practice scores.

Table 10 4.8 Coefficient of Regression Analysis of school professional environment of public and private primary schools

Model		Unstandardized Coefficients		Sig.
		B	Std. Error	
1	(Constant)	4.187	0.680	0.000
	Principal's role	0.395	0.138	0.006
	Teachers Collaboration	-0.568	0.276	0.046
	Dummy Variable = Private School	5.771	1.120	0.000
2	(Constant)	3.758	0.930	0.000
	Principal's role	0.518	0.198	0.013
	Teachers Collaboration	-0.552	0.327	0.099
	Dummy Variable=Private School	6.551	3.096	0.041
	Principal's role*Private School	-0.244	0.295	0.413

Teachers Collaboration*Private School	0.065	0.654	0.922

a) Dependent Variable: *Teaching Practice*

4.3.2 Qualitative Analysis Result

The themes that emerged during the qualitative analysis of interviews are discussed here.

Table 11 4.9 Qualitative Analysis

Objective	Themes:
To compare the school professional environment of public and private primary schools**.**	a) Motivation b) Resources Allocation c) Teachers Accountability d) Teachers meeting

4.3.2.1 Motivation

Regarding the principal's leadership in motivating teachers to perform their duties, the principal must be able to inspire and encourage the teachers. It will ensure that the teachers channel all their efforts and concentration toward achieving the predetermined outcomes. The principal should establish effective communication channels and consistently evaluate the teaching tasks completed by the teachers.

In response to the question, do you think teachers need motivation or guidance? Or do you guide your staff? One of Taluka's education Officers responded,

"In our schools (Government), teachers think they don't need motivation and guidance as they are well qualified and experienced. It's not like a person needs motivation every time, but it is an ongoing process that pushes teachers to perform well." Some Government principals replied that *we try to motivate teachers by helping and guiding them in academic or non-academic matters. One government principal specified, "It depended on the teacher whether he wanted to listen to us*.

On the other hand, in private schools, the principal responds:

"Indeed, guidance and motivation are important, especially for new teachers. It may be different; our school rewards our teachers with an appreciation award whenever they perform remarkably well. If our science teacher does a science project or prepares students for a speech competition based on their overall performance, we reward them with *an award."*

Comparing private and government school principals' answers shows that both sectors recognize teacher motivation's importance, but in government schools, they do not take any specific steps due to teachers' principal collaboration.

4.3.2.2 Resources Allocation

Resources are categorized into human, material, non-material, and audio-visual. Teachers can effectively use these resources to streamline the teaching process and enhance student comprehension. Moreover, educational resources encompass a diverse collection of materials that are either manually created or digitally captured to aid in the teaching and learning journey.

How do you support your teachers when asked why teaching practice is affected?

One of the principals said:

There are many reasons behind teachers' low effectiveness. How can a teacher teach well when we don't have books, chalk, and basic facilities? We didn't receive any SMC, course books, chalk, or clean and cold water for drinking.

Two principals out of 10 government schools run the evening shift; one principal of the evening shift adds.

"*There are seven classrooms in a school building, but we cannot use them. Morning shift administration locked four classrooms, so we are managing six classroom students in 2 or 3 classrooms, which ultimately affects teachers and students. But no authority has taken action. One School didn't have any electricity connection.*

Almost every government school has a problem with a lack of resources, and the shortage of books is an old, neglected issue.

In response to the question, the Private school principal replied.

"It's *our responsibility to facilitate students and make sure our students purchase course books.".*

In the form of school fees, private schools have direct access to money to arrange all basic things for schools.

4.3.2.3 Teachers' Meeting

When asking principals about teachers meeting the government, the school principal replied *we haven't teacher meeting culture, and if there is anything to discuss, I ask them individually.*

The other principals replied that.

"We unofficially discussed school problems and didn't need teachers to meet for daily affairs.

The private school principal replied, "*Yes, we arrange teachers' monthly meetings whenever needed, like before and after midterms Exams and annual Exams. In these meetings, we distribute responsibilities and tasks to teachers and discuss and try to address their problems."*

Other private principals replied, *"Every day after school, our teachers would stay 30 minutes after students off. At that time, we checked students' copies maintaining the library, Assembly register, or any records."*

Usually, teachers' meetings do not get any attention in government schools.

Regular meetings among teachers can play a significant role in fostering a nurturing school environment where teachers are appreciated, encouraged, and driven to collaborate toward shared objectives for the betterment of students. These gatherings serve as a means to promote open dialogue and the sharing of innovative ideas and approaches to enhance teaching methodologies. The study by Weinberg (2019) highlights that meetings enhance teachers' ability to comprehend

students' viewpoints, allowing them to effectively adapt their teaching approaches to address student requirements and improve educational outcomes.

On the other hand, private schools have a teachers-meeting culture, strengthening their teacher's collaboration with students, reflecting their cooperation with their peers and principals.

Besides all these factors, during school visits, I observed that in government primary schools, in 8 out of ten schools, one teacher is responsible for one whole batch and teaches all subjects from kindergarten to class five. However, in private schools, different teachers teach different subjects. It keeps students and teachers motivated and works as a teacher assessment.

4.3.2.4 Teacher Accountability

Improving the education system is a crucial accountability objective, as it aims to promote transparency, responsibility, and quality. Holding teachers accountable fosters a culture of responsibility and continuous improvement Brady (2021); Holloway and Holloway (2021)

When I asked Taluka Education Officers, "How do you know which teachers teach well and which does not? Is there any parameter or something on the district level?

All three, including the district officer, replied*, "No." There is no scale or measure of teachers' efficiency at the district level. During the annual inspection, TEOs and his team check students' performance and some essential things, such as whether teachers use lesson plans and how much course is completed. The annual inspection is the only practical evaluation of teachers in district Badin.*

One of the Government principals said, " *It's challenging to make accountable teachers if I comment or want to correct them or If I point out their mistakes, they get angry with me and make an uncomfortable environment."*

The private principal said," *It's challenging to make teachers accountable every time, so in our system, we want to make feels teacher by himself because I am not either teacher everywhere. Hence, we plan a weekly meeting to discuss our responsibilities, job description, and duties as teachers and to recall the importance of self-accountability. It works 100% for some teachers, but some don't take it seriously, so we compile monthly reporting.*

4.4 Regression Analysis of the relationship between School professional environment and teaching practice

Table 12 4.10 Regression Analysis of the relationship between School professional environment and teaching practice

Coefficients

Model		Unstandardized Coefficients		
		B	Std. Error	Sig.
1	(Constant)	1.405	0.523	0.010
	Principal's role	0.500	0.173	0.006
	Teachers Collaboration	0.583	0.206	0.007

a. Dependent Variable: *Teaching Practice*

Specifically, the influence of the principal's role (PR) on teaching practice showed a significantly positive effect ($\beta = .500$, $p = .006$). This outcome suggested that higher engagement and effectiveness in the principal's role are closely linked to improved teaching practices. It indicates that the teaching practice is expected to increase by 0.500 units for every one-unit increase in principals by keeping teachers' collaboration constant.

The second predictor, teacher collaboration, is also a positive significant predictor of teaching practice ($\beta = .583$, $p = .007$). Results indicate that each unit's increase in teacher collaboration is

associated with a rise of 0.583 unit in teaching practice score. In conclusion, the insights derived from the study shed light on two essential aspects: the central role of effective leadership and teacher collaboration in shaping teaching practices.

Regression Analysis of the relationship between school professional environment and teaching practice, including gender, teaching experience, and year of education

Table 13 4.11 Regression Analysis of the relationship between School professional environment and teaching practice, including gender, teaching experience, and year of education

Model		Unstandardized Coefficients		Sig.
		B	Std. Error	
1	(Constant)	.823	.835	.330
	Principal's role	.469	.200	.025
	Teachers Collaboration	.611	.225	.010
	Male	.748	.498	.142
	Graduation	.440	.742	.556
	Masters	.347	.845	.684
	Ten years of teaching experience	-.186	.751	.806
	Fifteen years of teaching experience	-1.376	1.215	.265

The above coefficient table shows the principal's role and teacher collaboration has a significant relationship, which is already highlighted by coefficient table 13; the focus here is the remaining variables: Gender, year of education, and years of teaching experience. These variables are included as a dummy variable to assess the impact of being male on teaching practice compared to females. Masters and Graduation are also dummy variables with reference category intermediate and 10 – 15 years of teaching experience compared to five or less than five years of teaching experience.

The regression analysis results show that the male dummy variable did not significantly predict teaching practice (B =.748, p =.142). The positive unstandardized coefficient (B =.748) indicates that male teachers may do better in teaching practice than female teachers. However, this difference is not statistically significant, meaning that any observed difference is likely the result of chance.

The second dummy variable in this regression is the teacher's qualification. The highest qualification level is for a master's degree, and the lowest is for an intermediate degree. The regression analysis revealed that graduation and master's qualifications did not significantly predict teaching practice (B =.440, p =.556). The positive unstandardized coefficient (B =.440) shows that, compared to the intermediate qualification reference group, teachers with a graduation and master's degree may do better in teaching practice, but the difference is not statistically significant.

The fourth and fifth dummy variables, 7-10 years and 11-15 years of teaching experience, also do not significantly influence teaching practice (B = -.186, p =.806), (B = -1.376, p =.265). The negative unstandardized coefficient of (B = -.186),(B = -1.376) shows that, as compared to the reference category of 0-5 years of experience, it can be concluded that teachers with 10 and 15 years of experience may do of poorer quality in teaching practice, although this is not statistically significant.

4.4.1 Qualitative Analysis

Table 14, 4.12 Qualitative Analysis

Objectives:	Themes:
To study the relationship between the school's professional environment and teaching practice.	a) Professional Development b) Problem solving. c) Teamwork

4.4.2 Professional Development

Teachers' Professional Development is pivotal in their ability to assume ownership of their learning and growth, acknowledging their capacity to drive positive change in educational settings. This practice ensures that teachers remain up-to-date with the latest research, methodologies, and technologies, equipping them to provide high-quality education and adapt to the ever-changing needs of students.

Regarding the professional development of teachers, DEO replied that

"*Professional development is very important. PITE organizes teachers' induction training, enhancing teachers' effectiveness and helping them better understand the education system. The Department does offer training sessions for secondary and Higher secondary teachers and college principals, but there are no specific training sessions for primary school teachers and principals."*

School leaders can effectively offer professional development initiatives to benefit teachers and students by understanding these specific requirements Choeda (2023).

4.4.3 Problem Solving

For better understanding, these questions are asked by the district education officer as he can give a big picture. District education officer of primary education Badin responded;

"Solving *teachers' problems is a kind of principal job description, and our (Government) Principal actively engaged and solved teachers' school, colleague, and students related problems. But it can't be found in every school. Some principals didn't want to push them into trouble."*

One Taluka education officer adds, "*The problem in government schools is that principals act passively, which cannot solve problems. Some of it works like gassing on* it."

One principal replied, "In our school, *teachers didn't want authorities to step in to solve their problems.*

The private principal responded, "*It's our priority to satisfy our staff by solving their problems. If they leave school because of personal or fellows-related issues, ultimately, our students have problems, so arranging new teachers is not easy.*

Principals with solid problem-solving abilities can foster a culture of collaboration and continuous improvement within the school. By effectively addressing issues, these principals create an environment where teachers feel valued and supported, leading to enhanced motivation and dedication in their work.

4.4.4 Teamwork

In reply to the question, why do you think teamwork work is important? Is there collaboration and teamwork between teachers in your school? Taluka education officers respond that

In our schools (Government), Teamwork is lacking because of favoritism. Overall, schools suffer because many teachers do not want to work together.

Firstly, public school principals denied it, but one principal responded that.

"It is difficult to lead the kind of teachers who don't want to work together," And it takes lots of time and energy to gather them in one page."

Contrastingly, the private school principal replied.

"We *make sure that teachers do work in teams. If there is any tension among teachers, we solve their problems." Because teamwork is the core of school success."*

These findings enhance our comprehension of the diverse factors influencing teaching practices and emphasize the significance of effective leadership and collaboration in cultivating an environment of school excellence.

It is supported by Johari et al. (2021) that teamwork is the key to improving teacher effectiveness, enhancing student learning, and developing problem-solving abilities. Principals and teachers can collectively contribute to the school's success by establishing a collaborative environment. Establishing innovative environments relies on teamwork and the harmonious interplay between team members. This collaborative approach enables teachers to cultivate the right perspectives, attitudes, and behaviors over time, leading to continuous improvement and development.

4.5 Regression Analysis of the Impact of a professional environment on students' learning outcomes

The PR (Principal's role) had a negative effect (B = -.337) on students' learning outcomes, which is statistically significant (p = .027). In contrast, teacher collaboration (B = 0.301, p = .004) had a positive statistically significant effect on students' learning outcomes. These results suggest that while the principal's role negatively impacts student learning outcomes, increased teacher collaboration significantly enhances them.

Table 15, 4.13 Regression Analysis of Impact of School Professional Environment on SLOs.

		Unstandardized Coefficients		
Model		B	Std. Error	Sig.
1	(Constant)	12.905	.193	.000
	Principal's role	-.337	.151	.027
	Teachers Collaboration	.301	.104	.004

a. Dependent Variable: *Students Learning Outcomes*

Teaching quality positively affected students' learning outcomes B = 0.352, which is statistically significant p = .004. Conversely, the quantity of teaching had a negative impact on students' learning outcomes, which is also significant at p = .016.

The results indicate that while an increase in the quality of teaching is associated with higher student learning outcomes, an increase in the quantity of teaching is associated with lower student learning outcones.

Table 16, 4.14 Regression Analysis of Impact of Teaching Practice on SLOs.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.908	.192		67.094	.000
	Quality of teaching	.352	.120	.659	2.941	.004
	Quantity of teaching	-.631	.261	-.543	-2.422	.016

a. Dependent Variable: *Student learning outcomes*

4.5.1 Qualitative Analysis

Table 17, 4. 15 Qualitative Analysis

Objectives:	Themes:
To study the effect of a professional environment and teaching practice on students' learning outcomes.	1. Exams System 2. Teacher behaviour 3. Activity-based learning

4.5.2 Exams systems

Exams are the most usual method for student assessment. In Sindh, Government schools start taking the written exam from the 4th class onward. Viva is taken twice a year and promotes students from kindergarten to three classes. The team conducts the viva the district education officer selects. Exams are taken by their teachers for four- and five-class students, and the district exams

committee gives question papers. In the whole district, the same question paper is held on the same date exams are held. Private schools prepare their exam pattern, which kindergarten to fifth-class students take thrice a year. Mainly, exams are based on written and verbal for almost every class. The government principal gave mixed responses for what they think is the reason behind the low achievement level of students' academics, and one of them replied,

"*Student Promoting Policy destroys students as students and their parents know that teachers won't fail students and all students will be promoted, so parents don't give proper attention to their student's education. Also, teachers feel comfortable till they teach the third class because there isn't any written form of paper which also assesses and teaches.*"

One of the principals said*." Due to the promotion of the policy from binging to third class, when our student reached four classes, and for the first time sitting in the exam, he did not perform well compared to a private school*."

In her interview, one of the Taluka education officers said, "*Promoting policy is okay because when our schools face a shortage of teacher resources, if we take so many challenging exams, students will fail, ultimately affecting their education. Due to the promotion policy, many students reached the 5th class. If there is a problematic exam system and a student doesn't pass it. he will not come to school and feel disheartened. Promoting policy is a department's need".*

The private school principal said, "*Taking an examination is necessary because it helps me know if our staff is teaching well and if our students are ready to advance to higher classes. Students also feel accountable for their exam".*

The qualitative findings aligned with a study by Bhatti and Dehraj (2018) on the examination system in class 8th of public schools of Sindh, which found that public schools faced difficulties in the annual examination system like monitoring, marking, et Cetra.

Due to the high risk of cheating and insufficient and improper paper packing, untrained staff for the paper-setting public school exams system is unreliable. Public school students are promoted in the next class without proper assessment and evaluation. They face problems in their higher education, which also causes problems for teachers and schools. A better examination system at the school level improves students' learning outcomes.

4.5.3 Teacher Behavior

Teacher behavior refers to how teachers engage with their students, encompassing verbal and non-verbal communication, active listening skills, clarity of instructions, and overall communication style.

Principals highlight the importance of teacher behavior: "*Teacher behavior is the main thing that motivates the student to attend school regularly, which eventually makes students learn better."* The government principal added, *"Government teachers aren't only responsible for teaching but increasing enrollment. Students attend school regularly, and continuing their studies is part of the government teachers' job, which can be achieved by good behavior.*

4.5.4 Activity Base Learning

Numerous research studies emphasize the significance of activity-based approaches in education, as they stimulate interest, enhance attention span, and improve comprehension of concepts. Implementing activities such as live quizzes and using application feedback can significantly improve student engagement and understanding, particularly in large classrooms. To fully maximize the benefits of activity-based learning, it is essential to effectively integrate these practices into curricula, ensure active participation from teachers, and provide proactive leadership support.

Principal answered, *"Nowadays, activity-based learning is vital because we can't teach students with just board and chalk in today's digital era. Activity increases students' potential and keeps them engaged and motivated to come regularly."*

Another principal replied*," Activities or using video speakers during classes makes students punctual and regular."*

4.6 Discussion

This chapter discusses the findings of the quantitative and qualitative analysis. The study aimed to explore the effect of a school professional environment on teaching practice in private and public schools and the impact of these two variables on overall student learning outcomes. In addressing the school's professional environment, the principal's role and teachers' collaboration are taken as indicators, and for teaching practice, quality and quantity of teaching are the indicators.

The findings show that private primary schools lead government schools regarding principal participation, teacher collaboration, and quality of teaching practice. Also, students' test scores in private schools reveal that students perform better academically than those in government schools.

The empirical analysis found a positive significant effect of the principal's role on teaching practice in the context of private schools. The findings are aligned with many studies that reveal that effective principals create favorable school environments, promote teachers' professional development, and cultivate a culture of teamwork, ultimately enhancing teaching practice Leithwood et al. (2004); TAHIR and FATIMA (2023).

Teachers' collaboration had a negative significant effect, which indicates that the principal's role increased teaching practice, but when teachers' collaboration increased, teachers' practice decreased. Vangrieken et al. (2015) disclose that the negative impact of teacher collaboration is

due to a lack of accountability, resistance to change, interpersonal conflict, and grouping between teachers, which ultimately affect students. Effective and supportive leadership, communication, and clear goals can solve this negative teacher collaboration. In the second model, the principal's roles are significantly positive. On the other hand, the interaction term (principal's role * private school) came as insignificant negative, which indicated no significant moderation effect of school type on the relationship between the principal's role and teaching practice. Liebowitz and Porter (2019) validate the negative relationship between principals and teaching practice. Principals do not impact students directly but positively influence teachers, and then teachers affect students' learning, so the principal indirectly contributes to improving students learning outcomes. It also states that leadership accounts for about a quarter of a school's total impact on students' learning outcomes.

Similarly, the interaction terms for teacher collaboration and school type are also positively insignificant. The emerging themes from qualitative analysis also back empirical results. Thematic analysis of qualitative data emerged themes such as motivation, resource allocation, teacher accountability, and teacher meetings. It is stated that a motivated teacher contributes more to the school environment and students' learning. Motivation denotes the inner mechanism that activates, guides and perpetuates behavior in pursuing a particular goal. It acts as the impelling force behind teachers' actions, profoundly impacting their willingness to exert effort toward achieving objectives, as stated by Safi'i et al. (2024). A motivated teaching staff and school environment positively impact student learning outcomes by creating a sense of belonging and promoting academic and non-academic excellence, as stated by Christian and Sayed (2023).

Teacher accountability encompasses several domains that are crucial for effective teaching. By actively engaging in professional development, teachers aim to improve their teaching methods

and expand their knowledge to serve their students better. The other significant domain is student learning outcomes, where teachers are held accountable for their students' academic progress and achievements. This domain underscores teachers' profound impact on student learning and their ability to facilitate academic growth. Wiens and Chou (2022) suggest teachers must align their teaching practices with established educational standards and curriculum guidelines.

Private schools are a significant positive predictor, suggesting that teaching practices are good in private schools compared to public schools because Private schools often have advantages that can contribute to better teaching practices and potentially better academic performance than public schools. And typically have more financial resources available than public schools. Private schools have more autonomy in decision-making and flexibility in teaching methods than public schools. Private schools have more control over curriculum, teaching methods, and flexibility, which leads to effective teaching practices. Private school students' parents are more involved than students in public schools. The strong partnership between parents and teachers leads to better outcomes Lubienski et al. (2008). Overall, it is concluded that teacher collaboration effectiveness depends on the implementation quality rather than the type of school.

The empirical analysis to study the relationship between the school's professional environment and teaching practice showed a significant positive relationship between the indicators of the professional school environment, the principal's role, the collaboration between teachers, and the teaching practice. Principals promote a learning culture and professional growth to enhance teachers' teaching methods, teaching practices, and quality of education. Amzat (2017) highlights how teachers' collaboration influences teaching practice. Enough time, resources, and supportive leadership are needed for adequate teacher collaboration. Previous findings from Khasawneh et al. (2023) and Lanich (2009) also supported these findings that teacher collaboration benefits

teachers by providing opportunities for professional growth, sharing best practices, and improving overall instructional quality in the classroom.

Findings also reveal no significant difference between male and female teachers' teaching methods. The same trend can be seen by (Saleha, 2008), who researched the situation of female teachers in elementary and secondary schools in rural Sindh, Pakistan, and discovered that both male and female teachers used comparable teaching strategies while encountering various problems in their professional settings. It also revealed that teachers with graduation and master's degrees have positive but no significant effect on teaching practice. For instance, Hafeez (2021) investigated how teacher training and qualification affected teaching techniques and student results in Pakistani secondary schools. The data indicated that while there is a positive association between instructors' educational levels and teaching effectiveness, the differences are insufficient to establish that higher qualifications directly contribute to better teaching practices. In contrast teachers who have more than 5-year teaching experience have poor teaching practice. A study conducted by Tayyab et al. (2023) investigates the teaching techniques of primary school teachers in Pakistan, discovering that those with more than five years of experience frequently use out-of-date approaches. And use traditional pedagogical approaches rather than creative, student-centered strategies required for effective teaching in today's educational environments. Regardless of qualification, this stagnation in teaching methods can lead to a deterioration in education quality over time. The study underlines the necessity for continuous professional development and training to improve teaching effectiveness and match methods with current educational standards.

Interviews with DEO TEOs highlight that Professional Development, Teachers Appreciation, Problem-solving, and Teamwork are the factors that enhance or weaken the teaching practice.

Principals must customize teaching programs to align with the unique needs of the school and community.

Through regular class visits, principals can show appreciation for teachers' efforts, provide guidance, and offer support, which can positively impact teacher performance Sandika et al. (2022). Many studies found that problem-solving skills improve teaching practice. The correlation between teachers' organizational commitment and school principals' solution-focused leadership is strongly positive, with Ozdem and Sezer (2019) highlighting the importance of effective solution-focused leadership in promoting more significant organizational commitment among teachers. Güneş (2022) also emphasizes that the correlation between principals' problem-solving skills and teachers' performance underscores the pivotal role of leadership in establishing a supportive work environment. By addressing problems proactively and constructively, principals can serve as influential figures, guiding teachers towards engaging in professional development and collaborative teamwork, ultimately leading to an overall enhancement in their performance. Don and Arumugam (2019) emphasize the key factors to successful teamwork lies in team members' active involvement, well-defined responsibilities, collaborative teamwork, and positive interactions. These factors help achieve organizational goals and promote a supportive learning environment.

The empirical analysis aims to study the effect of a professional environment and teaching practice on students' learning outcomes. Certain studies by Gates et al. (2014) consistently found that inadequate principal preparation and support can negatively impact students. Some studies found that principals don't directly enhance students' learning but affect indirectly by facilitating teacher collaboration and teacher efficacy. Dumay et al. (2013) state that teachers' collaboration affects students' learning outcomes. Studies show that school leaders significantly contribute to enhanced

student learning. Many studies by Ronfeldt et al. (2015) and Vangrieken et al. (2015) reveal that teachers' collaboration substantially impacts student learning outcomes. Nurdiana et al. (2023) elaborate that collaborating on instructional methods and course design can significantly enhance student learning outcomes in digital education.

The analytical analysis found that an increase in the quality of teaching is associated with higher student learning outcomes and an increase in the quantity of teaching is associated with lower student learning outcomes. Klieme and Nilsen (2022) have shown that an increase in the quantity of teaching, especially when not paired with improvements in teaching quality, can negatively impact student learning outcomes. It is often due to the diminishing returns of simply extending instructional time without enhancing the effectiveness of teaching practices.

The qualitative results support quantitative results. In government primary schools, the exam system is not so strong, which prevents students from experiencing and performing poorly in exams.

Farooq et al. (2017) and Khan et al. (2022)argued that government schools frequently suffer from a deficient examination system, negatively impacting student performance. It was found by Almani et al. (2012) that Private schools are noted for their systematic and structured instruction, which may result in kids performing better on standardized examinations than their public school peers. This is due in part to the rigorous examination methods that they undertake.

Active learning strategies in class are effective study options for students to improve their learning outcomes, as Favero and Hendricks (2016) indicate. Positive teacher behavior also has the potential to enhance students' confidence, motivation, and overall academic performance, as found by Coscos and Buenaventura (2023).

Activity-based learning in primary schools has enhanced various aspects of children's development. Nevertheless, studies have revealed that implementing activity-based learning in public pre-primary schools encounters challenges due to insufficient instructional resources and teacher training. Additionally, project-based activities involving collaboration among parents and teachers foster cognitive skills in younger students. Moreover, physically active academic lessons have improved primary schoolchildren's academic performance and motor skills, as indicated by (Bhat et al. 2023; Garg et al., 2022; Vansdadiya et al., 2023).

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The education sector in Pakistan, particularly in Sindh and district Badin, faces challenges such as limited resources, ineffective program implementation, deficient administrative capabilities, and inadequate monitoring and evaluation. The learning levels of students, especially in reading and arithmetic, are low, and it usually seems that private schools performing better than government schools. In conclusion, the study highlights the importance of a supportive professional environment in improving student learning outcomes in District Badin. Focusing on factors such as school environments, principals, and teachers' collaboration aims to provide valuable insights for policymakers to enhance education quality and make informed decisions to benefit students in the region. This research aimed to study and determine the effect of school professional environments identified by proficient leadership, encouraging social conditions, cooperative relationships among teachers, and teaching practices. It involves methods for classroom activities and strategies teachers implement. It combines teaching, communication, and evaluation methods on students' learning outcomes and analyzes the teaching practices and their differences between private and public primary schools. As primary education establishes the base of a student, many factors strongly impact teaching practice and student learning outcomes, such as the influential principal's role, Collaboration among teachers, quality of teaching, and quantity of teaching.

This study revealed that private primary schools have better school professional environments and teaching collaboration, and their students' academic scores are higher than government schools. This research analyzed the effect of the principal's role and teachers' collaboration on teaching practice for extensive insight. Many studies justify that principals focusing on instructional

leadership and facilitating a collaborative culture among teachers can significantly enhance teaching practices and student outcomes. However, Mora-Ruano et al. (2021) find if the principal's role is not well-defined or their leadership style does not promote collaboration and support, it can negatively impact student achievement.

Whether teachers' collaboration positively affected teaching practice in private schools. Private schools are a significant positive predictor, suggesting that teaching practices are good in private schools compared to public schools because private schools often have advantages that can contribute to better teaching practices and potentially better academic performance than public schools. Typically, private schools had more financial resources, facilities, and technology than public schools.

The second finding is that the principal's role and teachers' collaboration significantly impacted teaching practice and depended on teamwork, principal appreciation, principal problem-solving skills, and professional development. However, in primary school, male and female teachers didn't have differences in teaching methods, and teachers with high teaching experience had low-quality teaching despite teachers having high qualifications. Studies emphasize continuous professional development and training to improve teaching effectiveness.

The third finding is that the principal negatively affected students' learning outcomes in all types of schools. Teachers' collaboration has a positive significant effect on students' learning outcomes. It also found that an increase in the quality of teaching is associated with higher student learning outcomes, and an increase in the quantity of teaching is associated with lower student learning outcomes. The school-level factor contributing to students' learning outcomes is the exam system. The teacher-related factors that affect students' learning outcomes are teachers' behavior. Also, if a teacher used activity-based and technology-based teaching approaches, it would enhance

students' learning outcomes. Increasing Class duration has an adverse effect on SLO because it extends instructional time without strengthening the effectiveness of teaching practices.

The study's primary focus is to assess the academic achievements of private schools in contrast to public schools, the beneficial effects of a professional school setting on students' educational progress, and the impact of teaching methodologies on student learning outcomes. The research goals encompass evaluating the school professional environment in public and private elementary schools, analyzing the correlation between the school professional environment and teaching strategies, and exploring how a professional environment and teaching practices influence students' academic performance. Also, identifying the weaknesses and strengths of both sector schools in the district will provide valuable information for policymakers to enhance quality education. It compares the performance of private and public schools, highlighting the positive impact of a school's professional environment on student learning outcomes and exploring the relationship between teaching practice and student achievement.

Data is collected from 5th-class students, teachers, and principals, analyzed through multivariate regression, and utilized a Likert scale to assess the school's professional environment and teaching practices. The results indicated a reasonable level of internal consistency, with each sub-variable being analyzed separately to evaluate students' learning outcomes in English, Urdu, Sindhi, and mathematics. The study finds that the principal’s role and teacher collaboration has a significant positive relationship with teaching practice, indicating that an increase in these factors leads to improved teaching practice. Additionally, the interaction effects revealed that public schools score lower in teaching practice than private schools when considering the principal’s role and teacher collaboration.

The research findings from the multiple regression analysis showed a significant correlation between teaching practice and two primary predictors: the principal's role and teacher collaboration. Including these predictors in the model, they have demonstrated their valuable contribution to explaining the variability in teaching practice.

Effective leadership in the role of a principal has a significantly positive effect on teaching practices, while teacher collaboration does not considerably impact teaching practice outcomes. These findings highlight the importance of effective leadership in shaping teaching practices and emphasize the need for strong leadership structures in schools to promote excellence.

The finding shows that attending a private school significantly and positively impacts student learning outcomes, while variables such as the principal's role, teacher collaboration, and teaching quality and quantity do not have a significant effect. However, the overall explanatory power of the models is moderate, indicating the presence of other unmeasured variables that influence student learning outcomes. Further research is needed to identify and understand these additional factors.

5.2 Recommendation

In light of the current research findings, the study proposes the following recommendations:

5.2.1 Capacity building for principals

Training programs and workshops for school principals of public schools should be part of the policy. Education departments conduct principals' training but neglect primary school principals' training. District authorities should focus on primary school principals to enhance their professional development. It will improve the overall management and functioning of public schools.

5.2.2 Teachers Meeting Culture

In the context of district Badin, primary schools should focus on teachers meeting culture in schools. It increases principal effectiveness, teacher collaboration, learning, and accountability.

5.2.3 Evaluation and Monitoring System

Evaluation and monitoring systems should be done regularly to assess the school's professional environment and teaching practice. Sindh Education Road Map 2019-2024 discusses monitoring and evaluating schools. The availability of buildings and staff and their regularity are the primary domains of evaluation and monitoring in district Badin, but they are missing in-class assessment, teachers teaching evaluation, and principal assessment. Use data-driven insights from evaluation to improvement, and make informed policy decisions to enhance the primary education in district Badin.

5.2.4 Professional development

Ongoing professional development for primary school teachers should be implemented to increase teaching quality, practices, and student results. All teachers should be required to attend frequent training on modern teaching approaches and classroom management. Establishing professional learning communities inside schools encourages the exchange of best practices and peer observations. Teachers with access to online courses and educational materials will be able to keep up with the newest trends and research. Finally, creating a system of rewards and recognition will promote and reward teachers' continuous professional development efforts.

5.2.4 Resource Allocation

Regarding the challenges public schools face in District Badin, one recommendation could be to assign supplementary resources to advance set-up, provide required teaching materials and

curriculum guidebooks, and enhance technical gadgets. It would help fill the resource slit between private and public schools and make a more encouraging learning environment.

References

Al Haj, N. H., Nasution, F., Aminullah, M. A. F., & Haq, N. (2023). Pengajaran yang Efektif terhadap Perkembangan Psikologi Peserta Didik. *Jurnal Dirosah Islamiyah*, *5*(2), 420-426.

Alabi, O., & Bukola, T. (2023). Introduction to Descriptive Statistics. In *Recent Advances in Biostatistics*. IntechOpen.

Almani, A. S., Soomro, B., & Abro, A. D. (2012). Evaluative study of private schools of Pakistan: A survey of Sindh. *Indus Journal of Management & Social Sciences*, *6*(2), 91-98.

Amzat, I. H. (2017). Principal instructional leadership practice and its effect on teachers' reflective practices: Indicators for best classroom practices. In *Teacher professional knowledge and development for reflective and inclusive practices* (pp. 70-88). Routledge.

Awan, A. G., & Zia, A. (2015). Comparative Analysis of Public and Private Educational Institutions: A case study of District Vehari-Pakistan. *Journal of Education and Practice*, *6*(16), 122-130.

Basu, A. (2021). Cronbach's alpha. *Open Peer Review on Qeios*, *2*.

Battista, A., & Torre, D. (2023). Mixed methods research designs. *Medical Teacher*, *45*(6), 585-587.

Bhat, A. Z., Ahmed, I., Kameswari, L., & Khan, M. S. (2023). A Game Based Innovative teaching and learning environment to enhance progression and performance of students. SHS Web of Conferences,

Bhatti, A. W., & Dehraj, M. A. (2018). A Study of Annual Examination System In Sindh At Grade Eight Level In Pakistan. *Educational Research International Vol. 7 (1)*.

Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. (2011). The influence of school administrators on teacher retention decisions. *American educational research journal*, *48*(2), 303-333.

Brady, A. M. (2021). Response and responsibility: Rethinking accountability in education. *Journal of Philosophy of Education*, *55*(1), 25-40.

Bryck, A. (2010). Organizing schools for improvement: Research on Chicago school improvement indicates that improving elementary schools requires coherent, orchestrated action across five essential supports. *Phi Delta Kappan*, *91*(7), 23-30.

Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014). Measuring the impacts of teachers II: Teacher value-added and student outcomes in adulthood. *American economic review*, *104*(9), 2633-2679.

Choeda, U. (2023). Analyzing the School Principal's Role in Teacher Professional Development. *Asian Journal of Education and Social Studies*, *45*(3), 21-30.

Christian, D., & Sayed, Y. (2023). Teacher motivation to teach in challenging school contexts on the Cape Flats, Western Cape, South Africa. *Education Sciences*, *13*(2), 165.

Coscos, G. P., & Buenaventura, V. P. (2023). TEACHER COMMUNICATION BEHAVIOR AND CLASSROOM ENVIRONMENT AS PEDAGOGICAL FACTORS TO THE CULINARY COMPETENCE OF SENIOR HIGH SCHOOL STUDENTS. *European Journal of English Language Teaching*, *8*(1).

Creemers, B. P., & Kyriakides, L. (2006). Critical analysis of the current approaches to modelling educational effectiveness: The importance of establishing a dynamic model. *School effectiveness and school improvement*, *17*(3), 347-366.

Darling-Hammond, L. (2014). Strengthening clinical preparation: The holy grail of teacher education. *Peabody Journal of Education*, *89*(4), 547-561.

Don, Y., & Arumugam, R. (2019). School Management and Leadership: teamwork in school. *Multidisciplinary Journal of Instruction (MDJI)*, *1*(2), 14-36.

DuFour, R., & Eaker, R. (2009). *Professional learning communities at work tm: best practices for enhancing students achievement*. Solution Tree Press.

Dumay, X., Boonen, T., & Van Damme, J. (2013). Principal leadership long-term indirect effects on learning growth in mathematics. *The Elementary School Journal*, *114*(2), 225-251.

Farooq, M. S., Feroze, N., & Kaı, Y. T. (2017). Public vs Private quality education at primary level in Pakistan. *International Online Journal of Primary Education*, *6*(2), 1-23.

Favero, T. G., & Hendricks, N. (2016). Student exam analysis (debriefing) promotes positive changes in exam preparation and learning. *Advances in physiology education*, *40*(3), 323-328.

Firdaus, F., Giatman, M., & Ernawati, E. (2022). Principal's leadership in improving student learning outcomes. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, *4*(11), 4837-4847.

Garg, S., Prasad, Y., & Kumar, V. (2022). Mobile-Based Active Learning can Enhance Engagement in Classroom. Proceedings of the 14th International Conference on Education Technology and Computers,

Gates, S. M., Hamilton, L. S., Martorell, P., Burkhauser, S., Heaton, P., Pierson, A., Baird, M. D., Vuollo, M., Li, J. J., & Lavery, D. (2014). Principal Preparation Matters: How Leadership Development Affects Student Achievement. Brief. *RAND Corporation*.

Güneş, A. M. (2022). The Relationship Between Problem Solving Skills, Burnout Levels and Self Efficacy Beliefs of School Principals. *International Journal of Contemporary Educational Research*, *9*(3), 590-602.

Hafeez, M. (2021). Impact of Teacher's Training on Interest and Academic Achievements of Students by Multiple Teaching Methods. *Pedagogical Research*, *6*(3).

Hargreaves, A. (2021). Teacher collaboration: 30 years of research on its nature, forms, limitations and effects. *Policy, Teacher Education and the Quality of Teachers and Teaching*, 103-121.

Hauser, A. P. (2021). *The Impact of Selected Special Education Co-Teaching Models on Math and Reading Student Achievement and on Student Behavior in Kindergarten through Fifth Grade* The College of William and Mary].

Holloway, J., & Holloway, J. (2021). Teacher Evaluation and the Control of Risky Teachers. *Metrics, Standards and Alignment in Teacher Policy: Critiquing Fundamentalism and Imagining Pluralism*, 45-58.

Hoppey, D., & McLeskey, J. (2013). A case study of principal leadership in an effective inclusive school. *The Journal of Special Education*, *46*(4), 245-256.

Jackson, J. A. (1986). *THE RELATIONSHIP BETWEEN TEACHERS'PERCEPTIONS OF PRINCIPALS'JOB PERFORMANCE, TEACHER JOB SATISFACTION, PRINCIPAL INFLUENCE AND SCHOOL OUTCOMES*. Louisiana State University and Agricultural & Mechanical College.

Johari, A., Abdul Wahat, N. W., & Zaremohzzabieh, Z. (2021). Innovative work behavior among teachers in Malaysia: The effects of teamwork, principal support, and humor. *Asian Journal of University Education (AJUE)*, *7*(2), 72-84.

Johnson, S. M., Kraft, M. A., & Papay, J. P. (2012). How context matters in high-need schools: The effects of teachers' working conditions on their professional satisfaction and their students' achievement. *Teachers college record*, *114*(10), 1-39.

Khan, F., Omar Fauzee, M. S., & Daud, Y. (2016). Qualitative analysis of the teacher's performance in private and public sector schools: a developing country's experience. *Educational Research International*, *5*(4), 33-39.

Khan, S. B., Arif, M., & Azhar, M. (2022). Changing Structure of Examination System for Preparing Students for 21st Century. *Pakistan Journal of Humanities and Social Sciences*, *10*(4), 1598–1603-1598–1603.

Khasawneh, Y. J. A., Alsarayreh, R., Al Ajlouni, A. A., Eyadat, H. M., Ayasrah, M. N., & Khasawneh, M. A. S. (2023). An Examination of Teacher Collaboration in Professional Learning Communities and Collaborative Teaching Practices. *Journal of Education and e-Learning Research*, *10*(3), 446-452.

Klieme, E., & Nilsen, T. (2022). Teaching quality and student outcomes in TIMSS and PISA. *International handbook of comparative large-scale studies in education*, *2*, 37-31.

Kraft, M. A., & Papay, J. P. (2014). Can professional environments in schools promote teacher development? Explaining heterogeneity in returns to teaching experience. *Educational evaluation and policy analysis*, *36*(4), 476-500.

Kyriakides, L., & Creemers, B. P. (2012). School policy on teaching and school learning environment: Direct and indirect effects upon student outcome measures. *Educational Research and Evaluation*, *18*(5), 403-424.

Lanich, L. A. (2009). *The effect of weekly teacher collaboration on instructional practices in the classroom*. University of Northern Iowa.

Leithwood, K., Seashore, K., Anderson, S., & Wahlstrom, K. (2004). Review of research: How leadership influences student learning.

Liebowitz, D. D., & Porter, L. (2019). The effect of principal behaviors on student, teacher, and school outcomes: A systematic review and meta-analysis of the empirical literature. *Review of Educational Research*, *89*(5), 785-827.

Lubienski, S. T., Lubienski, C., & Crane, C. C. (2008). Achievement differences and school type: The role of school climate, teacher certification, and instruction. *American Journal of Education*, *115*(1), 97-138.

Lydiah, L., & Nasongo, J. (2009). Role of the headteacher in academic achievement in secondary schools in Vihiga District, Kenya.

Mahaputra, M. R., & Saputra, F. (2021). Literature Review the Effect of Headmaster Leadership on Teacher Performance, Loyalty and Motivation. *Journal of Accounting and Finance Management*, *2*(2), 103-113.

McChesney, K., & Cross, J. (2023). How school culture affects teachers' classroom implementation of learning from professional development. *Learning Environments Research*, *26*(3), 785-801.

Moore, C. M. (2012). The role of school environment in teacher dissatisfaction among US public school teachers. *Sage Open*, *2*(1), 2158244012438888.

Mora-Ruano, J. G., Schurig, M., & Wittmann, E. (2021). Instructional leadership as a vehicle for teacher collaboration and student achievement. What the German PISA 2015 sample tells us. Frontiers in Education,

Nayyar, Y., Jariko, G. A., & Mughal, S. (2017). Effects Of Social And Cultural Factors On The Dropout Rate Of Children In Primary Schools In District Badin, Sindh Pakistan. *Journal of Grassroot*, *51*(1).

Nedelcu, A. (2013). Transformational approach to school leadership: Contribution to continued improvement of education. *Manager*(17), 237-244.

Nurdiana, R., Effendi, M. N., Ningsih, K. P., Abda, M. I., & Aslan, A. (2023). COLLABORATIVE PARTNERSHIPS FOR DIGITAL EDUCATION TO IMPROVE STUDENTS'LEARNING ACHIEVEMENT AT THE INSTITUTE OF ISLAMIC RELIGION OF SULTAN MUHAMMAD SYAFIUDDIN SAMBAS, INDONESIA. *International Journal of Teaching and Learning*, *1*(1), 1-15.

Nzambi, P. (2012). Role of the Headteacher in Instructional Supervision as Perceived by Teachers in Secondary Schools in Kitui District, Kitui County-Kenya. *Unpublished Masters Project. Kenyatta University*.

Omotere, T. (2013). Influence of school environment on the academic performance of secondary school students in Lagos State. *published Online by Egobooster Books, Ogun State, Nigeria*.

Ozdem, G., & Sezer, S. (2019). The relationship between solution-focused school leadership and organizational cynicism, organizational commitment and teachers' job satisfaction. *International Journal of Progressive Education*, *15*(1), 167-183.

Pardosi, J., & Utari, T. I. (2021). Effective principal leadership behaviors to improve the teacher performance and the student achievement. *F1000Research*, *10*.

Richter, E., Fütterer, T., Meyer, A., Eisenkraft, A., & Fischer, C. (2022). Teacher collaboration and professional learning: Examining professional development during a national education reform.
Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American educational research journal*, *52*(3), 475-514.
Safi'i, M., Maryam, S., & Suryo, I. (2024). Pengaruh Motivasi, Komunikasi, dan Kompetensi terhadap Kinerja Guruyy SDIT Muhammadiyah Al-Kautsar: Studi Kasus pada SDIT Muhammadiyah Al-Kautsar Gumpang Kartasura. *EduInovasi: Journal of Basic Educational Studies*, *4*(1), 393-407.
Saka, O. A. (2021). Can teacher collaboration improve students' academic achievement in junior secondary mathematics? *Asian Journal of University Education*, *17*(1), 33-46.
Saleha, P. (2008). Status of female teachers in Pakistan: Problems and prospects. *The Journal of Educational Research*, *11*, 61-75.
Sandika, R., Lian, B., & Rohana, R. (2022). Improving Teacher's Performance Through Principal's Leadership. *Journal of Social Work and Science Education*, *3*(3), 211-218.
Shi, H., Cheung, E. S., & Cheung, A. C. (2020). The impact of stratified teaching on the academic performance of Chinese middle school students: A meta-analysis. *Science Insights Education Frontiers*, *7*(1), 735-760.
Shikalepo, E. E. Research Journal of Education.
Shimizu, I. (2014). Multistage sampling. *Wiley StatsRef: Statistics Reference Online*.
Smith, P. A., Escobedo, P., & Kearney, W. S. (2020). Principal influence: A catalyst for positive school climate. *International Journal of Education Policy and Leadership*, *16*(5), n5.
Subedi, Y. R. (2021). Factors Affecting Parental Choice of Private and Public Schools in Dhading. *Marsyangdi Journal*, 67-80.
TAHIR, I., & FATIMA, N. (2023). Effect of principal's instructional leadership practices on teachers' professional development: A cross sectional study of secondary school level from selected areas of Lahore, Punjab, Pakistan. *International Journal of Science and Research Archive*, *10*(2), 590-606.
Tayyab, I., Naveed, A., & Andleeb, N. (2023). 'Primary School Teachers' teaching Practices and their relevancy with Student Learning Outcomes. *Journal of Development and Social Sciences*, *4*(1), 430-437.
Ukobizaba, F., Ndihokubwayo, K., Mukuka, A., & Uwamahoro, J. (2021). From what makes students dislike mathematics towards its effective teaching practices. *Bolema: Boletim de Educação Matemática*, *35*, 1200-1216.
ul Hassan, Q., Din, M., & Gul, M. (2021). A STUDY OF WORK CULTURE OF PUBLIC AND PRIVATE SECONDARY SCHOOLS OF SOUTHERN PUNJAB. *Pakistan Journal of Educational Research*, *4*(1).
Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational research review*, *15*, 17-40.
Vansdadiya, R., Vasoya, N., & Gondaliya, P. (2023). Beyond the Classroom Walls: Activity based Learning for a Real-world Math Experience. *Asian J. Educ. Soc. Stud*, *43*(1), 1-9.
von Oertzen, T., Hertzog, C., Lindenberger, U., & Ghisletta, P. (2010). The effect of multiple indicators on the power to detect inter-individual differences in change. *British Journal of Mathematical and Statistical Psychology*, *63*(3), 627-646.
Wang, M.-T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational psychology review*, *28*(2), 315-352.
Weinberg, P. J. (2019). Classroom Discussions as an Artifact towards Teachers' Professional Community. *International Journal for Mathematics Teaching and Learning*, *20*(2), 237-256.
Wenger, E. (1999). *Communities of practice: Learning, meaning, and identity*. Cambridge university press.
Wibowo, A., & Hasanah, E. Principal's Strategy in Developing Teacher Work Motivation.

Wiens, P. D., & Chou, A. (2022). Teacher Accountability. In. Routledge.
Zimmer, F., Henninger, M., & Debelak, R. (2023). Sample size planning for complex study designs: A tutorial for the mlpwr package. *Behavior research methods*, 1-18.

Appendix A
Questionnaire

Name:								
School Name:								
Average Attendance								
Subject	English		Math's		Urdu		Sindhi	
How many hours per day/week students are engaged in reading/practice?	Hours/day				Hours/week			

Gender

Male	Female

Age

Below 25 years	30 years	40 years	Above 45 years

Qualification:

Intermediate	Graduation	Masters	MPhil

Type Of School

Government	Private

Type Of Education

Co-Education	Boys	Girls

Medium of schools

English	Urdu	Sindhi

Year of teaching in the current school

1-5 years	5-10 years	10-15 years

Total Year Of teaching experience

05 years	10 years	15 years

Net Salary in Rs

10000 Rs	15000 Rs	20000 Rs

Languages you can speak and understand:

Sindhi	Urdu	English	Any other

- ✓ Think about your experience in your school as you read each statement below. Tick that best which describes your answer. You can skip any question if you do not know how to answer.

S. No	Question	Never کبھی نہیں	Rarely شاذ و نادر ہی	Sometimes کبھی کبھی	Often اکثر	Always ہمیشہ
1.	How frequently Do you use interactive teaching strategies (Flash Card, Activity-Based learning) that engaged students?					
2	How frequently do you use technology in your teaching? (Video, Audio, etc.) آپ اپنی تعلیم میں ٹیکنالوجی کا کتنی بار استعمال کرتے ہیں؟					
3	do you plan and prepare for your lessons? کیا آپ اپنے اسباق کی منصوبہ بندی اور تیاری کرتے ہیں؟					
4	To what extent do you believe the class duration is enough? آپ کو کس حد تک یقین ہے کہ کلاس کا دورانیہ کافی ہے؟					
5	Do the principal guides and motivate you to improve the teaching methodology? کیا پرنسپل پڑھانے کے طریقہ کار کو بہتر بنانے کے لئےرہنمائی دیتے ہیں؟					
6	Does the principal know about the student's academic level. کیا پرنسپل طلباء کی دلچسپی بڑھانے کے لیے اسکول کی سطح سے کوشش کرتے ہیں؟					
7	Does in your school collaboration and teamwork among teachers? کیا آپ کےاسکول میں اساتذہ کے درمیان تعاون اور ٹیم ورک ہے؟					
8	Do your school arrange teachers meeting? آپ اپنے ساتھیوں کے ساتھ کتنا وقت گزار رہے ہیں؟					
9	How frequently are students engaged in Practice? طلباء دوران کلاس ریاضی کو کتنا وقت دیتے ہیں؟					
10	Do you feel supported by your school principal کیا پرنسپل آپ کو سہولیات مہیا کرتے ہیں؟					

Provide answers in words: What do you think is the reason behind the low learning level of students?

Any suggestion to improve students' reading/math solving?

Appendix B
Interview Guide for Principals

Principal questionnaire:

Principal Name: _____ Age: _____ School Name: _____

Gender:

Male	Female

Qualification:

Masters	MPhil	B.Ed.

Year of Experience:

5 Years	10 Years	15 years

School type:

Private	Government

Education type:

Co-Education	Boys	Girls

Medium Of School

English	Sindhi	Urdu

School is:

a. Monograde (1 teacher per class at a time)
b. Multigrade (1 teacher per two or more than two classes at a time)

Professional School Environment:

A School professional environment can be understood as a strong and positive culture of collaboration, mutual respect, and trust among teachers, school leaders, and other stakeholders. In such an environment, teachers are

encouraged to work together to improve their practice, share their knowledge and skills, and collaborate on instructional strategies that benefit all students.

پیشہ ورانہ اسکول کے ماحول کو اساتذہ ، اسکول کے رہنماؤں اور دیگر اسٹیک ہولڈرز کے مابین تعاون ، باہمی احترام اور اعتماد کی ایک مضبوط اور مثبت ثقافت کے طور پر سمجھا جاسکتا ہے۔ ایسے ماحول میں، اساتذہ کی حوصلہ افزائی کی جاتی ہے کہ وہ اپنی مشق کو بہتر بنانے، اپنے علم اور مہارتوں کا اشتراک کرنے، اور تدریسی حکمت عملی وں پر تعاون کرنے کے لئے مل کر کام کریں جو تمام طلباء کو فائدہ پہنچاتے ہی۔

Questions.

1. Do you think the school environment has an impact on students?
2. How can teacher performance be improved?
3. What do you think is the reason behind the low achievement level of students' academics**?**
4. Do you think teachers need motivation or guidance? Or do you guide your staff?
5. How do you support your teachers when asked why teaching practice is affected?
6. How do you know which teachers teach well and which does not? Is there any parameter or something on the district level?
7. Why do you think teamwork work is important?
8. Do you have any suggestions for improving teachers' collaboration to improve the school environment?

Thanks

Student Assessment Test

Name of student: _____D/O, S/O: _____

School: _____Age: _____

Gender: _____

Total days of school attendance: _____ Days of absent from school: _____

Do you feel good in school? Yes / No Why: _____

Do you go to tuition? _____

Parents Qualification: Father _____ Mother _____

Any Other: _____

Qno1. Read the following sentences:

1. What are you doing Memna?
2. After making each pot, she put it out in the sun to dry.
3. He wakes up early in the morning and first goes to the mosque to offer prayers.

Qno2. Read The Following Words:

Tree Clothes Bigger Faster Indian Ocean River Vegetables Cart Pronoun Communication

Qno3. Recognize the following letter.

Capital letters:

W	P	T	J	R	N

Small Letters:

k	u	z	b	h	s

QNo. 4 Ask The student to read Following Passage:

This is the true story of a little girl called Zahra. She wanted to study in a school and become a teacher. She wanted all the children in her village to get a good education. Zahra is born in a small village near Mirpur Sakro. When she is five years old, she started going to school with her brother. She loved her school. She learnt to read and write. Her books told her about the sun, Its light and heat. She also learns about many things and animals.

Math's: Ask the students to solve:

Subtraction:

2863132 439568 65309949

- 164350 - 2348736 - 8214309

Number recognition:

35,	57,	62,	24,	73,	81,	44,	98.

Number recognition:

1	2	3	4	5	6	7	8	9.

Divisions:

Q No 1.

1. 295845 ÷ 33
2. 576480 ÷ 60

Q No 2.

1. 444771 ÷ 321
2. 466896 ÷ 822

Test of Urdu:

حضرت خدیجۃ الکبریٰ

حضرت خدیجۃ کا شمار مکہ کے انتہائی مال دار خواتین میں ہوتا تھا۔اپنی پاکیزگی اور پاک دامنی کی وجہ سے آپ طاہرہ کے لقب سے مشہور تھیں۔ حضرت خدیجۃ کو ایسے شخص کی تلاش تھی جو ان کا سامان تجارت، دیانت داری

کے ساتھ دوسرے ملکوں میں جا کر فروخت کردیا کرے۔ نبی کریم ﷺ کئی تجارتی سفر کرچکے تھے۔ اعلٰی کردار کی وجہ سے آپ کو لوگ " صادق اور امین کے لقب سے پکارتے تھے۔

جملے:

سب ہے تیری عطا اے خدا اے خدا

سچل سرمست بڑے ہو کر تنہائی پسند ہوگئے۔

گاؤں کی فضا خاموش تھی۔

تمھاری زندگی اور صحت کا دارومدار صاف ہوا پر ہے۔

الفاظ کی فہرست:

کرشمہ	ڈالیاں	محنت	حیثیت	عروج
فائدہ	قربان	پرچم	مقرر	سخت

حرف:

ج	ھ	گ	ف	د
ن	ش	ر	ق	غ

Test Of Sindhi:

مسلمانَ جڏهن مڪي شريف کان هجرت ڪري مديني شريف آيا تڏهن کين پيئڻ جي پاڻيءَ جي ڏاڍي تڪليف پيش آئي. شهر جي ويجهو 'رومہ' نالي مٺي پاڻيءَ جو هڪ کوهہ هوندو هو، جيڪو هڪ يهوديءَ جي ملڪيت هو. اُهو يهودي ايترو تہ ظالم ۽ لالچي هوندو هو، جو پاڻي بہ پيسن تي وڪڻندو هو. جيڪو کيس پيسا ڏيندو هو تنهن کي پاڻي پرڻ ڏيندو هو ۽ جنهن غريب وٽ پيسا نہ هوندا هئا تنهن کي پاڻي پرڻ نہ ڏيندو هو. خاص ڪري مسلمانن سان تہ هن جو ويرُ هوندو هو.

جملا:

منهنجا وطن پيارا وطن، اکڙين سندا تارا وطن.

سنڌ، صوفين ۽ بزرگن جي ڌرتي آهي.

اڪرم اسڪول ڇو نه ٿو اچي؟

پورهيت خدا جو دوست آهي.

<u>الفاظ</u>

نظارو	سٿو
لتاري	آڪاش
اجاري	ڏسبا
ڌرتي	ڪهڪشان
وسندي	نهاريو

<u>حرف</u>

ي	ڈ	ٹ	ڈ	ک	ٹ