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## **Professional Competency of Secondary School Teachers and Classroom Learning Environment; A Correlational Study**

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### **Abstract**

The study correlate the variable of professional competency of teaches and the classroom learning environment at secondary level. For the selection of the respondents Simple random sampling technique was used. The respondents were comprised of 282 secondary school teachers, and 380 matric class (boys) students, 642 respondents from the three districts of Khyber Pakhtunkhwa. Three research objectives were created for the study. Learning environment Questionnaire (LEQ) was used to collect the related data. The instruments were validated through Cronbach's alpha with the index of .938 which was obtained for the (LEQ) respectively. The data was collected and were analyzed using SPSS. Furthermore mean score, Pearson Product Moment Correlation statistic results were tested at 0.05 level of significance. The research study's findings indicated that most secondary school teachers possess the skills to create a friendly atmosphere in the classroom during the teaching and learning process. The findings revealed that a substantial relationship exists between teachers' understanding of Professional competency of secondary school teachers and the Classroom Learning Environment at secondary level. On the basis of the conclusions it was recommended that classroom atmosphere for learning should be engaging, and teachers are advised to utilize various resources tailored to their students' needs, including charts and audiovisual aids. Ease to access the technological resources that Students can utilize the technological tools to enhance their learning capabilities. It was recommended that educators make use of the teaching and learning resources accessible in classrooms to improve students' learning results. It was recommended that teachers in secondary schools should receive training to utilize instructional materials more effectively, enabling students to organize the content by the end.

**Key Words:** Relationship, Teachers Professional competency, Classroom Learning Environment, and technological resources

### **Introduction**

The professional literacy of teachers enable the teachers to design the classroom



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environment in a way that promotes interaction between teachers and students and makes teaching and learning process a lot more easier for the both. According to Nadeem and Lilla (2024) skilled classroom leaders "create an environment that supports learning with minimal disruptions." Teachers are essential in establishing classroom dynamics, controlling student conduct, and successfully presenting material since they are learning facilitators. It is commonly acknowledged that a teacher's professional competency which encompasses subject-matter expertise, pedagogical skills, classroom management, assessment techniques, and emotional intelligence, is a critical factor in determining successful student outcomes and effective teaching (Darling-Hammond, 2006; Shulman, 1987). Simultaneously, the classroom learning environment acts as a vital context in which teaching and learning occur. Physical components, teaching methods, the social-emotional environment, and the psychological safety that students feel while participating in academic activities is all included (Fraser, 2012). Students can actively participate in a variety of activities, take their studies seriously, control their behavior, and understand the clear expectations and high standards of what they are expected to accomplish in a safe and supportive learning environment, Roberts, (2005).

The knowledge, skills, and talents a teacher possesses to effectively teach their subject matter to their students is referred to as their competency. It requires a variety of skills, including the capacity to develop interesting and successful lesson plans, communicate clearly, and manage the classroom effectively (Ahmad et al., 2017). Teachers' professional competency is important for the entire educational system as well as for the development and achievement of all students (Ismail & Jarrah, 2019). Their proficiency allows them to make greater contributions to the teaching and learning components and, concurrently, to the creation of a supportive learning environment for students (Aziz et al., 2014; Khan & Ahmed, 2015). As stated by Marraccini et al., (2020) teaching is more than just imparting knowledge; for instruction to be effective, a teacher must be competent at controlling the teaching-learning process. Teachers become a source of learning and become change agents for the students because of their professional knowledge, abilities, and attitude.

### **Research Gap**

There is still a need for empirical study examining the connection between teacher competency and classroom environment, despite the fact that both have been extensively studied. Do better learning environments exist in classrooms with more professionally qualified teachers? Do pupils have a better chance of succeeding in environments where teachers possess greater levels of professional expertise and understanding? It is imperative that these questions be addressed, especially in light of ongoing educational reforms, programs for teacher professional development, and attempts to increase school efficacy. **Therefore**, the purpose of this study was to investigate relationship between professional competency of teachers and classroom learning environment at secondary level. The study aims to add to the body of information that guides teacher preparation programs, school leadership strategies, and policy development that promotes high-quality education by examining this relationship.



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## Literature Review

The classroom learning environment plays a critical role in promoting professional literacy among students. Research by Merkley and Schmidt (2019) supports the notion that the classroom learning environment is critical for promoting professional literacy. The findings suggested that a supportive classroom environment, characterized by teacher-student interactions that fostered a sense of belonging and positive relationships between classmates, was associated with increased student engagement in literacy activities. Establishing a positive learning environment is crucial for teachers to make the classroom welcoming for students, allowing them to collaborate effectively. This environment significantly impacts students' learning abilities, making them feel at ease as engaged and cooperative members of the class. Additionally, it fosters the emotional well-being of students, which is vital for their learning and emotional growth (Bucholz & Sheffler, 2009).

Furthermore, the study found that students in a collaborative classroom setting tended to engage more in activities that demanded critical thinking and problem-solving abilities connected to literacy. One important concept and notable feature of a learning environment is interactivity (Chou, 2003; Vrasidas, 2000). Interactivity in the educational setting refers to ongoing, reciprocal conversation between students or between students and a teacher. The findings suggest that cultivating a supportive and positive classroom environment is essential for improving students' professional literacy. According to Canuto et al. (2024), teaching competency allows teachers to create "learning environments conducive to learning by ensuring safety, security, equity, and support, fostering student accountability and success." They can build inclusive educational learning environments for students from different backgrounds.

According to Thapa et al. (2013), the idea of learning environments is significant because it influences child's social and emotional health in addition to their academic performance. In addition to better behavior and mental health, a healthy learning environment can boost motivation, engagement, and achievement. On the other hand, a bad learning environment can exacerbate mental health conditions like anxiety and depression, absenteeism, and poor classroom performance. Therefore, it has been demonstrated that the two ideas are related.

As concluded by Minaz and idris (2023) The learning environment is combination of multiple factors including teaching approaches, management of classroom space and physical resources, collaboration and social atmosphere of the classroom and students' interactions with each other's and with their teachers. As Wang (2008) explain three major components of classroom learning environment while (Manninen et al. 2007; Minaz, Tabassum & Idris, 2017) identified the components that make the classroom environment effective for learning. But both were agreed that classroom learning environment is the one which support the classroom learning activities in an effective mechanism.

## Research Objectives

The following research objectives were the main focus of the study

1. To find out the professional competency of secondary school teachers with relevance to classroom learning environment



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2. To find out the correlation between the professional competency of secondary school teachers' and classroom learning environment at secondary school level
3. Find out the association between the secondary school teachers' professional literacy, classroom learning environment and the classroom performances of students.

### Research Questions

The research question was;

1. What is the professional competency of secondary school teacher's towards classroom learning environment?

### Research hypotheses

The following null hypotheses were tested;

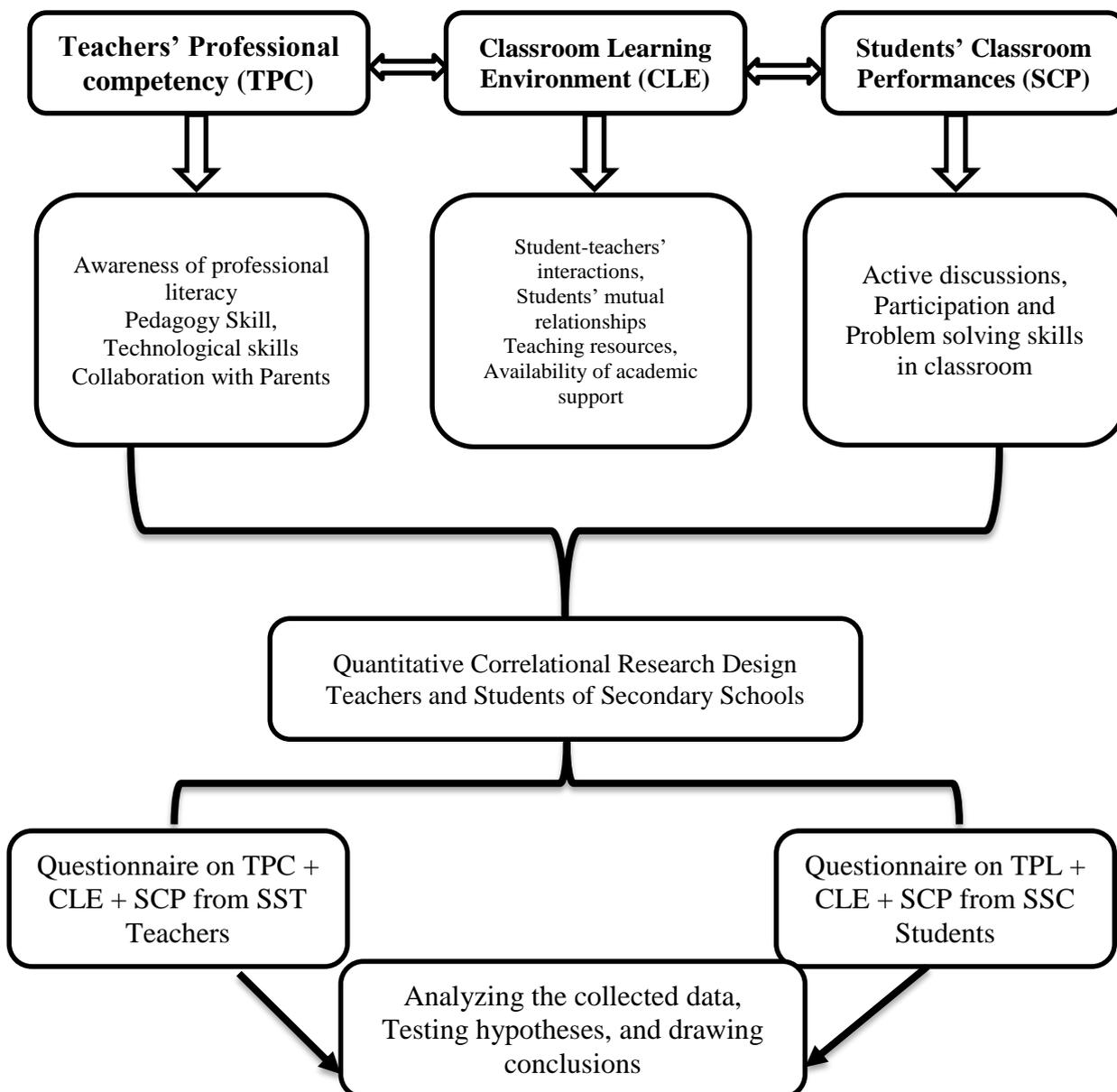
1.  $H_{01}$ : There is no significant correlation between the professional competency of secondary school teachers' and classroom learning environment at secondary level.
2.  $H_{02}$ : There is no significant correlation between teachers' professional literacy, classroom learning environment and the classroom performances of students' at secondary school level.

### Statement Of The Problem

Despite continued attempts to improve educational outcomes, gaps in student performance and engagement persist across multiple learning environments. The professional competency of teachers, which includes pedagogical skills, classroom management, content knowledge, and interpersonal abilities, is one possible factor influencing these results. However, there is limited empirical evidence on how these skills relate to the overall quality of the learning environment in the classroom. The aim of this study is to establish whether there is a significant correlation between the professional competence of teachers and the learning environment (Habib, Ullah, & Minaz, 2023) teachers create in the classroom. Grasping this connection is essential for guiding teacher education, ongoing professional development programs, and efforts to enhance schools.

### Conceptual Framework

The professional competency of teachers guarantees the successful execution of their instructional plans. Various indicators are essential for educators to achieve their professional literacy. In Pakistan, the foundational framework for teachers is outlined by the national professional standards.



Conceptual framework for the Correlational Study of Professional Competency of Teachers and Classroom Learning Environment

**Significance of the Study**

The research study is significant with respect to the importance of teacher’s professional literacy and its association along with its effectiveness during the process of teaching and learning. As the previous research studies collectively suggested that secondary level students exhibit varying degrees of technological proficiency, with some demonstrating adequate levels of digital literacy (Jan, 2018). Therefore the study is significance for the stakeholders in the field of teaching and learning that is teachers, students, community, and bureau of curriculum, professional training institutions and higher educational institutions for the reason that teachers professional competency is the dire need of the day. The study is important for future researchers to conduct such type of research adopting the mix method research and qualitative research to promote the



importance of the teacher's professional competency with classroom learning environment

## Methodology

The research study was quantitative in nature, and a deductive approach was employed. **POPULATION**

Since the research took place in the Khyber Pakhtunkhwa province of Pakistan, the sample included all boys' secondary schools in that region. Based on the EMIS data from the year 2020-2021, there were a total of six thousand two hundred eighty-four secondary school teachers and a total of eighty-eight thousand nine hundred seventy-three, male students in the study's population.

## SAMPLE AND DATA COLLECTION TOOL

To achieve the research goals, a total of two hundred eighty-two (282) secondary school teachers (SSTs) and three hundred eighty (380) class 10 students were chosen using the Raosoft online sample size calculator for data collection purposes. The Professional competency self- developed Questionnaire (PCQ), along with the classroom learning environment (CLE) Questionnaire was developed independently, underwent validation and its reliability was assessed using SPSS, with a Cronbach's alpha calculated at  $\alpha = .938$ . The dataset was analyzed statistically, using Mean, sd, t-test, and Pearson Product Moment Correlation, with a significance level set at 0.05.

## CATEGORIZATION OF MEAN SCORES

**Low:** A mean score ranging from 0.0 to 0.9 is considered low

**Medium:** Mean scores are classified in this range if they lie between 1.0 and 1.9.

**High:** A mean score is characterized as one that lies within the range of 2.1 to 2.9.

**Very High:** Scores that fall between 3.0 and 3.9 are considered to be quite high.

## Table 1

*Professional competency of secondary school and classroom learning environment*

Statements	N	Mean	S. D
I use strategies to guide the students during classroom activities	282	1.55	.715
I take interest in the students' academic problems		1.66	.743
I feel confident to Enhance my students' problem-solving skills		1.70	.688
I take rounds in the class to talk to my students		1.73	.781
I always appreciate students to discuss their ideas in the class		1.76	.881
Encourage students' ideas and suggestions		1.75	.828
Guide students towards solution of their problems		1.71	.717
Students are ready to start the class on time		2.16	.957
Follow instructions as per scheme of studies		1.81	.807
Students cooperate with each other in class		2.06	1.012
My students work as a team in a group		2.20	.952
My students collaborate in classroom projects		2.11	.807



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Students cooperate with each other in class activities		2.05	.906
I pay equal attention to every student's question		1.71	.852
Students have equal chance in class discussions		1.76	.818
Equal opportunity to my students to answer questions		1.69	.814

The above table 1 shows the mean score and standard deviation for all the statements of classroom learning environment. These questions were asked from secondary school teachers and from students to record their perceptions about classroom learning environment. Majority of secondary school teachers agreed that they guide students whenever they need help with a mean score of 1.55. Also, other statements like “ask students how they solve problems”, “take round of the class”. “Appreciate students to discuss ideas”, “encourage the students to give ideas”, “guide students towards solution of their problems”, “follow the schemes of study instructions”, “pay attention to every student question”, “give same opportunity to the students to ask question”, “give equal opportunity to answer the question” all mean score falls it the medium range (1.66 to 1.81 with under 1.00 standard deviation values). This shows not fully but on moderate level Secondary school teachers agreed with those questions.

On the other hand, statements that have high mean score are “students' eagerness to take class in time”, “students' cooperation with each other in the class”, “students' teamwork”, “help each other on project”, “class activity cooperation” the mean score range was 2.05 to 2.20. These results showed that according to the secondary school teachers, their students have qualities like teamwork, cooperation, and collaboration during classroom activities.

Similarly, students were also asked about the classroom learning environment. All statements of classroom learning environment mean score falls in medium range; this shows the moderate level of agreement. Students' responses were similar, and the mean scores were ranged from 1.44 to 1.98 on ten items of the construct and on six items students' responses were higher which ranged from 2.02 to 2.54. The mean scores of students' responses were not much scattered from their mean score responses. Overall, the respondents were moderately satisfied from the classroom learning environment.

**Table 2**

*Correlation between the professional competency of secondary school teachers' and classroom learning environment*

		<b>1</b>	<b>2</b>
level of competency	Professional Pearson Correlation	---	.399**
	Sig. (2-tailed)	---	.000
	N	662	662
Classroom Environment	Learning Pearson Correlation	.399**	1
	Sig. (2-tailed)	.000	---
	N	662	662

\*\* . Correlation is significant at the 0.01 level (2-tailed).



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Table 2 showed that the correlation coefficient (r) value between professional knowledge and skills of teachers and classroom learning environment of students in secondary schools the r value is .399 which showed a weak association between both variables.

Moreover, the p value is <0.01 shows the relationship is statistically significant. Therefore, it is found that teachers' knowledge of professional competency is positively associated with classroom learning environment of their classrooms.

**Hypothesis Testing:** due to the weak association between the variables, the null hypothesis that there is no significant correlation between the professional competency of secondary school teachers' and classroom learning environment at secondary level was rejected

**Table 3**

*Association Matrix of Professional competency, Classroom learning Environment and Students' Classroom Performance*

Association Matrix		1	2	3
Pearson Correlation	Students' performance	1.000	.461	.483
	Knowledge of Professional literacy	.461	1.000	.399
	Classroom learning Environment	.483	.399	1.000
Sig. (1-tailed)	Classroom performance of Students	----	.000	.000
	Knowledge of Professional literacy	.000	----	.000
	Learning environment	.000	.000	----
N	students performance	662	662	662
	Knowledge of Professional literacy	662	662	662
	Learning Environment	662	662	662

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results of the above table 3 showed the relationship of teachers' professional competency, classroom learning environment and students' classroom performance. The results was illustrated that the r value of .461, and .483 which were significant at .000 showed a low-level positive correlation of teachers' professional competency with classroom learning environment and students' classroom performances.

It was revealed that the professional competency of secondary school teachers' was most important for developing the positive learning environment at school for the better performance of students which contribute positively to students' classroom performances.

**Hypothesis Testing:** due to the positive correlation between variables the null



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hypothesis that there is no significant correlation between teachers' professional competency, classroom learning environment and the classroom performances of students' at secondary school level was rejected.

### **Discussions**

The results indicated that most secondary school teachers possess the skills to create a welcoming atmosphere in the classroom during the teaching and learning process. Merkley and Schmidt (2019) stated that the knowledge and proficiency of teachers regarding the evolving learning environment is essential. The research conducted by Guo, Dobson and Petrina (2016) indicated that a conducive classroom atmosphere, marked by interactions between teachers and students that promote belonging and supportive relationships among peers, correlated with higher levels of engagement in literacy activities among learners. Additionally, the findings suggested that students who were part of a collaborative classroom environment demonstrated an increased likelihood of participating in critical thinking and problem-solving tasks related to literacy.

### **Conclusions**

It is vital to periodically update teachers in order to increase the quality of education and instructional approaches. The intake method should be concise. NACTE is already in the process of modernizing the NPSTE. Much more research is needed to determine the causes of student failure. It was concluded that the secondary school teachers were professionally literate enough due to which they effectively taught us, manage classroom learning activities, and have developed a highly motivating learning environment in the class. The teachers can effectively manage overcrowded classes, utilizes multiple instructional strategies, communicated effectively with students, and created a learning environment in the classroom.

Based, on these results it was concluded that classroom learning environment of secondary school students is conducive for learning, secondary school teachers are providing enough participation opportunities in classroom activities and discussions, teachers have developed a strong rapport with students which motivate them for learning, enhance students' cooperation, collaborative, and teamwork spirits.

It was concluded after the rejection of the null hypothesis of the study that there is no significant association between teachers' professional literacy and students' classroom learning environments, because the correlation co-efficient two components of teaches professional literacy was positively and moderate level association, while two components have positive but low-level association with the classroom learning environment of students at secondary school level. These constructive associations show that teachers' professional literacy is a strong indicator of developing favorable learning environment in the class for students' learning.

### **Recommendations**

It was recommended that the learning atmosphere in the classroom should be engaging, and teachers are advised to utilize various materials tailored to their students' needs, such as charts and audiovisual aids. Students can utilize the technological devices provided in their schools. It was suggested that secondary



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school educators receive training to effectively use instructional resources, ensuring that students can organize the material by the conclusion. It was admired that the secondary school teachers utilizes appropriate teaching and learning resources in the classroom to improve the student learning outcomes. It was also suggested for the future researchers that there is a need for mixed-methods research that evaluates students' or observers' perceptions of the learning environment in addition to teachers' competence levels (pedagogical subject matter awareness, classroom management, etc.).

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