

**RESEARCH PAPER****Investigating the Impact of Teaching-Learning Materials on Students' Academic Performance in Government Primary Schools in the Naseerabad Division, Balochistan, Pakistan****<sup>1</sup>Dr. Shakeel Ahmed \* <sup>2</sup>Dr. Mumtaz Ali Baloch and <sup>3</sup>Hafsa Karim**

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**\*Corresponding Author:** psychology.ahmed1@gmail.com**ABSTRACT**

The main objective of this study was to examine the impact of Teaching-Learning Materials on students' academic performance in Government Primary Schools in the Naseerabad Division of Baluchistan, Pakistan. For this purpose, the data was collected from 200 head teachers, 8 educational administrators, 32 parents and 32 community members. The data collected through the questionnaire was analyzed using frequency distribution, percentage, Pearson correlation, and logistic regression. On the other hand, thematic analysis was used to analyze data collected through interview schedules and focus group discussions. The study found that teaching-learning materials significantly influence students' academic performance, and they play a crucial role in increasing students' engagement and understanding of complex concepts, improving retention, and boosting motivation and examination performance. Therefore, the study recommended, among others, that governments need to allocate more funds to provide teaching-learning materials to schools to enhance students' academic performance.

**KEYWORDS:** Balochistan, Quality Education, Teaching-Learning Materials**Introduction**

Teaching-Learning Materials (TLM) are essential to learning and significantly impact students' academic performance (Shafique, 2016). Textbooks, audiovisual materials, laboratory equipment, and other materials that assist students in comprehending and retaining information are examples of TLM (Saad & Sankaran, 2020).

Teaching-learning materials significantly assist the progress of students' learning. They offer a visual aid that might benefit students in comprehending complex ideas and concepts. Diagrams, charts, and graphs, for instance, can assist students in visualizing material that is challenging to understand from text alone (Riyan, 2016). Moreover, TLMs can improve students' ability to remember the material. When knowledge is delivered to students through visual aids or hands-on activities, they are more likely to remember it. Students are more likely to retain a scientific concept, for instance, if they have actually carried out an experiment rather than just reading about it in a textbook (Shabiralyani et al., 2015).

Years of experience have demonstrated that teachers rely excessively on using words to communicate and convey concepts and facts during teaching process. This approach is referred to as the "chalk-talk" method. Today, technological advancements have made it possible to create materials and equipment that can be utilized to minimize teachers' speaking while also making the lesson clearer, more entertaining, and simpler to comprehend for the student (Onasanya et al., 2008).

Various teaching-learning materials, including textbooks, audiovisual aids, computer-based resources, and laboratory equipment, are used to facilitate and improve students' academic performance (Soetan et al., 2010). Textbooks are extensively utilized within educational institutions to provide students with the essential information required for comprehending various subjects. However, textbooks cannot provide students with the benefit of audiovisual aids, which are crucial in enhancing their comprehension of complex topics (Ordu, 2021).

In the same way, audiovisual resources such as podcasts, presentations, and videos help expand students' educational experiences and facilitate their understanding of complicated concepts. Using audiovisual materials in classrooms is a valuable complement to conventional instructional lectures, effectively engaging students and maintaining their focus (Kuok Ho, 2018).

Another crucial TLMs used in science classes is laboratory equipment. Students can get practical experience conducting experiments and gathering data using this kind of TLMs. Laboratory tools are especially useful for improving students' comprehension of scientific theories and concepts (Al Musawi et al., 2015). Moreover, computer-based resources are also frequently used in classrooms. Online sources, virtual labs, and educational software are examples of this. Computer-based learning materials effectively provide students with interactive and interesting learning opportunities.

In light of this, the present study aims to assess the impact of teaching-learning materials on the academic performance of students in government primary schools in the Naseer Abad Division of Balochistan.

### **Study Area**

The study was conducted in the Naseerabad division, one of the administrative divisions in the Balochistan province, Pakistan. This administrative division comprises five districts: Sohbat Pur, Jaffarabad, Naseerabad, Kachhi, and Jhalmagsi. Two of these five districts were chosen for this study: Sohbat Pur and Jaffarabad. According to the 2017 census, 0.7 million is the combined population for these two districts. These areas were selected for research because students' academic performance in government schools was poor, indicated by the low enrolment and high dropout rates, compared to the rest of the province. Most students struggle to read and write the English and Urdu language correctly. They lack motivation and interest in the study. They perform poorly in the board examinations, and their confidence level is not worth praising.

### **Methods of Data Collection and Analysis**

The data collection and analysis methods are based on the education statistics for the area selected for the study. The study area has 847 government primary schools. From this number, 200 schools (100 boys' and 100 girls' schools) were selected through a simple random sampling method. A questionnaire was used to collect primary data from 200 primary school head teachers. Moreover, eight (8) key informants, including the director and divisional director of education (Schools), District Education Officers (DEOs), and Deputy District Education Officers (DDEOs) of the Jaffarabad and Sohbat Pur districts, were also interviewed for qualitative data.

This study also entailed using focus group discussions held in different parts of the study area. Individuals chosen to participate in the focus group discussions were parents and community members who provided valuable information about factors that influence students' academic performance. Questionnaire data was analyzed using frequency distribution, percentage, mean, Pearson correlation, and logistic regression. Bivariate correlation was run to determine the link between the dependent and

independent variables. It was followed by the use of multivariate analysis through logistic regression. Logistic regression was used as an analytical technique as it is the most suitable statistical procedure when the dependent variable (i.e., students' academic performance) is dichotomous. Moreover, thematic analysis was used to analyze data collected through interviews and focus group discussions.

### Results and Discussion

A bivariate correlation analysis was conducted to examine the relationship between the utilization of teaching-learning materials and students' academic performance. The computed correlation coefficients ( $r = .375, p < 0.01$ ) indicate a significant positive association between the two variables under investigation. Furthermore, the logistic regression analysis results show a statistically significant association between using teaching-learning materials and students' academic performance ( $OR=14.680, p < 0.05$ ). This suggests that using teaching-learning materials is associated with a fifteen times increase in the likelihood of improving students' academic performance.

The results further indicate that TLMs play a significant role in enhancing students' motivation and their understanding of complex concepts, and improving students' engagement and interest in their studies.

### Availability of Teaching-Learning Materials

The first research question was to examine the availability of teaching-learning materials in government primary schools by collecting the views of head teachers. Table 4 indicates head teachers' response to the availability of teaching-learning materials. The data transpired that the government primary schools in the Sohbat Pur and Jaffarabad districts were ill-equipped with teaching-learning materials as 60% of head teachers said their schools lacked adequate course books, and 100% of respondents stated their schools had no library. Moreover, 70% of respondents mentioned that their schools lacked charts. Regarding computer labs with internet connection and multimedia, 100% of head teachers stated these facilities were unavailable in their schools.

**Table 1**  
**Head Teachers' Response on the Availability of Teaching-Learning Materials**

Teaching-Learning Materials	Availability			
	Yes	%	No	%
Course Books	80	40	120	60
Library	00	0	200	100
Computer Lab with Internet Connection	0	0	200	100
Multimedia	0	0	200	100
Charts	60	30	140	70

### Impact of Teaching-Learning Materials on Students' Academic Performance

Teaching-learning materials considerably affect students' academic performance as they enhance students' engagement and understanding of complex concepts, improve retention, and increase motivation and performance in the examination.

### Impact of Teaching-learning Materials on Students' Engagement in Learning

There findings of the study revealed that by providing visual and tactile stimuli, teaching-learning materials make learning more interesting and engaging for learners.

While answering the question of how teaching-learning materials enhance students' engagement in learning, the Director of Education (Schools) stated:

*"Books, films, and in-class activities are just a few examples of teaching-learning materials that enhance a student's educational experience by encouraging an engaging and exciting learning environment. More enthusiastic students tend to be more focused, more engaged, and more likely to be actively involved in a more profound understanding and comprehension of the subject. A higher degree of student engagement and active participation in the academic subject has been seen when teachers use these excellent teaching resources."*

This result is consistent with those of Thakur and Srivastava (2018). They investigated the impact of teaching-learning materials on student engagement and science education learning outcomes. According to the study's findings, using teaching-learning materials, especially multimedia, to deliver instruction significantly increased students' engagement with the subject. Likewise, Bicen and Kocakoyun (2020) found that using digital storybooks in classrooms makes students involved in their studies more.

### **Impact of Teaching-Learning Materials on Students' Understanding of Complex Concepts**

The current study's findings also indicated that TLMs help students understand complex concepts by providing audiovisual representation of information. The Divisional Director of schools expressed the importance of TLMs in enhancing students' understanding of complex concepts in these words;

*"Teaching-learning materials such as charts, graphs, and diagrams provide a visual representation of data in a more organized and systematic way, enhancing students' understanding of complex concepts that are challenging to comprehend if explained solely through verbal communication."*

This finding is supported by a study conducted by Shabiralyani et al. (2015). They concluded that teaching-learning materials such as graphs, diagrams, and charts give students a visual presentation that helps them understand difficult concepts such as chemical reactions. Instead of just reading about a chemical reaction in a textbook, a chart that shows the steps of the process can help students comprehend the process better.

### **Impact of Teaching –Learning Materials on Students' Retention of Information**

The findings of the study demonstrated that Teaching Learning Materials provide students with a multi-sensory experience, which improves their ability to retain information; therefore, they play a significant role in helping students learn. While stating the importance of TLMs, the head teachers mentioned that the use of teaching-learning materials has been found to substantially impact students' ability to retain information, as these materials effectively use visual and interactive components. Using materials like diagrams, charts, interactive software, or hands-on activities activates students' various senses, which leads to the establishment of more comprehensive memory pathways. Visual aids simplify complex concepts, rendering them more easily retained, while interactive materials require active engagement, enhancing comprehension. These resources also facilitate the establishment of linkages between newly acquired information and pre-existing knowledge, thereby assisting in the process of information retention. Thus, combining visual, interactive, and cognitive elements in educational materials significantly enhances students' capacity to retain and retrieve information over time.

The findings are supported by Riyan (2016). He stated that it is easier for students to remember information when they visualize and understand concepts using models, charts, and diagrams. Similarly, Komachali and Khodareza (2012) stated that students could review vocabulary words in a language class using flashcards, which enhances their understanding and helps in word retention. Moreover, Munna and Kalam (2021) stated that TLMs encourage active learning, which is better than passive learning regarding information retention. That is why science class students who conduct experiments using interactive tools learn the material more effectively.

### **Impact of Teaching-Learning Materials on Students' Motivation**

The current study's findings also revealed that Teaching-Learning Materials (TLMs) significantly increase students' motivation to learn. The District Education Officers (DEOs) stated the significance of TLMs in boosting students' motivation in these words,

*“By adding elements of excitement and practicality into their educational experiences, teaching-learning materials help students become more motivated. Students are more excited to learn when they can access various instructional tools, including videos, interactive simulations, and examples from everyday life. In a science classroom, using tools like a hands-on experiment kit or a virtual laboratory environment fosters students' enthusiasm to understand complex topics by giving them a sense of exploration and achievement. Additionally, these instructional materials accommodate different learning styles, promoting thorough comprehension among all students. As a result, this creative strategy encourages greater self-assurance and motivation to learn. Teaching-learning materials can empower students and enhance their motivation for learning through greater interactivity, relatability, and adaptability.”*

The findings align with Raba and Tanni's (2014) conclusion. They concluded that TLMs make learning more engaging and interesting, encouraging students' participation. In a language class, students' motivation can be increased by using games and interactive software to practice grammar or vocabulary. Moreover, Colibaba et al. (2014) found that understanding complex concepts using stimulation to conduct experiments in the laboratory can also enhance students' motivation to learn science subjects. Similarly, Behrendt and Franklin (2014) found that in social studies classes, using stimulation or field trips to investigate historical events also enhances students' motivation and interest in that subject.

### **Impact of Teaching-Learning Materials on Students' Examinations' Performance**

The results of the study revealed that the use of teaching-learning materials plays a significant role in improving students' performance in examinations. The Director of education (Schools) stated the importance of impact of teaching-learning materials on students' examinations' performance in these words,

*“Using teaching-learning resources at the primary level substantially impacts students' examination performance, as it facilitates a deeper understanding of topics and enhances their self-assurance. For example, when teachers use counting blocks in classrooms, they help students understand mathematical concepts. Similarly, interactive resources such as games and quizzes strengthen subject matter and help students prepare for examinations.”*

The finding aligns with the conclusion of Igu et al. (2014), who found that students' examination performance was enhanced when they were taught using instructional materials. Similarly, a study conducted by Adedeji et al. (2018) indicated that the use of multimedia in classrooms improved students' examination performance.

## **Conclusion**

Teaching-learning materials are paramount in improving students' academic performance since they make the learning process more interesting and stimulating for students. These materials facilitate students' understanding of complex concepts by presenting data in a visual and interactive way. Furthermore, integrating modern Teaching-Learning Materials (TLMs) in educational institutions has positively impacted students' motivation levels and enhanced their academic performance in examinations. Nevertheless, the absence of TLMs has a detrimental impact on students' academic achievement, as comprehending complex topics becomes challenging when presented through verbal explanations. A significant number of educational institutions in the Naseerabad division are found to be deficient in teaching-learning resources, including but not limited to adequate textbooks, charts, multimedia, and computer laboratories equipped with internet access. The inadequate provision of these materials at government educational institutions in the Naseerabad division contributes to students' poor academic performance.

## **Recommendations**

Teaching-learning resources play a crucial role in enhancing students' overall academic achievement. The research revealed that many educational institutions in the Naseerabad division lacked teaching-learning resources. The allocation of additional funding by the provincial government is necessary to ensure that schools have sufficient Teaching-Learning Materials, facilitating advancements in students' academic performance. Teachers must have appropriate training in the utilization of modern teaching and learning materials. Furthermore, it is crucial that this training equips teachers with the necessary skills to effectively address each student's diverse needs and preferences while using TLMs in the classrooms. In addition, school administrators need to ensure that students are provided with modern TLMs.

Furthermore, it is crucial to closely monitor each student's academic progress to evaluate the efficacy and appropriateness of the applied TLMs. Furthermore, it is essential to have a fully equipped laboratory facility to facilitate practical experiments in scientific inquiry across all educational institutions. This measure will significantly contribute to the comprehensive exposure of students to many facets of practical education.

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