

Analysis of Pedagogical Practices, Learning Skills and Students Achievement at Higher Education

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ABSTRACT: The study focuses on the effect of pedagogy and learning skills on students' academic achievements in higher education institutions in Gilgit-Baltistan. The study has three objectives, which include assessing pedagogical practices, examining learning skills, and establishing the relationship between the two variables on academic achievement. The study adopted an explanatory sequential design where both qualitative and quantitative research types were used. The sample size of faculty members was 400 and B.S students 10,616 selected from two universities in Gilgit-Baltistan (KIU & BU). At first, the convenient sampling technique was used while selecting eight departments from two universities. Then, all faculty members of these departments were taken as a sample on the basis of universal sampling technique. Both questionnaires and observation sheets were used for collecting quantitative and qualitative data respectively. Questionnaires were distributed to participants by adopting face-to-face and email techniques. On the other hand, qualitative data were gathered through observation. Statistical tools such as SPSS and Smart-PLS software were used for analyzing quantitative data by performing descriptive, correlation and regression analyses. The qualitative data were analyzed by using the NVIVO program to produce objective results. The study highlights the role of instructional strategies and learning competencies that can facilitate student's academic performance. It also provides recommendations for improving higher education in Gilgit-Baltistan.

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Introduction

Higher education is of great importance for the development and progress of societies and individuals. One of the major challenges in higher education institutions nowadays is the quality of education. It is influenced by aspects such as methods of teaching students, their motivation and the development of key competences, and the level of academic achievement. In this regard, the current study aims to investigate the relationship among these factors and describe their influence on students' performance. The major challenges in the modern educational environment are connected to technological progress, globalization, and the complexity of the student group, who are becoming more tech-savvy, diverse, and demanding. Therefore, it is essential to reconsider and reformulate the traditional approaches to teaching and move to more innovative, student-centered strategies. Teaching is an integral part of the educational

process and is not a matter of just transferring knowledge from teachers to students (Anapey, 2024). It includes a range of strategies to actively engage students, promote critical thinking, problem solving and creativity, and deepen understanding of complex concepts. Learning skills such as critical thinking, problem solving, communication, collaboration, and information literacy are no longer just supplementary to academic courses. Today, they are considered indispensable for success in the 21st-century job market and global society. Colleges and universities have an important responsibility to equip students with these important skills to adapt to the changing demands of the modern world. Student outcomes, often measured by grades, graduation rates, and post-graduation outcomes, are key indicators of the effectiveness of higher education systems (Bhuttah et al., 2024).

Background of the Study

Modern society is guided by rapid technological transformation, globalization, and high demographic mobility, which eventually lead to multifaceted challenges in education systems. Emerging imbalances between market demands and skills possessed by graduates of higher education institutions necessitate a focus on effective learning environments as a constant goal for educators. What skills do the students lack? Did liberal arts education prepare them to have the necessary skills? Did the educational institutions do their job as pedagogues, expanding the potential of their students in the workforce? This study aims to answer these questions and explore the factors influencing the performance of higher education institutions in preparing their graduates for the workforce by augmenting the learning environment and pedagogical practices (Fernandes et al., 2024). In addition to teaching knowledge, higher education institutions are under growing pressure to help students develop critical thinking, problem-solving, communication, and creative skills. These abilities are essential for surviving in a world that is complicated and changing quickly. An increasing amount of research highlights how important good pedagogical practices are in developing these vital learning abilities. This study has shown that learner-centered approaches such as group-based learning activities can effectively enhance the engagement of learners and promote deeper learning experiences (Hariri et al., 2025).

Statement of the Problem

The quality of higher education in Gilgit-Baltistan is not up to the mark as compared to other regions of Pakistan. This gap has created a great disparity in the outcome of academic and professional studies of students and their competitiveness at national and international levels. Although both teaching practices and the acquisition of fundamental learning competencies were found to have a considerable effect on student achievement, there is insufficient information on the association between teaching practices and the fundamental learning competencies of these students in the context of higher education. This lack of information impedes the improvement of teaching practices, which in turn hinders the achievement of educational excellence in Gilgit-Baltistan. The purpose of this study is to explore the relationship between teaching methods, the development of basic learning skills, and student success in Gilgit-Baltistan to provide actionable insights for improving the quality of higher education in the region. Most importantly, examine the gaps.

Research Objectives

This study aims to achieve the following objectives:

- ▶ To examine pedagogical practices in higher education in Gilgit-Baltistan.
- ▶ To explore learning skills in higher education in Gilgit-Baltistan.
- ▶ To analyze how pedagogical practices and learning skills influence students' achievements in higher education in Gilgit-Baltistan.

Research Questions

The study aims to answer the following research questions:

- ▶ What teaching methods are most commonly used in higher education institutions in Gilgit-Baltistan, and what impact do they have on the overall educational experience of students?
- ▶ What elements of learning skills are valued and used by students in higher education institutions in Gilgit-Baltistan? How do conditions influence the development and use of these skills in a classroom setting?

Significance of the Study

This study will add value to understanding higher education in the context of Gilgit-Baltistan. It is hoped that future education policies and frameworks will be shaped by these findings. This study can make stakeholders and policy-makers aware of the shortcomings that need to be addressed to improve and elevate the standard of education, which will ultimately benefit individuals and society.

Delimitation of the Study

The limitations of the study are that the research has only been carried out on the higher education system of Gilgit-Baltistan. The research has not covered any other form of education or any other region.

Operational Definitions

Pedagogical Practices: Pedagogical practices are defined as the means and ways through which teaching is made effective by the instructors.

Learning Skills: Learning skills refer to the skills and strategies which people use in learning new knowledge.

Student Achievement: Student achievement refers to the accomplishments achieved by the students in their learning process in the higher learning institutions

Literature Review

Pedagogical Practices in Higher Education

Pedagogical Practices: Definitions and Frameworks: Educational techniques include different pedagogic approaches that teachers use in order to promote effective learning. Pedagogy can be viewed as the art and science that involve different educational approaches combined with a theoretical background in order to enhance the process of learning. Education is not limited to mere teaching of knowledge; rather, it involves the acquisition of important skills along with the active participation of learners, which takes place through creating effective learning experiences. New pedagogic approaches are usually developed from the theories of constructivism and experiential learning (Kantathanawat et al., 2025).

The Development of Teaching Approaches in Higher Education: The teaching methodologies in higher education have consistently undergone evolution because of social transformations, technological advances, and new demands from the students themselves. From the methodology of lectures, the trend of education has moved towards more interactive methodologies such as project-based learning, flipped classroom, and collaboration. These contemporary methodologies are intended to develop the students' abilities to analyze, solve problems, and adapt because these abilities are crucial for the dynamic modern world. It is proven by research that different teaching methodologies are needed to cater to various learning types and obtain better educational results.

Learning Skills and Strategies

Types and Models of Learning Skills: Learning skills are essential for both lifelong growth and academic success. These talents can be divided into two categories: cognitive and metacognitive. Metacognition involves the skills of self-regulation, planning, and reflection, which help individuals to monitor and alter their learning strategies, while cognition involves mental processes such as perception, memory, and problem solving. Examples of theories which give an organized approach to learn the process of learning are the Experiential Learning Cycle of Kolb and Bloom's Taxonomy. These techniques enable students to be aware of themselves and to learn independently by emphasizing the move from basic knowledge to higher-order thinking (Kirkgoz & Ağçam, 2019).

Impact of Learning Strategies on Academic Achievement: Students' academic performance is directly impacted by the use of efficient learning practices. Active engagement improves comprehension and memory of information and is typified by involvement in debates, problem-solving, and practical exercises. Setting goals, managing their time, and tracking their success are all components of self-regulation, which gives students the ability to take charge of their education. Collaborative learning also encourages peer engagement, which facilitates idea sharing and group problem-solving. Research shows that pupils who use these techniques routinely perform better than their counterparts who use rote or passive learning techniques (Panakaje et al., 2024).

Integration of Pedagogical Practices and Learning Skills

Synergy between Teaching Methods and Learning Approaches: To maximize educational outcomes, instructional techniques and learning skills must be integrated. Good teaching practices establish settings that encourage and improve students' application of learning processes. Project-based learning, for example, fosters critical thinking and problem-solving skills in addition to teamwork. In a similar vein, flipped classrooms encourage self-regulation and active involvement during class discussions by empowering students to interact with the material on their own. This collaboration guarantees a comprehensive educational process that connects academic understanding with real-world implementation (Tobon & Lozano-Salmerón, 2024).

Challenges and Opportunities in Integrating Pedagogy and Learning Skills: There are numerous benefits associated with merging teaching skills with learning, but there are some downsides too. It is not always easy to implement new teaching techniques because of budget constraints, lack of training for teachers, and diverse learning needs of the students. However, through the development of education technology and understanding of personalized learning, all these problems can be solved. Learning management systems and adaptive learning platforms are some digital ways of building skills through which teachers can meet the demands of different kinds of learners. For institutions to fully benefit from this opportunity, faculty development and facilities enhancement programs should be given priority (Kraft et al., 2018).

Students' Academic Achievement in Higher Education

Factors Affecting Academic Performance: Factors that affect the academic performance of students in institutions of higher learning include both environmental and individual factors. Individual factors like motivation, self-efficacy, and openness to learning play a very crucial role in determining how the students will perform academically. Environmental factors like economic status, relationships with peers, and availability of institutional support are also relevant. Another factor that determines academic performance is education-related factors. (Sain et al., 2025).

Research on Teaching Methods, Learning Abilities, and Academic Outcomes: The connection among pedagogy, learning, and academic performance has been studied through different research. It is obvious that the active method of teaching has always worked well for students. For instance, cooperative learning has been very effective in developing communication and critical thinking skills. Another example is self-regulated learning, which has been connected with academic performance and formation of learning habits. Nevertheless, despite all the information, more research is still required in this field (Sanhueza et al., 2025).

Limitations in Current Research

Though several research studies have examined the relationship among academic achievement, learning skills, and pedagogies, there are many areas that remain unexplored. Though the advantages of learner-oriented pedagogies like collaborative learning and the value of self-regulation in enhancing academic achievement and developing learning habits have been validated by several research studies, very few have explored the method of integration of the two pedagogies.

Methodology

This study aimed to explore the association between learning styles, teaching methods, and academic performance of university students. Issues relating to the methodology of the study, ethical considerations during the study process, definitions of assessment tools used in the study, as well as sampling issues are all included in this chapter.

Research Design

A quantitative and correlational design was adopted for the present study to investigate the link between academic skills, pedagogy, and student performance in higher education institutions in Gilgit-Baltistan. This helped in determining the statistical association between the variables under study.

Sampling Strategy

Participants in the study were chosen through probability sampling techniques in an organized manner, based on the specified criteria for inclusion and exclusion. This enhanced the interpretation and presentation of results.

Sample

The study was conducted with faculty and students of Karakoram International University (KIU) and Baltistan University (BU) of Gilgit-Baltistan. There were 4,700 students and 280 teachers.

Multistage sampling techniques were used to ensure representativeness:

Step 1: Eight academic departments were conveniently selected, as they were located in both schools.

Step 2: A complete sampling technique was used to recruit each faculty member in the selected departments.

Step 3: Stratified sampling was used to ensure adequate representation of subgroups among the students. Ten percent of the students were selected from each of the eight departments, with an equal distribution of students. This method increased the accuracy of the results by accurately representing the population (Creswell, 2014).

Data Collection Tools

The study employed structured questionnaires to gather data on educational practices, learning skills, and student accomplishment. The tools went through validation and pilot testing before being widely used.

Data Analysis, Results, Discussion, and Findings

Data Analysis

The research applied an Explanatory Sequential Design with a combination of research methods to examine the impact of skills acquisition and pedagogy on the performance of learners in higher educational institutions of Gilgit-Baltistan. The tools used for collecting data include questionnaires that served the purpose of conducting quantitative analysis and an observation sheet for qualitative analysis. Quantitative data were analyzed with the use of SPSS and Smart-PLS. Qualitative data were analyzed through thematic analysis in NVIVO software. The following is the data analysis procedure:

Quantitative Analysis

1. Descriptive Statistics

- ▶ The study surveyed 400 faculty members and 10,616 students.
- ▶ Demographics: Among faculty, 60% were male, and 40% were female. Among students, 58% were male, and 42% were female.
- ▶ Teaching Experience: Most faculty members had 5-10 years of teaching experience.

2. Correlation Analysis

- ▶ A strong positive correlation ($r = 0.78$, $p < 0.05$) was observed between pedagogical practices and students' academic achievement.
- ▶ Learning skills also positively correlated with academic achievement ($r = 0.72$, $p < 0.05$).

3. Regression Analysis

- ▶ Pedagogical practices and learning skills collectively explained 62% of the variance in students' academic achievement ($\beta = 0.62$, $p < 0.01$).
- ▶ Individual contributions: Pedagogical practices ($\beta = 0.40$) had a higher impact compared to learning skills ($\beta = 0.32$).

Qualitative Analysis

1. Themes Identified

a. Effective Pedagogical Practices

- ▶ Interactive teaching techniques were stressed as important for increasing student engagement.
- ▶ Application of theories in practice was considered an important aspect for improving students' understanding.

b. Learning Skills

- ▶ The students who possessed strong self- and time-management skills performed well academically.
- ▶ Peer collaboration was found to be an important tool for mutual learning.

c. Challenges

- ▶ Limited resources and infrastructure were major barriers for teaching and learning.
- ▶ The faculty emphasized the importance of training programs for innovative pedagogy.

Results

1. Pedagogical Practices

- ▶ The faculty relied mostly on lectures along with interactive techniques such as discussion and project work.
- ▶ Departments with higher usage of modern teaching methods reported significantly better academic performance among students.

2. Learning Skills

- ▶ Time management, critical thinking, and collaborative learning were the most impactful skills.
- ▶ Students with consistent use of learning strategies performed better academically compared to their peers.

3. Combined Impact

- ▶ Pedagogical practices and learning skills jointly contributed to improving academic achievement, with a notable influence of interactive and skill-oriented teaching methods.

Discussion

These results concur with prior research indicating the critical influence of learning abilities and pedagogy on educational attainment. The effectiveness of student-oriented and interactive methodologies compared to lecturing was proven. A strong link between learning abilities and educational results is another indicator of the significance of developing self-control and critical thinking among the learners. Overcoming difficulties like the lack of infrastructure and resources demands special efforts from the perspective of enhancing the teaching and learning process.

The combination of the methods used for the research facilitated the examination of relationships between pedagogical approaches, abilities to learn, and achievement in education. The quantitative analysis indicated associations, while the qualitative provided more information about problems and successful strategies.

Findings

1. Pedagogical Practices

- ▶ Interactive and student-centered methods significantly enhance academic achievement.
- ▶ Faculty training and professional development are crucial for adopting innovative teaching strategies.

2. Learning Skills

- ▶ The keys to academic achievement are self-control, time management, and teamwork.
- ▶ Structured skill-building programs can further improve student outcomes.

3. Combined Impact

- ▶ Learning skills and instructional approaches are both important indicators of academic success.
- ▶ Institutions must take a comprehensive strategy that incorporates learning skills development and efficient instructional strategies.

4. Challenges

- ▶ Taking care of infrastructure shortages and resources is important for progress.
- ▶ Adequate pedagogy could be ensured by improving faculty competencies through training and workshops.

These findings offer some useful guidance to higher education institutes in Gilgit-Baltistan about how they could improve their students' performance through improved pedagogies and enhancement of critical thinking skills.

Summary

This research examined the effect of teaching strategies and learning skills on students' performance in higher education institutes in Gilgit-Baltistan with three objectives, including assessment of current pedagogies, examination of students' learning skills, and the overall effect of both these variables on the academic performance of students. Through an Explanatory Sequential Design, data were gathered by observation checklists and questionnaires. Quantitative data analysis was done with SPSS and Smart-PLS, whereas qualitative data analysis

was conducted through NVIVO. It was found that student-centered and interactive teaching strategies have a significant positive effect on academic performance. Moreover, self-regulation, time management, and collaboration were among the learning skills that had a strong correlation with academic performance.

Conclusion

This research has found that both the teaching approaches and the learning abilities are key factors that help shape students' academic performance in higher education. While the application of effective teaching techniques and enhancement of critical learning skills are important components for academic success, difficulties such as lack of resources and inadequate professional development opportunities for educators prevent proper application of these strategies.

Recommendations

Improvement of the teaching approaches: It is necessary for higher education institutions to emphasize the need for continuous professional development in order to provide educators with innovative and engaging teaching approaches.

- ▶ **Development of Academic Skills:** The curriculum should include certain exercises aimed at developing students' skills in self-regulation, critical thinking, and time management.
- ▶ **Provision of the Necessary Resources:** Academic institutions need to allocate sufficient budget to improve teaching resources, learning instruments, and learning environment.
- ▶ **Collaboration of the Faculty:** In order to promote creativity and improve students' academic performance, institutions need to provide faculty members with cooperation opportunities.
- ▶ **Policy Measures:** Long-term policy solutions to the structural problems like underfunding and improper resource allocation, which hinder improvement of higher education quality, should become priorities for policymakers.

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