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Strategies for Enhancing Pakistan's Higher Education: Challenges, Opportunities, and Global Perspectives

Zohaib Hassan Sain, Mahadharu Ashifaati Ashfan, Ramil Abbasov, Nurulannisa Binti Abdullah, Uthman Shehu Lawal

[1]*Superior University, Lahore, Punjab, Pakistan*
[2]*Universitas Brawijaya, Malang, Indonesia*
[3]*George Mason University, Virginia, United States*
[4]*Universiti Teknologi MARA (UiTM) Shah Alam, Selangor, Malaysia*
[5]*Kaduna State University, Kaduna, Nigeria*
e-mail: zohaib3746@gmail.com, mahadharu10@student.ub.ac.id, rabbasov@gmu.edu, annisa@uitm.edu.my, uthmanshehu.lawal@kasu.edu.ng

ABSTRACT. This study examines Pakistan's higher education system by integrating structural, institutional, and policy perspectives, emphasising strategies to enhance international competitiveness. A mixed-methods approach was employed, involving qualitative data from structured interviews and case studies across eight universities (four public and four private) and quantitative surveys from 420 students, 20 faculty members, and four administrators. Data were analysed using descriptive statistics and thematic content analysis. The study identifies three main challenges: inadequate funding and infrastructure, ineffective governance, and a weak research culture. It also uncovers key opportunities, including technology-enhanced learning platforms, international academic partnerships, and industry-academia collaborations. The findings suggest that aligning strategic opportunities with existing challenges can drive significant improvement in the sector. The study recommends targeted investments in infrastructure, improved governance, faculty development, and expanded global partnerships. These insights offer actionable directions for policymakers and educators to strengthen the sustainability and global relevance of Pakistan's higher education system.

Keywords: *Global competitiveness, Higher Education Commission (HEC), Socio-economic Advancement*

INTRODUCTION

Higher education is crucial in shaping a nation's socio-economic development by preparing future leaders, researchers, and professionals (Batool & Liu, 2021; Saud & Ashfaq, 2022; Byrkovych et al., 2023; Jonbekova et al., 2023). The sector has witnessed notable growth in Pakistan over recent decades, yet it continues to grapple with enduring challenges that hinder its global competitiveness and overall effectiveness. These include insufficient funding, inequitable access, faculty underdevelopment, governance inefficiencies, and outdated curricula (Tierney et al., 2019; Zahid et al., 2020; Murtaza & Hui, 2021; Zamir & Wang, 2023). Addressing these issues is vital for national progress and enhancing Pakistan's role in the global academic landscape.

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Despite existing research highlighting these obstacles (Tierney et al., 2019; Zamir & Wang, 2023), there remains a significant gap in exploring comprehensive strategies that leverage unique opportunities—such as technological advancements and international collaborations—to overcome these barriers. Previous studies often stop at problem identification without offering actionable, globally aligned solutions. This lack of practical and strategic direction within the literature signals a pressing need for in-depth research that analyses the issues and formulates sustainable, forward-looking recommendations.

This study addresses this research gap by thoroughly examining Pakistan's higher education system through structural, institutional, and policy-level lenses. Specifically, it aims to identify persistent challenges and explore underutilized opportunities that can enhance global competitiveness. As Pakistan comprises diverse public and private universities, there is a pressing need to ensure relevance, sustainability, and international integration in higher education (Naz, 2016). The study investigates how Pakistan can strategically harness innovations such as technology-enhanced learning, international academic partnerships, and stronger industry-academia collaboration to address longstanding issues. If effectively utilized, these opportunities have the potential to transform the sector and align it with global standards. This approach strengthens the academic system and contributes to national development goals and international educational objectives.

To support the significance of this research, a growing body of literature acknowledges the critical role of higher education in socio-economic progress and innovation (Sahin, 2018; Fatima et al., 2020; Heleta & Bagus, 2021; Batool & Liu, 2021). However, challenges like substandard infrastructure, lack of quality assurance, faculty shortages, and governance inefficiencies persist (Zuhairi et al., 2020; Shohel et al., 2021; Akbar et al., 2023). These problems are particularly acute in private sector institutions, where learning environments, extracurricular space, and administrative capacity are limited (Sain, 2023).

Moreover, the development of a robust research culture is imperative. Faculty and students require more significant support in research methodologies and critical analysis skills, which are crucial for academic and employment outcomes. Political interference and bureaucratic governance structures also weaken institutional autonomy and effectiveness, further underlining the need for systemic reform (Rehman & Huma, 2024). Innovative solutions such as online learning platforms have been identified as transformative tools for widening access, particularly in remote areas, and enhancing student engagement (Salas-Pilco et al., 2022; Sato et al., 2023). International academic partnerships offer significant potential to foster research collaboration, knowledge exchange, and global benchmarking (Jacob & Meek, 2013; Tan, 2016; Aldieri et al., 2018). These alliances can elevate Pakistan's academic standing by facilitating joint degrees, collaborative research, and faculty/student mobility.

Investment in research infrastructure and promoting interdisciplinary projects are essential to support innovation and build global competitiveness (Imran et al., 2019; Waheed et al., 2023). Equally, training and empowering faculty and students in advanced methodologies is crucial to fostering a culture of excellence and relevance. This study aims to (1) examine key challenges facing Pakistan's higher education sector in the global context, (2) identify distinctive opportunities to enhance international competitiveness, and (3) provide evidence-based recommendations to support sustainable development.

METHOD

This study employed a convergent mixed-methods design, integrating qualitative and quantitative data to comprehensively explore challenges and potential improvements in Pakistan's higher education system. This approach facilitated the triangulation of findings, enhancing the results' depth, validity, and reliability.

Literature Review

An extensive literature review established the study's theoretical and contextual foundation. Sources included peer-reviewed journal articles, policy documents, and institutional reports from global and regional perspectives. This phase informed the development of research instruments and guided the identification of key thematic areas, such as governance, quality assurance, funding, infrastructure, and internationalization.

Participants and Sampling

Fifteen stakeholders, including policymakers, senior administrators, and academic leaders, were selected purposively based on their expertise and institutional roles in higher education. This criterion-based sampling gave participants in-depth insights into higher education governance, policy implementation, and strategic planning. Quantitative data were gathered through structured surveys administered to a stratified sample comprising 420 students, 20 faculty members, and 4 University administrators. Stratification ensured representation across gender, academic disciplines, and institutional types.

Table 1. Statistical Data

Category	Instrument	Number
Stakeholders	Interviews	15
Students	Surveys	420
Faculty Members	Surveys	20
Higher Education Institutions	Public	4
	Private	4

Data Collection

Semi-structured interviews were conducted face-to-face or via virtual platforms, depending on participant availability. The interview protocol was thematically organized and pre-tested for clarity and content validity. Interviews explored participants' perspectives on systemic challenges and opportunities within Pakistan's higher education sector.

Case Studies

This study included in-depth case studies involving eight universities, representing public and private institutions equally, to enhance the contextual understanding of the dynamics and difficulties within Pakistan's higher education system. The selection of these cases was guided by considerations of institutional diversity, including variations in size, governance structures, and geographical distribution. Data sources for the case studies encompassed a comprehensive review of institutional documents, internal policy frameworks, and strategic planning materials. These were further enriched through interviews with key university-level stakeholders, allowing for a nuanced exploration of institution-specific experiences and practices within differing organizational and policy contexts.

Data Analysis

Interview and case study data were analyzed using thematic content analysis, following Braun and Clarke's six-step framework. Coding was supported by NVivo software to ensure systematic categorization. Member-checking and peer debriefing were employed to enhance the credibility and dependability of qualitative findings.

Triangulation

Findings from qualitative and quantitative strands were merged during the interpretation phase through a narrative joint display, highlighting areas of convergence and divergence across data sources. Methodological triangulation, which compared data from interviews, surveys, and case studies, increased internal validity.

RESULT AND DISCUSSION

Result

Data analysis collected through qualitative and quantitative methods identified critical challenges and opportunities within Pakistan's higher education system. The thematic analysis revealed three key obstacles: inadequate funding and infrastructure, ineffective governance, and a weak research culture. These issues were consistently highlighted in both survey and interview data, supporting the findings from previous studies.

Tabel 2. Student Survey Data (Challenges Faced by Students)

Challenge	Percentage (%) of Students Expressing Dissatisfaction
Infrastructure Dissatisfaction	68
Research Opportunities Dissatisfaction	72
Governance Concerns	65

Inadequate Funding and Infrastructure

In order to explore the State's of education in this sector, interviews were conducted with a number of stakeholders, including students, lecturers, and management of educational institutions. The results of the interviews showed similar complaints regarding inadequate funding and infrastructure, which significantly impact the quality of education provided. Most respondents reported that a persistent lack of funding is a significant problem hindering education development. A lecturer explained (L1), *"We often have to deal with situations where the existing budget is insufficient to meet basic needs, such as maintaining facilities and providing quality learning materials. This certainly impacts the quality of teaching that we can provide."*

Students also expressed similar views. As many as 68% expressed dissatisfaction with the condition of the existing infrastructure, which they considered less supportive of the learning process. One student explained (S1), *"The existing facilities are minimal. Inadequate classrooms and difficult access to technology make it difficult for us to follow the learning optimally. This affects our comfort in learning."* (S2). In addition, 72% of students expressed dissatisfaction with the limited availability of research opportunities. One student added, *"We feel less encouraged to develop our research capabilities because of limited facilities. The reference books we need are hard to find, and the equipment to conduct research, such as laboratories or the necessary software, is also limited."*

From a management perspective, the University acknowledges the significant challenges in managing limited resources. An official from the management said (M1), *"We are constrained in terms of funds, and this certainly affects various aspects of education, including infrastructure and research facilities. However, we find creative ways to overcome these shortcomings, although the results are often not optimal."* In addition, a lecturer made a similar statement (L2): Despite limited funding, he tried to use various alternative resources, such as online learning materials or collaboration between universities, to improve the quality of education. *"We try to utilize technology as much as possible, although the main obstacle remains the problem of infrastructure that has not been updated for a long time."*

Overall, interviews with various stakeholders showed that despite many efforts to overcome these shortcomings, inadequate funding and infrastructure remain significant obstacles to improving the quality of education. More comprehensive and innovative solutions are needed to manage existing resources more effectively, and research opportunities for students and teachers can be increased.

Ineffective Governance

In-depth interviews with various stakeholders—including senior lecturers, faculty leaders, students, and administrative staff—revealed that ineffective governance remains one of the

fundamental challenges hindering institutional progress in higher education. The issues cited revolve primarily around bureaucratic inefficiencies and excessive political interference in academic decision-making processes.

A senior Lecturer emphasized (L3), *"Key decisions are often made not based on academic needs or quality evaluations, but rather due to political interests or personal affiliations with policymakers."* This testimony illustrates the marginalization of academic autonomy by bureaucratic and political considerations. Faculty leadership also acknowledged that the rigid and multi-layered bureaucratic system hampers the timely execution of strategic decisions. One faculty head remarked (M2), *"We must go through an excessively long process even to approve basic academic needs such as instructional materials or facility maintenance. As a result, teaching and learning activities are frequently disrupted."* Student representatives echoed these concerns and highlighted a lack of transparency and participation in decision-making. A student organization leader stated (S3), *"We often feel excluded from important institutional decisions. For instance, changes in the curriculum can be implemented suddenly without prior consultation with the students."* An administrative officer added that overlapping authorities within internal units often lead to coordination breakdowns. *"Many programs are delayed simply due to unresolved interdepartmental conflicts. This not only slows down our operations but also affects the quality of services provided to students and lecturers,"* the staff member noted (M3).

Overall, the perspectives gathered from stakeholders underscore the urgent need for governance reform in higher education. Improving transparency, accountability, and professionalism in institutional decision-making enhances academic quality and ensures sustainable educational development.

Weak Research Culture

Interviews with key stakeholders—including lecturers, faculty deans, research coordinators, and postgraduate students—revealed that the institution's research culture remains considerably underdeveloped. This situation is primarily attributed to insufficient financial support, limited access to academic resources, and a lack of institutional incentives to encourage research productivity. A senior faculty member conveyed concern (M4), stating, *"There is minimal motivation for lecturers to engage in research because there are no clear rewards or recognition systems. Even if a Lecturer publishes in a reputable journal, the institutional support is often negligible."* This sentiment was echoed by others, emphasizing the absence of both material and non-material incentives that could stimulate a robust research environment. Another research coordinator highlighted structural limitations, noting, *"The institution lacks a centralized body or effective policy framework that consistently facilitates research development. Proposals are often stalled due to bureaucratic delays or unclear budgeting procedures."* These administrative hurdles hinder long-term planning and discourage innovative research initiatives.

From the perspective of postgraduate students, access to research funding and academic mentorship was a dominant concern. One student shared (S4), *"We are often left to find our way. There are no regular research seminars, collaborative forums, or grant-writing workshops to help us enhance our skills and knowledge."* This reflects the broader institutional neglect in cultivating a dynamic academic community that values inquiry and innovation. Compounding these issues are governance-related constraints. Approximately 65% of stakeholders cited governance as a central barrier to research advancement. A faculty dean noted (M5), *"Research proposals are frequently subject to approval from non-academic bureaucrats who may not fully understand the academic merit of the work, delaying important initiatives unnecessarily."*

The interviews underscore a critical need for policy reforms prioritizing research development. Enhancing research governance, increasing funding opportunities, and institutionalizing incentive structures are pivotal to fostering a culture of innovation and academic excellence.

Discussion

The findings of this study reveal several critical issues concerning the state's educational resources and infrastructure. First, most respondents' highlighted persistent funding shortages and poor infrastructure as significant challenges. These findings align with previous studies, which have indicated that resource constraints often hinder the development of effective educational systems (Frehywot et al, 2013; Mugendawala, & Muijs, 2020). The dissatisfaction expressed by 68% of students regarding the current infrastructure reflects the ongoing struggles faced by educational institutions, particularly in developing regions. This dissatisfaction is consistent with earlier research by Khumalo and Mji (2014), who found that inadequate infrastructure negatively impacts student learning outcomes, particularly in rural areas.

Additionally, 72% of students expressed dissatisfaction with the availability of research opportunities. This sentiment suggests that the lack of adequate funding and resources is not only a physical issue but also affects academic growth and opportunities for higher learning. A similar concern was raised by Brew and Mantai (2017), who argued that insufficient research opportunities, often caused by budgetary constraints, limit students' intellectual development and their ability to contribute to the academic community. On the other hand, other studies have suggested that the lack of resources could lead to more innovative solutions in resource-limited environments (Bicen & Johnson, (2014). These researchers say scarcity may prompt educators and students to develop creative alternatives, fostering resilience and adaptability in adversity.

Moreover, while some studies argue that limited resources lead to systemic inefficiencies, others contend that institutions' ability to adapt without substantial funding may improve their focus on maximizing the value of existing resources (Berman et al., 2012). For instance, various studies have shown that developing virtual learning platforms and adopting open-source educational materials can partially alleviate the adverse effects of poor infrastructure (Asamoah, 2021; Adil et al., 2024). This alternative perspective challenges the commonly held view that adequate funding is the primary driver of educational success, suggesting that strategic resource management and innovation can also play crucial roles in overcoming these challenges.

Thus, this study's findings, which underscore the critical need for improved infrastructure and research opportunities, contribute to the ongoing academic debate about the relationship between educational resources and student satisfaction. While many scholars advocate for substantial investments in infrastructure and funding, others argue for a more nuanced approach that emphasizes resource optimization and innovation in resource-poor settings.

CONCLUSION

Lack of funding and infrastructure, ineffective governance, and a weak research culture hamper Pakistan's higher education development. Most students are dissatisfied with the facilities and limited research opportunities, while bureaucratic issues and political interference are significant barriers to improving the quality of education. Lack of financial support and research incentives exacerbate these conditions. Theoretically, these findings provide new insights into the relationship between institutional management and the quality of higher education in developing countries. The results provide important recommendations for policymakers to improve governance, increase funding, and build a better research culture. This study is limited to a specific region and does not include a long-term study. Therefore, future research should explore other regions or use a more in-depth approach to examine the broader impact of policies.

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