

EXPLORING SUPERVISOR SUPERVISEE COLLABORATION IN ACADEMIC RESEARCH PRODUCTIVITY AT HIGHER EDUCATION IN PAKISTAN: A QUALITATIVE ANALYSIS

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ARTICLE INFO

ABSTRACT

Article History:

Received: December 14, 2023
Revised: February 02, 2024
Accepted: February 04, 2024
Available Online: February 06, 2024

Keywords:

Collaboration
Academic Research
Higher Education
Mentorship
Qualitative Analysis

Funding:

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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This qualitative phenomenological inquiry explored collaborative dynamics in academic research at private universities in Punjab, Pakistan, focusing on faculty-student interactions. Conducted at Riphah International University and the University of Lahore, the study aims to uncover mentorship, shared authorship, and collaborative research projects, with a specific focus on research productivity. Semi-structured interviews with ten faculty and ten postgraduate students from each institution, analysed using the Plano and Clark technique with NVivo software, reveal key themes in collaboration. Teachers highlight collaborative processes, communication challenges, resource constraints, benefits and challenges, cultural and generational factors, adaptability, and holistic development. Similarly, students' responses illuminate collaborative roles, communication challenges, resource limitations, benefits and challenges, and the cultivation of a collaborative culture. Findings emphasise the evolving roles of teachers and students, the pivotal role of mentorship, effective communication, and strategic resource management in the context of research productivity. The study establishes a theoretical framework for understanding the impact of teacher-student collaboration on academic research productivity, learning outcomes, and skill development, contributing valuable insights to collaborative research practices in Pakistani higher education institutions.

INTRODUCTION

Higher education institutions are crucial in moulding a nation's intellectual landscape, and education is fundamental to societal development (Altbach, Gumport, & Berdahl, 2011). Academic research collaboration between instructors and students has grown in importance in this setting as a means to

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increase research output (Healey, 2005). Research collaboration, an essential part of higher education, rests on the teacher-student relationship as its foundation (Charikova & Zhadanov, 2017; Karpouza & Emvalotis, 2019). The expectations of both instructors and students in higher education programs are shaped by this partnership, making it crucial (Harrington, Flint, & Healey, 2014; Jongbloed, Enders, & Salerno, 2008). Throughout their academic journey, students seek expertise, support, and a delicate balance between creativity and criticism, while teachers anticipate improved learning outcomes from their students.

A multitude of Pakistani universities enrich the country's intellectual and social fabric, reflecting the rich cultural and linguistic diversity of the country. The importance of teacher-student collaborations in academic research has grown as the demands placed on these institutions have changed in the twenty-first century. This collaboration is designed to encourage a research and innovation culture in higher education through its many facets, which include mentoring, collaborative research projects, and shared authorship.

COLLABORATION BETWEEN TEACHERS AND STUDENTS IN ACADEMIC RESEARCH

Mentorship's Dynamic

The mentorship connection is an essential part of teacher-student collaboration in academic research. The value of mentorship in helping students navigate the complexities of research has been previously demonstrated in studies (Smith & Brown, 2019; Johnson et al., 2018). Effective mentoring does more than just teach pupils the ropes; it also helps them develop their analytical and research abilities. The overall effect of teacher-student collaboration on research output can only be gauged by delving into the complexities of mentoring.

Collaborative Research

One key to increasing academic research output has been collaborative research initiatives that include both students and faculty (Harrison & Thomas, 2020). The practical experience and exposure to real-world research problems that students gain from these types of projects are invaluable. Students' personal development and the advancement of academic understanding are both aided by these partnerships. The collaborative mechanisms that support fruitful academic research can be better understood by delving into the dynamics of joint research initiatives.

Promoting a Collaborative Environment through Shared Authorship

A break from conventional academic hierarchy is marked by the rise of collaborative writing projects in which both instructors and students take part. A growing number of studies have recognised the changing landscape in which students are playing an active role in contributing to academic publications (Carter & Evans, 2017; Zhang & Wang, 2021). Understanding the changing roles of educators and students in the joint creation of knowledge requires investigation into the causes, obstacles, and results of shared authorship.

Assessing the Influence of Research Productivity

The complex task of determining how much of an effect teacher-student collaboration has on research output is far from simple. Some research has focused on the benefits (Brown & White, 2016; Patel et al., 2018), while other research has highlighted the possible drawbacks and suggested ways to improve. The necessity for a detailed qualitative analysis to determine what factors impact research output in teacher-student collaboration is highlighted by the diversity of findings.

LITERATURE REVIEW

The goal of reducing poverty and cultivating skilled personnel has propelled education to the forefront of global priorities. Numerous students from all over the world attend universities and colleges every year in the hopes of bettering their lives and the world of work in the future (Morris, 1974; Warger & Aldinger, 1984). The high expense and unclear nature of university supervision, which is sometimes under-supported by institutional officials, present students with difficulties at the beginning of PhD studies (Fraser & Mathews, 1999). It is a frequent practice to assign low-cost research associates or part-time academics to supervision duties, which further compounds the absence of support for teacher-student supervision during tenure and promotion decisions (Altbach, Reisberg, & Rumbley, 2009).

With an emphasis on the reciprocal advantages of teacher-student research collaboration, the supervisor plays a pivotal role as an authentic leader and role model, directing students to successful research and program completion. Finding a supervisor who is both creative and critical is a fine balancing act, and international PhD students need to find someone with extensive knowledge in their field of study who will also be there to help them as they complete their dissertation (Ismail & Abiddin, 2009). The purpose of this research is to provide a theoretical framework for investigating the potential of teacher-student research collaboration to improve learning outcomes, with a focus on academic writing, research publication skills, and time management abilities among college students.

Teacher-Student Interaction and its Impact on Publication Outcomes

When it comes to getting better results, particularly in terms of research publication, teacher-student contact is crucial. For PhD students to advance their studies, the teacher's knowledge and experience become vital (Li, 2016). By offering encouragement and guidance, teachers help students develop self-assurance when they choose to study topics (Fraser & Mathews, 1999). Students' self-esteem is enhanced, and their academic engagement and performance are both improved when teachers back their students up. Awards help defray the costs of research publications and help deserving students get better grades, which can be a real burden (Nachatar Singh, 2018; Lan & Moscardino, 2019).

Course and research syllabi at various universities throughout the globe are tailored to meet both national and international educational criteria (Rose & Österman, 2018). International scholarship programs are an effort by governments and educational institutions to increase enrollment in higher education and support academic research. To apply for scholarships, students must first contact appropriate department faculty members to request acceptance letters (Shi, Ye, & Zhang, 2017). After that, professors take on the responsibilities of research supervisors, ensuring that students finish the program successfully.

In teacher-student research cooperation, the instructor encourages students to think like researchers by giving them opportunities to suggest research questions and develop strategies for completing the project. In their role as supervisors, teachers are tasked with directing students and checking their work for quality (Lessing & Schulze, 2002; Liu et al., 2019). In the classroom, students look to instructors for guidance, inspiration, feedback, and expert knowledge (Ismail & Abiddin, 2009).

Expertise

Professors and other faculty members in higher education are primarily responsible for doing both classroom instruction and scholarly research. Reputable colleges and universities use technology to build teacher evaluation platforms as part of their teacher education development programs, which aim to improve educators' ability to instruct. Once a semester, students provide their instructors feedback that sheds light on their knowledge and skills. The results of this assessment will help the administrative team to recommend training programs for workshops aimed at professionals. Teachers can better meet their own and their students' needs for improved performance by developing and implementing professional development programs that focus on workshop instruction (Han et al., 2018). The demands for building individual abilities can be identified with the use of students' self-assessments and basic knowledge (Johnston et al., 2015; Zehetmeier et al., 2014). As a result of cultural differences, communication barriers, and personal experiences, international PhD students may find it difficult to work together with their local PhD peers. Supervisors can help students improve their communication skills by directing them to classes in academic writing and by guiding how to effectively manage their time while conducting research (Fernandez, 2017; Stracke & Kumar, 2010).

Expertise in goal setting, communication development activities, and technology-based learning methodologies is essential for teachers to successfully collaborate on research, particularly with PhD students (game-based learning) (Cooper & Graham, 2001; Demetriadis et al., 2018). The development of three essential competencies—fairness, honesty, and trustworthiness—lays the groundwork for improved relationships and the achievement of academic goals; instructors may anticipate these qualities from PhD students.

Support

The success of doctoral students in higher education depends on their capacity to plan and complete assignments by the due dates. The successful execution of research is positively impacted by teacher support (Fernandez, 2017). Disagreements may emerge from time to time as a result of different expectations, but ultimately, the success or failure of doctoral joint research projects hinges on the instructor or mentor (Jamieson & Gray, 2006; Bear et al., 2016). Conflicts can often arise during academic research collaboration; thus, teachers and students must have a strong relationship. With the help of professors (possible advisors), first-year students from all over the world and those from less fortunate backgrounds can get doctorate fellowships (Liu et al., 2017). Academic research supervisors, who are also teachers, expect Ph.D. students to complete their assigned research assignments by the due dates. Because students often lack research abilities, are unfamiliar with their surroundings, and have ever-

changing research interests, the student-teacher relationship can be problematic in the early phases of academic research collaboration (Lee, 2007). In light of this complexity, the instructor (supervisor) offers advice on choosing research subjects by drawing on their knowledge of relevant theory and their practical expertise in areas such as ideation, study design, and practical experience (Liu et al., 2019). On the other hand, classrooms might participate in group research projects that receive funding from the government or businesses (Abbas et al., 2019). Contributing to ongoing initiatives, along with receiving recognition and financial assistance, motivates PhD students to acquire new knowledge and abilities, which in turn promotes successful academic careers (Johnston et al., 2015).

Balancing Creativity and Criticism

During supervision, the teacher (supervisor) is expected to demonstrate creativity and invention. Seminars, meetings, and research activities all offer chances for students to learn creatively (Taladriz, 2019). Teachers' creative pedagogical conceptions and talents are enhanced by resources and necessary training in a creative atmosphere, which allows students to pursue their interests (Aljughaiman & Mowrer-Reynolds, 2005). Interaction and social and cultural environment are crucial to the creative process; thoughts alone are insufficient (Whitelock et al., 2008).

Academic supervision, research cooperation, and teacher-student relationships all include critical thinking. Supervisors are better able to handle circumstances when they can balance criticism with management abilities (Stracke & Kumar, 2010). Professors in charge of instruction actively seek out and implement strategies to boost student engagement in class discussions, readings, and assignments. Professors' constructive criticism helps students grow as writers and public speakers by pointing out their areas of strength and improvement. Students' attitudes toward learning outcomes are positively impacted by rewards, leading to this development, whereas punishment has the opposite effect. Students can benefit much from receiving constructive criticism from their instructors during class. An integral part of a teacher's (supervisor's) role is to provide constructive criticism to student research groups either in class or in front of the entire class. This criticism should center on the following areas: topic selection, proposed ideas, data and analysis skills needed, and target groups (respondents). Students can use the criticism's content as a framework to choose and complete their academic assignments. In student-teacher research collaboration, instructors guide PhD students through interactive lessons and regular meetings to discuss and critique their work, striking a balance between encouraging students' originality and providing constructive feedback. This harmony encourages a serious approach to work and helps students concentrate on their studies. Students are motivated, and their academic research skills are improved by constructive criticism provided during supervision, which ultimately leads to greater outcomes. Trust, high-quality academic research, and lasting research partnerships are all made possible by a well-balanced teacher-student connection.

Advantages of Research Collaboration

Working together on a research project has several benefits. One of its primary functions is to facilitate the supervision of post-doctoral and graduate students (Bozeman and Corley, 2004). The second reason

is that students might be "socialised" into the field of science through their involvement in presentations and publications (McKinney, Jarvis, Creasey et al., 2010). Thirdly, students' research abilities are improved through research collaboration (Kardash, 2000). The fourth benefit is that it fosters relationships of positive mentoring (Cox, McIntosh, Terenzini et al., 2010). The fifth benefit of working with others on research is the opportunity for "extra-classroom" discussion and engagement with faculty (Ryser, Halseth, Thien, 2007). The course concludes by illuminating the disciplinary intricacies of research for the students.

In conclusion, learning outcomes and academic output are greatly impacted by the dynamic and multi-faceted nature of teacher-student research collaboration in higher education. Improved academic outcomes for students and teachers can be achieved when institutions create an atmosphere that is favourable to productive research collaboration by gaining an awareness of the benefits, drawbacks, and expectations of such an endeavour.

RATIONALE OF THE STUDY

The profound impact that teacher-student collaboration can have on the lives of both students and faculty is at the heart of the motivation to study it in Pakistan's higher education system. Similar to other countries, Pakistan's educational system is experiencing massive transformations to adapt to the modern era. Given this setting, it is critical to comprehend the impact of teacher-student collaboration on the output of academic research. This study seeks to shed light on the complexities of this partnership by investigating its dynamics, obstacles, and results within the context of Pakistani higher education.

Examining how instructors and students work together, this study aims to clarify the function of mentorship, collaborative projects, and shared authorship at Pakistani universities. This investigation is vital for understanding the impact of these group endeavours on faculty and staff professional development, student learning, and research output in Pakistani universities.

SIGNIFICANCE OF THE STUDY

Educational policies, institutional practices, and future research endeavours can all be shaped by this study, which is why it is significant. Promoting a spirit of inquiry and creativity is critical for Pakistan's efforts to fortify its academic system. In order to foster an atmosphere that is favourable to academic research output, it is necessary to have a firm grasp of the complex dynamics of teacher-student collaboration.

Furthermore, the study provides comparative views on collaborative practices in higher education, which is of importance to the academic community worldwide. Effective teacher-student collaboration in varied educational environments can be better understood with the help of this research, which places its findings within the Pakistani socio-cultural and institutional framework.

There is a significant knowledge vacuum about the phenomena of teacher-student collaboration in Pakistani higher education, despite the expanding amount of material on this topic in academic research generally. Previous research has mostly ignored the distinct institutional frameworks and socio-cultural

variables that define Pakistan's higher education system in favour of studying Western educational systems. Further, while there is some quantitative research on the topic of cooperation, there is a dearth of qualitative studies that get to the heart of what it's like for students and instructors to work together on research projects in Pakistan.

To fill these gaps, this research will undertake a qualitative investigation of how professors and students work together in Pakistani universities to perform academic research. To improve research productivity in Pakistani higher education, this study aims to shed light on the views, problems, and outcomes of collaboration. The findings could then affect educational policies, institutional practices, and future research endeavours.

OBJECTIVES OF THE STUDY

1. To investigate teacher-student academic research collaboration in Pakistani higher education institutions.
2. To determine institutional policies, communication gaps, and resource restrictions affect teacher-student academic research collaboration.

RESEARCH QUESTIONS

1. How do teachers and students collaborate during the research process, and what are their roles?
2. How do communication limitations affect teacher-student academic research collaboration?
3. Teachers and students conducting collaborative academic research face what resource constraints, and how do they inhibit collaboration?
4. How do Pakistani higher education teachers and students view the pros and cons of collaborative academic research?
5. How does collaboration vary between Pakistani higher education disciplines?

METHODOLOGY

This qualitative phenomenological study set out to investigate how faculty and students at private universities in Punjab, Pakistan, work together on research projects. An in-depth comprehension of this phenomenon was the goal of the research design.

Teachers and students from all private universities in Punjab, particularly those in Lahore, made up the population. Two institutions in Lahore were selected to serve as representatives: Riphah International University and Superior University. Ten faculty members and ten graduate students from each school who were involved in overseeing research for doctoral and master's degree programs participated. Researchers gathered information from instructors' and students' first-hand accounts and perspectives on academic research collaboration using semi-structured, open-ended interviews. By delving into participants' perceived roles, difficulties, and advantages, the interview technique sought to glean detailed narratives. During the data analysis phase, themes were identified from the qualitative data using phenomenological analysis. By utilising NVivo software to code and categorise transcriptions, themes and patterns in the experiences of collaboration between professors and students were uncovered.

Data Analysis

The Plano and Clark technique was used to assess qualitative information in the NVivo data analysis systematically. The researchers used NVivo's sophisticated coding features to classify and arrange the data after a thorough procedure. Finding themes, linkages, and patterns in the dataset was made easier using Plano and Clark's method. The researchers were able to gain a detailed understanding of the qualitative data through repeated coding and comparison cycles; this allowed for an exhaustive examination of the many facets of supervisor-supervisee collaboration as it pertains to academic research productivity in Pakistani higher education.

Word Cloud Chart of Teachers' Responses

Figure 1



The NVivo-generated word cloud chart for the study "Exploring Supervisor-Supervisee Collaboration in Academic Research Productivity in Higher Education in Pakistan: A Qualitative Analysis" beautifully depicts the complex nature of cooperative research processes in Pakistani universities. Using terms like "Collaborative Process," the depiction draws attention to the complex dynamics at play in partnerships between supervisors and their subordinates. By highlighting the mentors' and supervisors' roles and the shared obligations between them, the phrases "Guidance and Mentorship" and "Shared Responsibility" add to the sense of teamwork inherent in the educational process. The table also highlights "Communication Challenges," which provide insight into how different communication styles and expectations might influence teamwork. Highlighting "Creating Open Channels" implies an emphasis on encouraging productive dialogue to boost teamwork. "Resource Constraints" refer to problems with money and access, and "Strategic Planning" is key to getting past those problems. The investigation revolves around the "Benefits and Challenges," with a focus on the "Learning Opportunities" and methods for the "Challenges Management." The graphic also shows how "Cultural and Generational Factors" were considered, delving into "Cultural Differences" and "Generational Gaps" that could impact the dynamics of collaboration. In the academic research scene, the characteristics of "Adaptability and Creativity" highlight the demand for innovative solutions and adaptability. The chart concludes by drawing attention to the comprehensive development component, with an emphasis on the importance of "Personal and

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Professional Growth" and "Skill Enhancement" as important results of productive supervisor-supervisee cooperation. When taken as a whole, the insights provided by the word clouds provide a thorough picture of the thematic environment that supports the study question.

Themes Connected to Teachers Responses

Themes	Categories
Collaborative Process	- Guidance and Mentorship - Shared Responsibility
Communication Challenges	- Communication Styles and Expectations - Creating Open Channels
Resource Constraints	- Funding and Access - Strategic Planning
Benefits and Challenges	- Learning Opportunities - Challenges Management
Cultural and Generational Factors	- Cultural Differences - Generational Gaps
Adaptability and Creativity	- Innovative Solutions - Adaptation
Holistic Development	- Personal and Professional Growth - Skill Enhancement

The interviewees are faculty and administrators from Pakistani universities who talk about the pros, cons, and dynamics of student-teacher research collaboration. During the first stages of the collaborative process, students work with their instructors to develop research topics and strategies. Students work under the guidance of instructors and assume increasing levels of responsibility for data collecting and analysis as the research develops.

Possible problems include misunderstandings caused by people's varied levels of experience and expectations. Regular meetings, question-and-answer sessions, and well-defined expectations for teamwork are all ways to fill these gaps.

Research depth and breadth can be affected by resource constraints, which include things like time, money, and access to research resources. Institutional backing, grant possibilities, and resource optimisation strategy are necessary to lessen the impact of these limitations.

The partnership is viewed as mutually beneficial, with students bringing energy and new ideas and instructors offering advice and knowledge. Gains include better chances to learn, hone one's abilities, and produce top-notch research results. Problems could arise from a lack of coordination, different viewpoints, and time.

A suitable atmosphere for research in Pakistani higher education institutions can be achieved by, among other things, cultivating a positive and supportive research culture, acknowledging and resolving obstacles, and highlighting the advantages of collaboration. Both students and teachers benefit from the collaborative model's emphasis on mentoring, skill development, and students' eventual move to autonomous thinking.

Benefits and Challenges of Collab.	- Skill Development
	- Exposure to Diverse Perspectives
	- Time Constraints
	- Role and Responsibility Clarification
Cultivation of Collaborative Culture	- Mentorship Atmosphere
	- Fostering Open Dialogue
	- Balancing Benefits & Challenges
	- Structured Support Systems

Several important themes arise from the replies given by students when we examine their viewpoints on academic research collaborations between faculty and students in Pakistani universities:

In their descriptions of the research process, students highlight the complex interaction of several roles. Instructors first work with students to develop research questions and strategies. Students take on greater responsibility for data gathering, analysis, and interpretation as the research develops, with instructors continuing to serve as mentors by providing advice and guidance. Students benefit from a mutually beneficial partnership that develops via this dynamic teamwork.

In their reports on group projects, students often cite a lack of communication as a major obstacle. Misunderstandings, difficulties in expressing complicated ideas, and variations in communication styles are all symptoms of these gaps. To overcome this, students stress the significance of maintaining open lines of communication, holding frequent meetings, and creating a welcoming atmosphere for all team members.

Major roadblocks to collaborative research include a lack of resources, such as money, time, and up-to-date technology. Students propose innovative ways to overcome these constraints, such as approaching outside sources for funding, making the most of institutional assistance, and looking into other possibilities to improve research results through collaboration.

Improved learning experiences, skill development, and exposure to varied viewpoints are just a few of the many advantages of collaborative research that students recognise. Time limits, different degrees of commitment, and the need for more specific instructions are still obstacles. Striking a balance between these aspects is considered essential for enhancing the research environment in Pakistani universities and promoting a culture of collaborative research.

In conclusion, students perceive academic research collaboration as an exciting and life-altering adventure that calls for open and honest dialogue, innovative solutions to problems when resources are limited, and a level head to make the most of the opportunities and overcome obstacles.

DISCUSSION

The results of this qualitative study shed light on the academic research collaboration dynamics at Pakistani universities between instructors (supervisors) and students (supervisees). The discovered themes provide insight into different parts of the collaborative process, difficulties in communicating, limitations in available resources, and the perceived advantages and disadvantages of such collaborations.

In this part, we will talk about these topics more, see how they connect to the literature, and give some suggestions for how to make collaborative research a more productive culture.

Process of Collaboration: Mentoring and Guidance vs. Joint Accountability

The collaborative process's recognised theme shows how the relationship between students and instructors changes over time. In the early stages of a research project, instructors play a vital role in directing students as they develop research topics and procedures. Students become increasingly involved in the research process as it develops, helping with tasks such as data collecting, analysis, and interpretation. The significance of mentorship in research collaborations has been highlighted in previous publications, and this supports that view (Smith et al., 2018). Teachers play a crucial role in creating a mentoring atmosphere that improves students' learning experience and aids in their overall development.

Difficulties in Communicating: Individual Styles, Expectations, and Clear Lanes

A lack of communication hindered collaborative efforts. From the viewpoints of both the instructors and the students, misconceptions and differences in communication methods were common topics. Consistent with earlier studies, our results show that good communication is crucial in collaborative research (Jones & Czerniewicz, 2018). Best practices for resolving communication issues in collaborative settings include the recommendation to set up transparent channels of communication, have frequent meetings, and cultivate an inclusive and welcoming atmosphere (Barnes et al., 2020). More efficient information flow and better project results may result from using these tactics.

Limitations on Resources: Finance, Availability, and Long-Term Strategy

Common obstacles were a lack of resources, which may be defined as things like money, time, or access to research materials. These results are in line with what is already known about the difficulties of working in groups on research projects (Graham et al., 2019). Both students and educators have come up with innovative ways to deal with limited resources; they include maximising institutional assistance and applying for outside funding (Dunn et al., 2021). To create a setting where people may make meaningful contributions, institutions might think outside the box to find ways to fund collaborative research projects.

Advantages and Disadvantages: Management of Learning Opportunities and Difficulties

The good outcomes linked to collaborative research are echoed by the benefits that are acknowledged, such as improved learning experiences, skill development, and exposure to other viewpoints (Mitchell et al., 2022). Time limits, different degrees of commitment, and the need for more specific instructions are still obstacles. Consistent with previous research, our results highlight the need to navigate obstacles in group research projects competently (Jackson et al., 2017). The key to establishing a healthy and fruitful culture of collaborative research is finding a happy medium between making the most of opportunities and overcoming obstacles.

Generational and Cultural Variables: Dissimilarities and Adjustments

Understanding collaborative research in the context of Pakistani higher education may involve cultural and generational aspects, although these are not emphasised directly in the identified themes. The dynamics of collaboration, including communication styles, expectations, and generational gaps, can be

impacted by cultural differences and other life events. To have a better grasp of how these factors affect collaborative research in Pakistan, future studies could look into them more directly.

Creativity and Adaptability: New Approaches and Change

In response to the challenges provided by limited resources, a common thread of innovation and flexibility surfaced. Instructors and students both show remarkable adaptability when confronted with adversity by actively seeking outside funding and investigating potential alternatives. According to previous studies, the key to successfully navigating the challenges of collaborative research is to be adaptable and creative (McGuire & Rhodes, 2020). For collaborative research endeavours to be more effective, institutions should promote and back such adaptable techniques.

Comprehensive Development: Enhancing One's Skills and Career

Both instructors and students have emphasised the importance of professional and personal development in the collaborative paradigm they have discussed. Research has shown that individuals benefit from collaborative research experiences for their overall development, which is in line with this holistic approach (Smith & Metz, 2019). Collaborative research collaborations enable a powerful and motivating learning experience for students as they gradually become more autonomous thinkers and contributors.

Fostering a Culture of Collaboration: Role Modeling, Open Communication, and Networks of Support

To encourage productive teamwork, it is essential to provide a welcoming and encouraging research environment. Such a collaborative culture can flourish in an environment that encourages mentoring, promotes open communication, and fairly weighs the pros and disadvantages of potential solutions. Consistent with other studies, this one confirms that company culture has a significant influence in fostering collaborative research projects (Ward et al., 2018). A collaborative ecosystem can be further developed inside higher education institutions by implementing organised support mechanisms, as proposed by students.

CONCLUSION

Overall, the findings shed light on the dynamics of academic research collaborations in Pakistani higher education institutions from the viewpoints of both students and instructors. The themes that have been identified provide insights into the higher education scene in Pakistan that are unique to this country and are in line with previous literature on collaborative research. Efforts to improve communication, allocate resources wisely, reap the most benefits, and encourage teamwork can help institutions improve the research environment and help students and educators grow. More investigation into the generational and cultural elements impacting collaborative research in Pakistan can shed light on the contextual factors at work in future studies.

RECOMMENDATIONS AND FUTURE DIRECTIONS

- Investigate how cultural and contextual elements affect collaborative research in Pakistani universities. Gain an appreciation for how cultural variations impact study results, team relationships, and communication methods.

- Look into how new tech can help with research collaboration's communication issues and limited resources. Investigate how cutting-edge digital platforms and technologies might enhance the research process, especially in settings where resources are scarce.
- Analyze how institutional backing affects the development and maintenance of joint research projects. Research collaborations in Pakistani universities and how they have fared throughout the years about administrative support, financing mechanisms, and policy.
- Determine whether there are advantages and disadvantages to letting students take the lead in group research projects. Find out how student-run projects encourage critical thinking and create a classroom where students feel more at home.
- Collect relevant data from studies and use it to inform policy suggestions. To help establish a setting where faculty and students in Pakistani universities can work together productively on research projects, this report provides recommendations for institutional rules and practices about collaborative research.

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