

Implementation of Inquiry-Based Learning in Pakistani Government Colleges: An Exploratory Study

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Abstract

The main aim of conducting this study was to analyze the effectiveness of introducing inquiry-based learning approaches in Pakistani government colleges and what strategies are used by instructors as interventions. The research used a mixed-methods approach and conducted pretests and post-tests on 50 students of the BS English program in Govt. Graduate College, Gujranwala. In the meantime, qualitative data was gained by conducting interviews with 20 educators who came from this institution. A comprehensive overview of research and case studies was also carried out. The results reveal a significant improvement in learners' performance and critical thinking after IBL intervention, with the experimental group performing better than control once conventional teaching is reinstated. The implementation of IBL suggests that continuous professional development programs for educators could further enhance their capacity to implement IBL effectively.

Keywords: IBL, Learning, Inquiry, Language Learning, Exploratory Study.

Introduction

The educationists employ different educational techniques to impart education effectively. Moreover, the fact remains that educational activity is ever-evolving, demanding innovative educational approaches to societal needs (Asmoro & Prayitno, 2021). Inquiry-based learning has emerged as a vital element in the global conversation on effective teaching methods. IBL has occupied a significant place in the educational field. Inquiry-based learning (IBL) is experiential, whetting critical thinking (Bogar, 2019). It has become a potent force for transforming traditional education in Pakistani government colleges. Pakistan has a diverse educational system in which students from different backgrounds get an education using a dominant traditional teaching method (Arafah et al., 2020). This study evaluates the integration of IBL in Pakistani government colleges after the acknowledgement of the global imperative to equip students not only with knowledge but also with essential skills for future life (Hira & Anderson, 2021). In orientation with these objectives, the IBL approach gives priority to developing critical thinking and adaptability in students.

Inquiry-based learning is an instrumental approach that fosters the development of skills in students (Wolhuter, 2023). Many scholars have agreed and stressed that the IBL approach has transformative potential in the development of critical thinking and an insightful understanding of the subject matter (Jumilah et al., 2021; Miller & Krajcik, 2019). Research on IBL identifies prevailing issues within the educational system and considers socio-economic inequalities, fluctuating infrastructure, and an exam-focused culture (Gholam, 2019). The research will utilize both qualitative and quantitative methodologies to examine the challenges of educational reforms in Pakistani government colleges. A comprehensive analysis of the influence and practicality of implementing Inquiry-Based Learning (IBL) in the Pakistani

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government college system will be carried out. The qualitative investigation of educators' experiences and viewpoints will supplement numerical evaluations of student outcomes (Tawfik et al., 2020).

In exploring the implementation of inquiry-based learning in Pakistani government colleges, it becomes crucial to understand how local cultural and literary influences shape educational methodologies. This link becomes evident when considering a thematic analysis of Manto's short story 'Ullu ka Patha', which delves into complex societal themes through its sublime messaging (Nazeer & Syed, 2023). Manto's narrative techniques and thematic depth can serve as a rich resource for inquiry-based learning, encouraging students to engage critically and creatively with literature as a mirror to societal issues. By integrating such culturally resonant literature into the curriculum, the study on inquiry-based learning not only aligns with the local context but also demonstrates how indigenous literary works can be powerful tools in fostering critical thinking and a deeper understanding of societal dynamics in the Pakistani education system (Kazim et al., 2023).

We need to replace traditional education with new techniques. In this regard, IBL is likely an integral part. IBL will meet the needs and hurdles of this Pakistani learning system. The findings of this study are very critical as they will inform the educational decision-makers about the feasible value attached to IBL, thus providing invaluable knowledge for researchers aimed at improving the quality of education inside Pakistani institutions (Hussain et al., 2023).

This exploratory study presents the implementation of Inquiry-Based Learning (IBL) within Pakistani government colleges, aiming to unravel the intricacies and outcomes of adopting such pedagogical approaches in a context characterized by traditional educational paradigms. By focusing on the thematic discussion around the practicality, challenges, and impacts of integrating IBL methodologies, this research seeks to illuminate the transformative potential and hurdles encountered in the quest to foster critical thinking, problem-solving skills, and a more engaged learning environment among students. Through the lens of educators, administrators, and learners within these institutions, the study endeavors to contribute valuable insights to the discourse on educational reform and pedagogical innovation in Pakistan's public education sector.

Problem Statement

The introduction of inquiry-based learning (IBL) in Pakistani government colleges is a challenging task due to the fact that there are rote methods and a culture defined by examinations. Even though IBL proves to be a viable strategy for promoting desirous competencies, several problems, such as social and economic diversity, are barriers to implementing it into practice. New and advanced approaches in the educational system can make progress impossible. Thus, there is an immediate requirement to investigate these issues and provide specific solutions for the successful implementation of IBL in Pakistani government colleges.

Research Objectives

- To evaluate the effectiveness of incorporating Inquiry-Based Learning (IBL) in the Pakistani government colleges.
- To explore strategies for the successful implementation of Inquiry-Based Learning (IBL) in the Pakistani government colleges.

Significance of the Study

This research is of great significance because of its contribution to the educational field. This study strives to look at how IBL is being implemented in Pakistani government colleges. Based on the investigation of validity and difficulties associated with IBL in a complex setting of

Pakistani traditional educational culture, this research promises to provide useful information for educators, policymakers, and researchers. The results of this study could help in specific IBL-associated educational reforms in Pakistani government colleges. In addition, the research adds to continuing international debates on innovative pedagogies, providing cross-cultural comparisons that might stand out in other educational systems experiencing similar challenges around the world.

Delimitations

The study centers on the Pakistani government colleges of Gujranwala. While this offers rich insight into the local educational environment, its results may need to be more generalizable to diverse educational contexts. This study is limited only to the IBL approach and does not utilize other academic approaches. The research period is limited to data acquired between 2021 and 2023 and may only consider possible modifications or novelties within this era. Although the sample population of students and educators is representative, it may represent a partial range of experiences and views present in the Pakistani government's college system.

Literature Review

Inquiry-Based Learning (IBL) has gained worldwide significance in the educational field. By enhancing active involvement in the learning process, it leads to a constructive learning theory. IBL is an experiential learning approach based on a groundbreaking theory. The scholars point out that IBL results in a true comprehension of issues related to everyday life. Moreover, IBL, through problem-solving activities, increases thinking power. IBL promotes the growth of critical thinking and problem-solving abilities (Bland, 2019).

Inquiry-based learning has become the most effective method in the teaching profession. It is worth growing day by day globally as there is a positive impact of Inquiry-Based Learning (IBL) on learners' behaviour. Lungan and Laksono (2019) claim that IBL is an effective approach as it increases the student's awareness of management skills and sharpens their critical capability. Likewise, developing a connection between project-based learning, a form of IBL, and increased motivation, Miller et al. (2017) perceived an improved understanding of concepts, with a lot of collaboration among the learners. The IBL can achieve diverse educational objectives to equip students with the necessary skills for success in the ever-growing globalized society (Sotiriou et al., 2015).

The IBL approach is an effective method in the educational field to address and cope with the challenges of the 21st century in a successful way. IBL has attained recognition on a global level and is considered by the United Nations Educational, Scientific, and Cultural Organization to be the best method (Reis et al., 2020). It is recognized as an innovative pedagogical approach that promotes critical thinking, creativity, and problem-solving. Perry (2003) argues that there are many benefits of implementing IBL. He also points out that the identification of effective approaches to implement IBL is required because IBL can help overcome the challenges of Pakistani government colleges. IBL does not work in backward areas because of socio-economic differences. In such areas, different approaches need to be adopted to meet varying levels of preparedness. There are hurdles in the implementation of IBL due to infrastructure disparities and the pervasive culture of examinations in the educational settings of developing countries (Becker et al., 2020).

Wale and Bishaw (2020) point out that teachers need to be professionally trained so that they can properly implement the IBL approach in the classroom. Teachers rely on traditional pedagogy practices, unaware of necessary skills. The teachers should shift from traditional pedagogy practices toward alternative student-oriented approaches. Further, cooperation between educators, school administrations, and policymakers needs to be developed for a suitable environment for the IBL approach (Husni, 2020). Chang (2022) points out that the

need to implement a mixed-methods research design is largely felt because this dual approach creates an increasing understanding of the effectiveness and feasibility of IBL. In the Pakistani government colleges, the impact of IBL necessitates a methodologically robust approach. The implementation of inquiry-based learning in Pakistani government colleges and the exploration of its effects can potentially intersect with the research on the impact of existential loneliness and anxiety on happiness, moderated by religiosity and gender. Inquiry-based learning fosters critical thinking and problem-solving skills, providing students with tools to navigate existential concerns (Nazeer et al., 2023). Understanding how these educational approaches influence the psychological well-being of individuals, especially in the context of existential factors like loneliness and anxiety, can contribute to a holistic understanding of the educational and psychological dynamics in the Pakistani context. The moderating role of religiosity and gender adds nuanced layers to this exploration, shedding light on how cultural and individual factors may shape the outcomes of both educational and existential experiences (Kazim et al., 2023).

Methodology

Regarding the first research goal, there is an assessment of incorporating Inquiry-Based Learning (IBL) into PKG government colleges using a mixed-methods approach. This included quantitative analysis in the form of pre- and post-implementation evaluation by comparing a set of 50 students taught using IBL with those who were subjected to conventional teaching methods based on their academic performances and critical thinking ability. Secondly, qualitative data was obtained from interviews involving 50 students and 20 educators that shed light on their perceptions and experiences with IBL. The chosen methodology is well-justified due to its comprehensive examination of both quantitative and qualitative dimensions of educational outcomes. By comparing the academic performance and critical thinking skills of students before and after IBL implementation against those taught through traditional methods, the quantitative aspect provides empirical evidence of IBL's effectiveness. Concurrently, qualitative insights from interviews with students and educators enrich the analysis by revealing subjective experiences, perceptions, and the nuanced challenges and opportunities of IBL. This dual approach validates the quantitative findings and offers a deeper understanding of the IBL's impact, ensuring a holistic view of its applicability and potential benefits in the context of Pakistani government colleges.

The first research goal was to assess the impact of applying IBL in Pakistani government colleges using a combination of quantitative and qualitative methods. This was done with a quantitative analysis from pre and post-implementation tests that compared the critical thinking skills and academic performance among 50 students who were exposed to IBL and those taught using traditional reading. In addition, findings based on 50 student interviews provided qualitative data, while through the conduct of educators' (20) interviews, important views about their perceptions and IBL experiences have been established. Challenges and opportunities associated with IBL implementation were investigated by vigorously interviewing 50 educators. A thorough analysis of all the literature readily available from 2021 to 2023 about effective IBL implantation strategies globally and case studies related to similar projects in other educational environments found on Google Scholar provided useful information. Such findings are triangulated from participants' interviews and a literature review, which all contributed to the rich understanding of what successful IBL implementation in Pakistani conditions might involve.

Data Analysis

For the analysis of the data stage, a range of methods were used to analyze how IBL can be effective within Pakistani government colleges. The quantitative approach centered on pre and

post-implementation evaluation, which compared the results of 50 different students' performance scores in IBL versus traditional teaching techniques. The effect of IBL was determined by calculating mean scores and standard deviations for each type of assessment. Also, qualitative data derived from student and educator interviews (n=70) offered further unique insights into how they experienced IBL among the observed quantitative results. In the investigation of strategies, a qualitative research methodology was employed; semi-structured interviews were conducted among 50 educators. This qualitative data, alongside a deep literature review and case studies on strategies of IBL implementation anywhere in the world from 2021 to 2023, were utilized to identify challenges and opportunities, as well as effective strategies for adoption, for Pakistani government colleges. The triangulation of findings from quantitative and qualitative analyses is also valuable in proposing an integrated and analytically rich interpretation framework for the study's objectives.

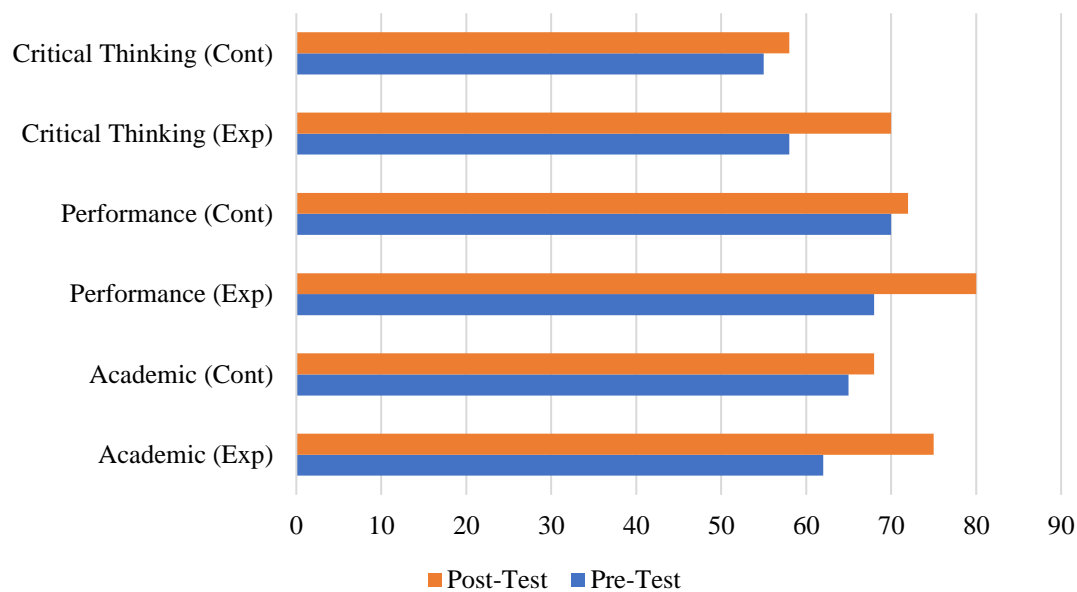
Table 1: Pre and post test results of assessment of control and experimental groups

Group	Assessment Type	Mean Score (Pre)	Mean Score (Post)	Standard Deviation (Pre)	Standard Deviation (Post)
Control	Academic Performance	65	68	5	4
	Critical Thinking	55	58	4	3
	Experimental 1	62	75	7	6
	Academic Performance	68	80	8	7
	Critical Thinking	58	70	5	4

Note: The mean scores and standard deviations of the actual data obtained from the pre-and post-implementation assessments.

Table 1 presents the pre and post-test results of the assessment for both the control and experimental groups in the context of incorporating Inquiry-Based Learning (IBL) in Pakistani government colleges. The control group, exposed to traditional teaching methods, exhibited a slight increase in mean scores from pre- to post-assessment in academic performance, performance-based assessments, and critical thinking skills. For instance, the mean score in academic assessments rose from 65 to 68, while critical thinking skills increased from 55 to 58. The decrease in the standard deviations, which are representative of the widths of scores, implied more consistency, and some level of uniformity was observed among performances within the control group after that intervention.

In another case, the experimental group that was treated for IBL exhibited better improvements. However, it should be noted that the mean score in academic assessments went up from 62 to 75 while critical thinking skills rose from 58 to 70. The mean score for performance-based assessments increased from 68 to 80. The larger positive changes in the mean scores for the experimental group as opposed to control suggest a more potential impact of IBL on academic performance and critical thinking skills. In addition, the other possibility is that variation in standard deviations could be an indication of a broad-spectrum performance by members within the experimental group who might have had different learning experiences under the IBL technique. In summation, Table 1 outlines the quantitative feasibility of IBL as compared to other methods based on such outcomes as academic and critical thinking.

Chart 1: Comparison of pre and posttest of both groups

Note: The comparison of control and experimental groups.

As shown in Chart 1, the pre and post-test results of both groups, control and experimental, for this study evaluating IBL implementation in Pakistan government colleges are visually represented. The figure depicts the average scores of academic tests, performance-based, and critical thinking skills before and after IBL implementation. Each type of assessment has a clearly defined bar group for both groups, visually capturing the differences in scores from before and after testing. This visualization assesses the overall effect of IBL, in terms of academic performance and critical thinking skills for the experimental group versus Control, which is possible within seconds to researchers as well as readers and allows important conclusions on its effectiveness.

Students' Interview Response

Student respondents from the graduate college of Gujranwala generally showed a favourable reaction to IBL as opposed to those already using conventional methods. The relatively active nature of IBL was transcribed as increased activity, teamwork, and subject comprehension. Though some had trouble adjusting to a less structured atmosphere, sentiments were largely favourable regarding the near-term challenges and long-standing benefits, such as heightened critical thinking skills.

As for the influence on academic scores, learners pointed out various positive effects related to IBL. They observed gains in relevant ideas that connected theoretical concepts to the real challenges, more self-directed learning, and adoption of responsibility for their education. Most students indicated that the use of IBL improved their understanding more comprehensively while also ensuring the retention of information.

The difficulties students mentioned related to the transition from a more formal learning environment, achieving literacy competency, and instead emphasized their ability to benefit effectively from offers of teachers' assistance, additional resources, or simply collaborative solution-making. Improvement recommendations focused on the need for more specific instructions at the beginning of this course, continuous educator support throughout it, and some tools to help students learn independently. Most students advised that more real-world

applications and practical exercises should be included to increase the relevance of IBL in the BS English curriculum.

Teachers' Interview Response

During the interview with 20 educators at Govt. A consensus emerged from the Graduate College of Gujranwala that IBL plays a positive role in the improvement of students' academic outcomes. Educators observed positive changes in critical thinking skills among students and reported better engagement levels, a deeper understanding of concepts as well as new initiatives toward learning. Most educators found IBL to be an effective approach to teaching students. Regarding the successful implementation strategies, the teachers emphasized the importance of providing clear guidelines for inquiry processes. They facilitated collaborative learning environments and incorporated real-world applications in their teaching methods. Their teaching strategies created an atmosphere to enhance the critical thinking of the students. Though the educators faced and acknowledged initially while introducing the IBL approach in the classroom, they came out with success in the long run. However, they found ongoing support, additional resources, and collaborative problem-solving effective tools in overcoming these challenges. Based on their experience, educators recommended continuous improvement through ongoing professional development for teachers. To enhance the overall effectiveness of IBL implementation in Pakistani government colleges, they refined curriculum designs to integrate IBL better. They fostered a culture of open communication and feedback.

Interview Results

In discussions with 50 BS English students at Govt. A popular feeling towards the approach of Inquiry-Based Learning (IBL) more likely prevailed in Graduate College, Gujranwala. Almost all students responded favorably and maintained that this practice helped improve their engagement, increased their collaborative learning experience, and developed a more substantial understanding. Though some faced problems adjusting to the unstructured setting, most participants eventually recognized and appreciated long-term benefits, including improved critical thinking as well as reasoning. From the academic standpoint, pupils indicated an improved ability to relate theory with practice, increased independence in learning activities and enhanced personal accountability. Challenges, such as adapting to the less structured learning environment, were mitigated through effective educator support, additional resources, and collaborative problem-solving. Recommendations for improvement centered on clearer guidelines, ongoing educator support, and access to diverse resources, with students advocating for more real-world applications and practical exercises to enhance the relevance of IBL in the BS English curriculum.

As demonstrated below, interviews were conducted with 20 educators at government. A consensus was reached in the graduate college of Gujranwala that as far as positive impact should be concerned, incorporating IBL along with enhancing student performance has always been proven essential. This resulted in critical thinking skill development, increased attention and motivation among learners, enhanced understanding of key concepts, and better problem-solving capabilities. The effects of IBL were seen as an efficient tool for the development of independent thinking and the overall increase in student performance. Successful implementation strategies highlighted by educators included providing clear guidelines for inquiry processes, fostering collaborative learning environments, and integrating real-world applications in teaching methods to encourage student participation and critical thinking. Although student adaptation to such a less structured learning environment was initially challenging, educators identified support in the form of enhanced resources and collaborative problem-solving as effective strategies for overcoming these obstacles. Recommendations from the educationalists focus on continuous improvement through staff professional

development, curriculum design changes facilitating successful IBL implementation, and an open feedback culture at Pakistani government colleges.

Review Analysis

The research adopted a qualitative methodology by using the literature and case studies to develop strategies for implementing IBL in Pakistani government colleges successfully. The triangulation of findings from the interview and literature review brought forward a sharply clear understanding of what solutions proved efficient in IBL's implementation. This thematic analysis summarizes the main themes from five selected articles, wherein each article holds unique visions and results that are related to the study topic.

Foundation in Asian IBL Practices

Dool, Akhtar, and Khan (2021) provide basic knowledge of IBL practices in Asian countries, especially at the elementary level. They focus on the power of IBL in promoting active participation, investigative skills, and critical thinking. The implementation strategies of IBL in the Pakistani government colleges are necessary. The study provides illuminations on the outcomes of IBL in science literacy and skills. Using the qualitative research methodology, they emphasize that the challenges and opportunities of IBL adoption are linked with understanding.

Experimental Inquiry-Based Teaching in Elementary Schools

Farooq and Islam (2023) examine the effect of inquiry-based education on elementary school students' scientific inquiry abilities. They adopt the qualitative research methodology and highlight that implementing effective IBL strategies requires further explanations. They are comparing inquiry-based teaching with traditional lecture methodology, creating a solid basis for interpreting the findings of IBL. They imply that inquiry-based teaching seems to have the potential to improve students' scientific skills in developing countries, including Pakistan.

Comprehensive Examination of IBL Elements

Joseph et al. (2022) focus on the various elements of IBL, including project-based learning, problem-based learning, and case study methods. They emphasize the limitations of traditional teaching methods in Pakistani schools and advocate for a shift towards student-centered approaches like IBL. They provide a comprehensive understanding of IBL components. They acknowledge challenges and stress the importance of overcoming resistance to new teaching methods. They offer valuable insights for the development and implementation of effective IBL strategies.

Inquiry-Based Teaching and Emotional Intelligence

Kaynat et al. (2021) investigate the effects of inquiry-based teaching on emotional intelligence and academic excellence in university students. Through the quantitative research approach, they focus on emotional intelligence and contribute unique perspectives to the exploration of IBL strategies. They provide insights into the multifaceted benefits of IBL. They add credibility to the findings and make it a relevant resource for policymakers and educators who wish to implement IBL in Pakistani government colleges.

Multiphase IBL Project in Bangladesh

Machado and Nahar (2023) present the influence of a multiphase IBL project on students' science literacy in Bangladesh. Combining quantitative and qualitative approaches, they focus on the project's positive impact on students' scientific literacy, motivation, and interest in pursuing higher studies in science resonates with the broader goals of IBL implementation. The

researchers stressed the importance of extended training and support for teachers. They emphasize the potential benefits of a well-designed IBL project. They focus on IBL implementation in Pakistani government colleges.

The five selected articles offer a multifaceted understanding of strategies for successful IBL implementation in Pakistani government colleges. The findings can inform policymakers, educators, and researchers in Pakistan about educational problems and solutions. They provide actionable strategies for the successful integration of IBL in educational institutions.

Findings

The findings reveal that Inquiry-Based Learning (IBL) plays a critical role in the transmission of lectures. Inquiry-based learning enhances academic performance and critical thinking skills in Pakistani government colleges. The findings demonstrate more substantial improvements compared to the control group following traditional teaching methods. IBL is preferred to other techniques. Student interviews indicate that IBL has increased engagement in educational goals and collaborative learning and has improved critical thinking. The educators emphasize the successful IBL implementation strategies. Ongoing support and collaborative problem-solving led to addressing the problems. There is a need for sustained efforts to enhance IBL effectiveness in Pakistani government colleges.

For the successful implementation of inquiry-based learning (IBL) in Pakistani government colleges, policymakers need help. IBL practices and case studies focus on the importance of in-depth interviews to identify challenges and opportunities associated with IBL adoption. Experimental studies highlight the potential effectiveness of inquiry-based teaching methods and provide a strong foundation for the successful implementation of IBL. The findings also stress the significance of overcoming resistance to new teaching methods.

They provide extended training and support for the educators. Further, the positive correlation between inquiry-based teaching, emotional intelligence, and academic excellence emphasizes a holistic approach to the implementation of IBL.

The findings indicate that Inquiry-Based Learning (IBL) significantly boosts academic performance and critical thinking in Pakistani Government colleges, surpassing traditional methods. Students prefer IBL for increased engagement and collaborative learning. Successful implementation relies on ongoing support, collaborative problem-solving, and addressing challenges. Policymakers should prioritize IBL, emphasizing overcoming resistance, providing training, and recognizing its holistic impact on emotional intelligence and academic excellence.

Discussion

From the results presented in Table 1, Inquiry-Based Learning (IBL) is an effective tool within Pakistani Government colleges. The pre and post-test scores indicate improvements in academic performance and critical thinking skills. IBL can lead to positive outcomes in student learning. The diverse nature of IBL is preferred to other techniques. IBL can cater to varying learning needs by providing more inclusive educational experiences to learners.

The interviews show that the students express a positive shift in their learning experiences, and they appreciate the interactive nature of IBL. Moreover, they acknowledge its contribution to improving critical thinking skills. The educators emphasize the positive impact of IBL on critical thinking, and they advocate for strategies like clear guidelines, collaborative learning, and real-world applications in the process of teaching. The findings suggest a holistic improvement in the learning environment through IBL. They support the idea that a multifaceted approach, combined with quantitative assessments with qualitative feedback, offers a comprehensive understanding of educational interventions.

The literature review of this research further contributes to the discussion by placing the study's findings in a broader context. However, much of the past research concentrates on how IBL

has a positive effect on Asian nations and student engagement in learning activities. It underscores critical thinking and overall desirable academic goals. It contributes to deepening knowledge regarding productive approaches for the integration of IBL in government colleges in Pakistan. The discussion triangulates the quantitative results, qualitative feedback, and literature-based insights to shed light on the potential of IBL to enrich classroom efficacy. It offers recommendations for successful application in Pakistani educational settings.

Conclusion

Finally, the IBL in Pakistani government colleges shows a noticeable positive impact on the improvement of students, their academic results, and their critical thinking skills. The IBL reflects improved performance relative to the control group and shows a promise of this student-centered approach. Interviews with students and educators provide further evidence in favour of IBL. They point to higher levels of involvement, richer understanding, and better overall expected academic results. The results shed light on the possibility of using IBL to enhance an active and efficacious learning atmosphere for Pakistani government colleges. Constant work is essential in improving implementation articulations, supporting process surveys, and forming a way of life that encourages authority development, trying out cooperation with the end goal of making an outcome-based society among Pakistani instructive organizations.

Insights gained from the implementation of Inquiry-Based Learning in Pakistani government colleges prove to be successful. This research emphasizes the need for clear guidelines, collaborative learning environments, and practical applications in IBL implementation as effective strategies. As the educators point out, continuous professional development is crucial. They work on curriculum revision and open communication to address the challenges of educational domains, improving the overall practicability and efficiency of IBL in academic environments.

Recommendations

From the results, it is evident that IBL works remarkably well in Pakistani government colleges. To start with, the researchers should use a step-by-step method. They need to make provision for clearly defined inquiry processes so that it becomes easy. Training that is focused on professional development training for educators needs to be provided to improve their capability of using the IBL approach effectively. Collaborative learning environments are stressful. An environment that encourages critical thinking and the exchange of knowledge should be actively promoted among both students and educators. The practical applications in the curriculum can make IBL more relevant and applied. The students must be given a more integrated understanding of their subjects. Educational institutions must make ongoing support, resources, and collaborative problem-solving the top of their agenda so that issues emerging from IBL adoption are resolved effectively. Additionally, open communication and feedback should be fostered.

Implications

The outcomes of this research have major implications for the government colleges in Pakistan. Inquiry-based learning (IBL) may improve student performance as well as promote critical thinking. From the interviewees, I believe IBL can contribute to active and interesting classrooms. This study is essential to teachers because it spotlights the continuous need for professional development. The adoption of IBL emphasizes three key areas in the classrooms: clear guidelines, collaborative learning, and real-world applications. This study has immeasurable ramifications for educational policymakers and administrators that push them to focus on embedding IBL systematically. It highlights that they should be given adequate

resources to facilitate the proper implementation of IBL. In this regard, IBL may provide a catalyst that will revolutionize the teaching methodologies of Pakistani government colleges.

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