

Assessing Pedagogical Approaches in Bachelor of Elementary Education: A Focus on Practical Outcomes

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Abstract. The study aimed to assess the effectiveness of pedagogical approaches in teaching BEEd, focusing on their implementation. The study utilized a descriptive-correlational research design to determine the profile variables of the respondents, their assessment of the effectiveness of pedagogical approaches, and the extent of challenges and issues encountered by the faculty members in implementing pedagogical approaches. The study found that all pedagogical approaches used in teaching BEEd were assessed as highly effective. On the other hand, faculty members encountered various challenges while implementing pedagogical approaches. Despite these challenges, the study revealed no significant difference between respondents' assessments.

Keywords: Pedagogical approaches; Effectiveness; BEEd; Implementation; Challenges.

1.0 Introduction

The efficacy of pedagogical approaches in shaping student outcomes is a cornerstone of higher education. Effective pedagogy is crucial for fostering student development, cultivating subject matter expertise, and bridging the gap between academia and real-world applications (Ruarte, 2019; Habib, 2017). Educators, as the primary architects of the learning experience, wield significant influence over student achievement. To optimize outcomes, higher education institutions (HEIs) must prioritize the selection of competent educators equipped with robust pedagogical content knowledge (TPCK) (Habib, 2017).

Despite the acknowledged importance of effective pedagogy, research on its implementation in specific contexts, such as Bachelor of Elementary Education (BEEd) programs, still needs to be completed. While studies have highlighted the need for innovative pedagogical practices to address the evolving demands of the 21st century (Leite & Zabalza, 2012; Tuncdogan et al., 2019), there is a shortage of research investigating the challenges and opportunities associated with their integration into BEEd curricula.

This study aims to contribute to this knowledge gap by examining the effectiveness of pedagogical approaches employed in BEEd programs. Specifically, it will explore faculty members' challenges and issues when implementing these approaches. By understanding these factors, this research seeks to inform the development of strategies to enhance pedagogical practices in BEEd programs and better prepare future educators to meet the needs of diverse learners.

2.0 Methodology

2.1 Research Design

A quantitative descriptive-correlational research design was employed to examine the relationships among faculty profile, pedagogical approach effectiveness, attainment of BEE Program Learning Outcomes (PLOs), and associated challenges. Statistical correlation analyses, such as Pearson's r or Spearman's ρ , were utilized to determine the strength and direction of relationships between these variables.

2.2 Research Locale

The study was conducted at the Cagayan State University-Aparri campus in Barangay Maura, Aparri, Cagayan. The campus houses the College of Teacher Education, which offers Bachelor of Elementary and Secondary Education programs. The campus provides a conducive learning environment for students since it has the necessary facilities for teacher education, including classrooms, laboratories, and a library. Notably, the College has consistently demonstrated excellence in teacher education, with recent high passing rates in the Licensure Examination for Teachers.

2.3 Research Participants

The study included 82 participants: 20 faculty members and 62 graduates from the Bachelor of Elementary Education program at Cagayan State University, Aparri Campus. Stratified random sampling was employed to obtain a representative sample and reduce selection bias. This method categorized the population into subgroups (strata). Participants were then randomly selected from each stratum proportionally to their representation in the overall population. This probability sampling technique is commonly used in surveys to ensure that subgroups within the population are adequately represented (Parsons, 2017).

2.4 Research Instrument

All participants provided written informed consent outlining the study's purpose and potential benefits. Data was collected using a structured questionnaire administered through face-to-face interviews with faculty members and online surveys via Google Forms for graduates. Part III of the questionnaire was adapted from CMO 74, Series of 2017, with modifications to align with the study's objectives. This study used an adopted, modified, validated survey questionnaire as the main instrument and primary data source to answer the research questions. To ensure the validity and reliability of the questionnaire, questionnaire design experts analyzed the questions for clarity, relevance, and coverage of the intended constructs. More so, a small sample of the target population completed the survey to identify confusing questions, flow issues, or missing data.

2.5 Data Gathering Procedure

This study used specific steps to gather data. A formal letter of request was addressed to the Dean of the College of Teacher Education. Before commencing data collection, written informed consent was obtained from all participating respondents, explicitly ensuring their voluntary participation. This process provided detailed information about the study's objectives and anticipated outcomes. The collected data was meticulously compiled and organized for analysis and interpretation, adhering to the strictest confidentiality principles. Its use was solely confined to advancing the research investigation. Data gathering was employed in two forms: face-to-face data collection through hard copy questionnaires for faculty members and Google Forms sent online for alumni respondents.

2.6 Ethical Considerations

This research adhered to strict ethical guidelines. Participant involvement was entirely voluntary, and respondents retained the right to withdraw from the study at any time without consequence. All potential harm, including physical, psychological, and social risks, was minimized. The dignity and well-being of the respondents were prioritized throughout the study. Research data was kept confidential to safeguard respondent rights and maintain scientific integrity. Rigorous measures were implemented to prevent plagiarism and research misconduct, ensuring the ethical conduct of the study.

3.0 Results and Discussion

3.1 Profile of the Participants

Table 1. Descriptive statistics of the profile of the respondents

Variables	Alumni		Faculty	
	Freq. (n=63)	Percentage	Freq. (n=20)	Percentage
Sex				
Male	5	7.9	7	35.0
Female	58	92.1	13	65.0
Age				
22 to 25	53	84.1	4	20.0
26 to 29	5	7.9	5	25.0
30 to 33	3	4.8	4	20.0
34 to 37	1	1.6	2	10.0
38 or above	1	1.6	5	25.0
Educational attainment				
Bachelor's graduate	56	88.9	-	-
Earned units in a Masteral degree	7	11.1	4	20.0
Masteral graduate	-	-	3	15.0
Earned units in a Doctorate	-	-	4	20.0
Doctorate graduate	-	-	9	45.0
Employment status				
Not Employed	32	50.8	-	-
Employed in a Non-Teaching Job	11	17.5	-	-
Contract (JO/COS) Private	15	23.8	-	-
Contract (JO/COS) Public	3	4.8	8	40.0
Permanent Private Teacher	2	3.2	-	-
Permanent Public Teacher	-	-	12	60.0

Table 1 illustrates the demographic profiles of alumni and faculty members. The alumni population exhibits a female majority with a frequency of 58 or 92.1 percent. In contrast, the faculty distribution reflects a more equitable sex (female and male) with a frequency of 13 or 65 percent comprising females. Alumni tend to be younger, with a significant proportion falling within the 22-25 age bracket or 84.1 percent and a mean age of 24.71 years. In contrast, faculty members encompass a broader age spectrum, with a higher mean age of 33.10 years and a more extensive standard deviation. This finding is because the alumni are new graduates while the faculty members are in their mid-year service.

Regarding educational attainment, most alumni hold baccalaureate degrees with a frequency of 56 or 88.9 percent, while faculty members exhibit notably advanced levels of education. A substantial segment of faculty possesses master's with a frequency of 3 or 15 percent and doctoral degrees with a frequency of 9 or 45 percent. Schudde and Bernell (2019) found in their undertaking that educational achievement influences employment prospects. This finding shows that the alumni have not engaged in post-graduate education, which is substantial for their employment. Also, this shows that faculty members have pursued their advanced education degrees.

Finally, there are discernible disparities in the employment status of the two cohorts. A significant portion of alumni are presently unemployed, with a frequency of 32 or 50.8 percent. In contrast, most faculty members are permanent public teachers, with a 12 or 60 percent frequency. Despite reported shortages of teachers, this finding shows that the teacher job market can be competitive, with more graduates than available positions in certain areas.

3.2 Effectiveness of Constructivism as a Pedagogical Approach

Table 2 illustrates the effectiveness of constructivism as a pedagogical approach in teaching the Bachelor of Elementary Education based on various indicators. The weighted mean of 4.64, with a descriptive value of "very effective," indicates that constructivist approaches are highly effective in enhancing learning outcomes within the Bachelor of Elementary Education program.

Table 2. Descriptive statistics of the effectiveness of constructivism as a pedagogical approach

Indicators	Mean	Interpretation
1. Teachers utilize graphic organizers (e.g., concept maps) to help students categorize information and identify cause-and-effect relationships.	4.65	Very effective
2. Teachers use journals to empower students to document, analyze, and synthesize learning experiences.	4.43	Very effective
3. Teachers actively use oral presentations to construct and share students' knowledge with their classmates.	4.80	Very effective
4. Teachers utilize peer assessment to engage students in self-evaluation and critical reflection.	4.54	Very effective
5. Teachers require students to create portfolios, allowing them to take ownership of their learning by selecting artifacts representing their progress and understanding.	4.47	Very effective
6. Teachers utilize rubrics to provide clear expectations and foster a focus on the learning process itself, not just the students' final grades.	4.78	Very effective
7. Teachers utilize project-based learning to actively construct knowledge among students by engaging them in real-world problems and projects that require them to research, analyze, solve problems, and create solutions.	4.80	Very effective
Overall Mean	4.64	Very effective

Among all the indicators, the utilization of oral presentation and project-based learning received the highest weighted mean of 4.80 with a descriptive value of “very effective.” This finding implies that these methods effectively engage students and promote deep learning. Project-based learning allows students to tackle real-world problems and develop critical thinking, collaboration, and communication skills, all essential for success in the workplace and beyond. On the other hand, oral presentations provide students with a platform to rehearse and solidify their understanding of the course material while also strengthening their public speaking skills. According to Liu and Carless (2023), presentations improve communication skills, critical thinking, and public speaking confidence.

On the other hand, journal utilization received a slightly lower score, with a weighted mean of 4.43, but still with a descriptive value of “very effective.” This implies that journal use within this approach might be slightly less impactful due to its nature, such as presenting research findings and theoretical advancements in education, which can be a step removed from the practical application teachers need in the classroom.

3.3 Effectiveness of Inquiry-based as a Pedagogical Approach

As shown in Table 3, inquiry-based pedagogy is effective in the Bachelor of Elementary Education programs. The data, reflected in weighted mean scores and descriptive values, consistently indicates a high level of effectiveness of the different instructional strategies along the inquiry-based approach. The weighted mean of 4.68 provides compelling evidence of inquiry-based approaches' effectiveness in enhancing student learning outcomes.

Table 3. Descriptive statistics of the effectiveness of inquiry-based as a pedagogical approach

Indicators	Mean	Interpretation
1. Teachers allow students to do experiments to develop essential scientific skills, such as observation, data collection, analysis, and critical thinking.	4.70	Very effective
2. Teachers utilize classroom debates for the students to explore multiple perspectives on complex issues, fostering critical thinking, research skills, and a deeper understanding of the topic	4.48	Very effective
3. Teachers allow group work among students to share their existing knowledge and experiences, enriching the collective understanding of the topic under investigation.	4.87	Very effective
Overall Mean	4.68	Very effective

Among all the indicators, allowing group work among students received the highest weighted mean of 4.87, indicating that group work is the most effective strategy within the inquiry-based approach. This aligns with current research on collaborative learning within constructivism (Amineh & Asl, 2015). Studies show that group work fosters deeper understanding and knowledge construction than individual work in inquiry-based settings (Johnson & Johnson, 2013). This also aligns well with the core principles of inquiry, as collaborative learning fosters knowledge sharing, diverse perspectives, and deeper understanding through shared investigation. This further indicates that students can learn from each other's experiences and approaches, leading to a richer collective grasp of the topic.

While still categorized as “very effective,” classroom debates have a slightly lower mean of 4.48 compared to the other indicators. This finding implies that debates can be more challenging to prepare for and require specific

facilitation skills from the teacher to ensure a respectful and productive exchange. Additionally, not all students may feel comfortable with the confrontational nature of the debate, and some topics may be better suited to other learning methods. Research suggests that effective debate requires fostering specific skills like argumentation and critical analysis (Facione, 2019). Creating a safe space for respectful disagreement is crucial for productive debate (Aster & Shaw, 2018). Finally, the topic itself can influence the effectiveness of the debate. Not all subjects are well-suited for a debate format, and some might require a strong foundation of knowledge before engaging in productive debate (Jin & Kammermeier, 2020).

3.4 Effectiveness of Reflective as a Pedagogical Approach

The different teaching strategies along the reflective approach are very effective, as revealed by the overall weighted mean of 4.72 (see Table 4).

Table 4. Descriptive statistics of the effectiveness of reflective as a pedagogical approach

Indicators	Mean	Interpretation
1. Teachers utilize self-assessment to help students become more aware of their strengths, weaknesses, and learning styles.	4.67	Very effective
2. Teachers utilize classroom observations to assess student engagement, identify areas of confusion, and evaluate the effectiveness of their teaching methods.	4.72	Very effective
3. Teachers allow students to create reflective journals to engage them in metacognition (thinking about their thinking), analyze their learning experiences, and document their evolving understanding of concepts.	4.64	Very effective
4. Teachers give feedback to students to discuss, ask clarifying questions and develop strategies for improvement.	4.86	Very effective
Overall Mean	4.72	Very effective

This implies that incorporating strategies and the reflective approach into teacher education can significantly benefit future educators. Previous evidence has indicated that reflection not only facilitates conceptual understanding but also enhances problem-solving abilities and metacognitive awareness, promotes engagement in the learning process (Chen et al., 2019), and boosts learning confidence (Wang et al., 2018).

Among all indicators, giving feedback to students received the highest weighted mean of 4.86, which indicates that providing feedback is the most effective strategy within reflective pedagogy. This aligns with the study of Bangert-Drowns et al. (2019), emphasizing the importance of dialogic feedback, a two-way conversation where students actively participate in understanding and applying feedback. Effective feedback allows students to close the gap between current understanding and desired learning outcomes (Nicol & Macfarlane-Dick, 2020), develop self-assessment skills as they learn to analyze their work (Sadler, 2018), and refine teaching strategies based on student responses.

While still categorized as "very effective," self-assessment and reflective journals have slightly lower means than classroom observation and feedback. This finding shows that self-assessment and journaling, though valuable, require additional support to maximize their effectiveness in fostering deeper reflection. This finding aligns with the study of Artino & Taylor-Greene (2014), which suggests that this might be due to the need for explicit instruction and scaffolding in developing these metacognitive skills. Students may initially struggle with self-reflection, requiring guidance to analyze their strengths, weaknesses, and learning processes (Moon, 2013).

3.5 Effectiveness of Collaborative as a Pedagogical Approach

Table 5 shows the effectiveness of the collaborative approach in the Bachelor of Elementary Education programs. The different teaching strategies along the collaborative approach are very effective, as revealed by the overall weighted mean of 4.64, which implies that incorporating the collaborative approach into the Bachelor of Elementary Education program has a significant positive impact. This indicates that future educators who experience collaborative learning firsthand are well-equipped to implement it effectively in their classrooms. This finding aligns with research by Borokhovski et al. (2016), who emphasize the substantial impact of student collaboration on academic achievement.

Table 5. Descriptive statistics of the effectiveness of collaborative as a pedagogical approach

Indicators	Mean	Interpretation
1. Teachers utilize think-pair-share to engage students in active participation and knowledge construction.	4.75	Very effective
2. Teachers utilize simulations (e.g., historical simulations) to have the students reenact historical events and debate strategies and actions as a group.	4.49	Very effective
3. Teachers allow peer teaching among students to take on the role of the instructor for a designated period, explaining a concept or skill to their classmates	4.59	Very effective
4. Teachers utilize small group discussions to allow students to practice communication skills like active listening, expressing ideas clearly, and respectfully disagreeing.	4.67	Very effective
5. Teachers utilize role-play simulated scenarios in which the students actively participate, make decisions, and step into different shoes, fostering empathy and understanding of various viewpoints.	4.71	Very effective
Overall Mean	4.64	Very effective

Among all indicators, utilizing think-pair-share to engage students in active participation and knowledge construction received the highest mean of 4.75, indicating its strong impact within collaborative pedagogy. Think-Pair-Share allows for individual reflection, followed by peer discussion and knowledge sharing. Research suggests that think-pair-share promotes active participation as students think independently and then engage in discussions (Cheng et al., 2020). Moreover, Students who gain a deeper understanding by explaining concepts to peers reinforce student learning (Webb et al., 2018).

While still "very effective," simulations have a slightly lower mean of 4.49 compared to other strategies. This indicates that simulations require careful design and implementation while still being effective to maximize their benefits. This could be due to factors like design and implementation, in which the effectiveness may vary depending on the quality and facilitation of the simulation (Friesen, 2022).

3.6 Effectiveness of Integrative as a Pedagogical Approach

Table 6 presents the effectiveness of integrative pedagogy in Bachelor of Elementary Education programs. Examining various indicators, the table reveals uniformly high respondent ratings, with an overall weighted mean of 4.82, implying that integrating various subjects and real-world applications into teaching significantly benefits future educators. By experiencing this interdisciplinary approach firsthand, pre-service teachers can develop the skills and knowledge to create engaging and well-rounded learning experiences for their students.

Table 6. Descriptive statistics of the effectiveness of integrative as a pedagogical approach

Indicators	Mean	Interpretation
1. Teachers allow students to do research activities that delve into information gathering, analysis, and synthesis. They learn to evaluate sources, use credible evidence, and present their findings effectively.	4.80	Very effective
2. Teachers allow students to observe and assist their cooperating teachers in the field (e.g., field study)	4.80	Very effective
3. Teachers allow students (e.g., teaching internships) to take on more responsibilities, starting with small tasks like leading discussions or activities and teaching full lessons or units.	4.86	Very effective
Overall Mean	4.82	Very effective

While slight variations exist, all three indicators in Table 2e fall under the "very effective" category. This shows that all three strategies – research activities, field experiences, and teaching internships – are valuable components of integrative pedagogy. With the highest weighted mean of 4.86, teaching internships provide a platform for pre-service teachers to take on increasing teaching responsibilities (Zeichner, 2012). This practical experience allows them to integrate knowledge and skills across disciplines while gaining valuable hands-on experience to prepare them for future careers.

On the other hand, research activities cultivate essential skills like information literacy, critical analysis, and knowledge synthesis across disciplines (Lang & Bruce, 2018). This equips future educators to guide their students in navigating information effectively. Complementing this theoretical foundation are field experiences where pre-service teachers observe and assist seasoned educators. This real-world exposure allows them to bridge the gap between theory and practice, understanding how to implement their knowledge in a classroom setting.

Table 7 summarizes the effectiveness of different pedagogical approaches in teaching Bachelor of Elementary Education, presenting overall weighted mean scores and descriptive values. The table shows that all pedagogical approaches are deemed "very effective." Among the five pedagogical approaches, integrative ones were the most

effective, receiving the highest overall weighted mean of 4.82 with a descriptive value of “very effective.” This implies that different teaching strategies and an integrative approach have a significant advantage in preparing future BEE teachers. This holistic approach equips them to create engaging learning environments that promote memorization, critical thinking, information literacy, and the ability to connect knowledge across disciplines. El-Sherbiny and Al-Tantawi (2011) highlighted the significance of this approach, defining it as “a system that emphasizes the interconnected study of academic subjects, organized more by psychological principles than traditional structures, while not neglecting the societal benefits students derive from their learning.”

Table 7. Summary of the results

Pedagogical Approaches	Overall Mean	Overall DV
1. Constructivism	4.64	Very effective
2. Inquiry-Based	4.68	Very effective
3. Reflective	4.72	Very effective
4. Collaborative	4.64	Very effective
5. Integrative	4.82	Very effective
Composite Mean	4.70	Very effective

Meanwhile, constructivism and collaborative approach both attained the lowest overall weighted mean score of 4.64 among the pedagogical approaches, though still categorized as “very effective.” This indicates that their impact might be slightly less pronounced when used in isolation than in integrative pedagogy. Constructivism, which emphasizes individual knowledge construction through experiences and exploration, might need more breadth of exposure provided by integrative pedagogy’s research activities and real-world experiences. Similarly, collaboration, though valuable for fostering communication and knowledge sharing (Johnson & Johnson, 2013), might offer a different depth of exploration or application across disciplines than seen in integrative approaches. However, the strengths of constructivism and collaborative learning might be amplified when strategically integrated within a broader framework like integrative pedagogy.

The composite mean for all approaches is 4.70, indicating that each approach effectively teaches Bachelor of Elementary Education. This finding implies that all five pedagogical approaches examined in this study – reflective, collaborative, integrative, constructivist, and reflective – hold value in preparing future educators. Taufiqurrochman and Rana (2021) reiterated that education is a long human process, but several approaches and strategies are needed to improve students’ abilities. While education is a lifelong journey, employing diverse teaching methods and fostering student engagement are crucial for maximizing their learning potential.

3.7 Challenges and Issues Encountered

All indicators were rated as “moderate extent,” as shown in Table 8, with an overall weighted mean of 3.17.

Table 8. Descriptive statistics of the challenges and issues encountered

Indicators	Mean	Interpretation
1. Lack of Access or Outdated Equipment that limits the types of technology-based approaches instructors can implement.	3.70	High
2. Faculty members do not have enough dedicated time to learn new technologies and integrate them effectively into their courses	2.65	Moderate
3. Technology-based approaches are time-consuming to set up and manage.	2.90	Moderate
4. Faculty members resist changing their teaching methods, even if they see the potential benefits of technology.	3.35	Moderate
5. Faculty members share common areas like labs or media centers, limiting their control over the learning environment for their specific approach.	3.65	High
6. Inadequate knowledge of varied teaching strategies and pedagogical approaches.	2.50	Slight
7. The assessment tools do not adequately reflect new pedagogical approaches.	2.70	Moderate
8. Developing assessments that align with new pedagogical approaches that take time and effort.	3.30	Moderate
9. Schools do not have the budget to provide flexible furniture, whiteboards, or other materials needed for active learning approaches.	3.85	High
Overall Mean	3.07	Moderate

This finding implies that Cagayan State University – Aparri Campus faculty members encountered moderate challenges when implementing various pedagogical approaches in the Bachelor of Elementary Education (BEE) program. This indicates that there are no significant hurdles, and it is not completely smooth sailing for educators to use these methods. Among the identified challenges in implementing pedagogical approaches used in teaching

BEEed, the highest weighted mean, 3.85, reflects the challenge “Schools do not have the budget to provide flexible furniture, whiteboards, or other materials needed for active learning approaches” described as “great extent.” This finding indicates that Cagayan State University – Aparri campus faculty members view this lack of resources as a major barrier to implementing active learning methods in their classrooms. Active learning approaches often require students to work collaboratively and move around the room, making flexible furniture and whiteboards crucial tools. This further implies that without these resources, faculty members of the College of Teacher Education at CSU–Aparri may struggle to create engaging environments that promote critical thinking, communication, and participation. This highlights a potential disconnect between educational best practices and the financial realities many schools face.

On the other hand, the lowest mean, 2.50, corresponds to “Inadequate knowledge on varied teaching strategies and pedagogical approaches,” classified as “slight.” This finding implies an interesting contrast. It indicates that faculty members, on average, view their knowledge of diverse teaching methods as a less significant hurdle than resource limitations. Perhaps faculty members feel confident in their existing repertoire of teaching strategies, even if those strategies might not be the most varied.

3.8 Comparison of the Assessment of Respondents on the Effectiveness of Pedagogical Approaches When Grouped by Profile

Table 9 compares the effectiveness of pedagogical approaches in teaching the Bachelor of Elementary Education (BEEed) program when grouped according to profile.

Table 9. Comparison test results on the assessment of the respondents on the level of effectiveness of pedagogical approaches used in teaching BEEed when grouped by profile

Variables	F-value	p-value	Statistical Inference
Type of respondent	0.256	0.799	Not significant
Sex	0.671	0.504	Not significant
Age	0.648	0.630	Not significant
Educational attainment	0.485	0.747	Not significant
Employment status	1.492	0.202	Not significant

*tested at 0.05 level of significance

As shown, it was found that all probability values exceed the standard significance threshold of 0.05. No statistically significant differences exist in how respondents assessed the effectiveness of pedagogical approaches used in teaching Bachelor of Elementary Education (BEEed) program when grouped according to profile. Hence, regardless of sex, age, educational attainment, employment status, and connection to Cagayan State University, the respondents have the same assessment of the effectiveness of pedagogical methods used in BEEed programs. This implies that the lack of significant differences might indicate that the Bachelor of Elementary Education (BEEed) program utilizes core pedagogical approaches across the curriculum. This could be due to guidelines established by the Commission on Higher Education (CHED) or the specific requirements of the CMO (Curriculum Memorandum Order) for BEEed programs. The CMO likely outlines specific pedagogical approaches that all BEEed programs must adhere to. This ensures consistency in teaching methods across institutions, potentially explaining why respondents from different backgrounds had similar assessments. By exploring CHED’s policies and guidelines for BEEed programs, for instance, Republic Act No. 7787, also known as the Teacher Education Act of 1994, emphasizes the importance of equipping future educators with a strong foundation in pedagogy.

3.9 Comparison of the Extent of Problems Encountered When Grouped by Profile

Table 10. Comparison test results on the extent of problems encountered when grouped by profile

Variables	KW	p-value	Statistical Inference
Sex	0.014	0.905	Not significant
Age	5.909	0.206	Not significant
Educational attainment	9.122	0.028	Significant
Employment status	0.024	0.877	Not significant

*tested at 0.05 level of significance using the Kruskal-Wallis test (non-parametric)

Table 10 explores potential variations in the extent of problems faculty members encounter when implementing pedagogical approaches when grouped according to profiles. The analysis reveals that the respondents' extent of problems varies according to educational attainment, as reckoned by the f -value of 9.122 and its probability value of 0.028. This indicates that faculty members perceive challenges in implementation differently based on their level of education.

Post hoc analysis shows that faculty members with doctoral degrees (mean 17.63) reported encountering the most problems overall compared to those with master's degrees (mean 10.44). This finding implies that faculty members with doctorates may need help with a potential disparity between their theoretical knowledge and practical classroom experience. Their advanced degrees may have focused heavily on theory, leaving them needing more preparation to navigate practical implementation issues related to technology, facilities, learning environments, and assessment tools. This underscores the importance of professional development programs that equip educators, regardless of academic background, with the practical skills and tools necessary to effectively implement innovative teaching methods in the face of such challenges. This finding aligns with Hanushek et al. (2017), who emphasize the importance of advanced degrees, highlighting the need for professional development that bridges the gap between educational attainment and effective teaching practices.

4.0 Conclusion

The study revealed that pedagogical approaches employed in BEED teaching are highly effective. Despite encountering moderate challenges, faculty members successfully implemented these strategies. To sustain and enhance the effectiveness of these approaches, faculty members should prioritize continuous professional development, strong communication, critical thinking, and technology skills. Furthermore, cultivating positive professional attributes will be instrumental in successfully implementing diverse pedagogical strategies. Future research could delve deeper into specific pedagogical approaches that yield optimal outcomes and explore strategies to mitigate challenges inside the classroom.

5.0 Contributions of Authors

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7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper

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9.0 References

- Acar, O.A. and Tuncdogan, A. (2019). Using the inquiry-based learning approach to enhance student innovativeness : A conceptual model, *Teaching in Higher Education Critical Perspectives*, 1 (2517), 895-909. <https://doi.org/10.1080/13562517.2018.1516636>.
- Amineh, M., & Asl, H. R. (2015). The effectiveness of collaborative learning for EFL learners: A systematic review. *English Language Teaching*, 8(3), 19-31. <https://rb.gy/mc7846>
- Artino, A. R., & Taylor-Greene, S. J. (2014). Scaffolding reflective practice in pre-service teacher education. *Reflective Teaching in Educational Leadership*, 67(2), 167-188.
- Aster, B. D., & Shaw, L. F. (2018). Creating a safe space for respectful classroom debate. *Journal of Political Science Education*, 14(3)-325-342. <https://rb.gy/62idpt>
- Bangert-Drowns, R. (2019). Effectiveness of feedback interventions in K-12 science education. *AERA Reviews of Educational Research*, 39(3), 400-434.
- Borokhovski, E., Bernard, R. M., Tamim, R. M., Schmid, R. F., & Sokolovskaya, A. (2016). Technology-supported student interaction in post-secondary education: A meta-analysis of designed versus contextual treatments. *Computers & Education*, 96, 15-28. <https://doi.org/10.1016/j.compedu.2015.11.004>
- Chen, M. A., Hwang, G., & Chang, Y. (2019). A reflective thinking-promoting approach to enhancing graduate students' flipped learning engagement, participation behaviors, reflective thinking and project learning outcomes. *British Journal of Educational Technology*, 50(5), 2288-2307. <https://doi.org/10.1111/bjet.12823>
- Facione, P. A. (2019). Critical thinking: A statement of core competencies. In P. A. Facione (Ed.), *The disposition to think critically* (3rd ed., pp. 25-50). Peter Lang.
- Friesen, S. (2022). Simulations in teacher education: A critical review of the literature. *Journal of Teacher Education*, 73(2), 189-204.
- Habib, H. (2017). A research of teacher effectiveness and its importance. *National Journal of Multidisciplinary Research and Development*, 2(3), 530-532.
- Hanushek, E. A., (2017). Teachers' college major, certification, and student achievement: Updated evidence from the MET project. *Education Finance and Policy*, 12(4), 420-444.
- Jin, H., & Kammermeier, K. (2020). Factors influencing the effectiveness of the debate format in science education: A systematic review. *International Journal of Science Education*, 42(18), 9262-9286. <https://jns.scholar.princeton.edu/document/90>
- Johnson, D. W., & Johnson, R. T. (2013). Cooperative learning experiences in science. In B. J. Fraser, K. G. Tobin, & C. J. McRobbie (Eds.), *Second international handbook of science education*, Vol. 12, 1035-1070, Springer Netherlands.
- Liu, X., & Carless, D. (2023). Oral presentations: A review of research on student learning. *Educational Psychology Review*, 35(1), 1-25.

- Lang, H. Y., & Baek, J. Y. (2022). The effects of using concept maps on students' critical thinking and metacognition in science learning. *International Journal of Science Education*, 44(1), 122-140.
- Moon, J. (2013). Learning journal writing in ELT. *English Teaching Practice & Critique*, 12(3), 51-65.
- Nicol, D. J., & Macfarlane-Dick, D. (2020). Formative assessment and self-regulated learning: A model and seven principles of good practice. *Assessment & Evaluation in Higher Education*, 45(8), 1490-1508.
- Parsons, V. (2017). *Wiley Stats Ref: Statistics Reference Online*. John Wiley & Sons, Ltd.
- Ruarte, D.E. (2019). *Effective Pedagogies for Online Learning*. Research Gate
- Sadler, D. R. (2018). Diagnostic classroom assessment: Purposes and practices. *Studies in Educational Evaluation*, 62, 149-158. <https://doi.org/10.1016/j.stueduc.2018.08.002>
- Schudde, L., & Bernell, K. (2019). Educational Attainment and Nonwage Labor Market Returns in the United States. *AERA Open*, 5(3), 1-18. <https://doi.org/10.1177/233285841987405>
- Taufiqurrochman, R., & Rana, H. A. S. (2021). Video-Based Ice Breaker Game in the Department of Arabic Language Education. *Ijaz Arabi Journal of Arabic Learning*, 4(3), 557-569. <https://doi.org/10.18860/ijazarabi.v4i3.13148>
- Wang, M., Yuan, B., Kirschner, P. A., Kushniruk, A. W., & Peng, J. (2018). Reflective learning with complex problems in a visualization-based learning environment with expert support. *Computers in Human Behavior*, 87, 406-415. <https://doi.org/10.1016/j.chb.2018.01.025>