

Feedback of Employers of Bachelor of Technical Vocational Teacher Education Graduates: Inputs to Curriculum Enhancement

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Abstract

Feedback of employers serves as an important consideration in the enhancement of teacher education programs. By incorporating employer perspectives, programs can ensure that their curriculum remains up-to-date, relevant, and aligns with the needs of the education sector. The present study sought to determine the feedback of employers of the Bachelor of Technical-Vocational Teacher Education (BTVTED) graduates at Catanduanes State University. Anchored on the Human Capital Theory, which posits that investments in education increase an individual's productivity and market competitiveness, this research aimed to determine if the graduates' education was a worthy investment from an employer's perspective. The findings were used to provide recommendations for curricular enhancement. Adopting an explanatory sequential mixed-method research design, the study utilized a survey questionnaire and interviews to gather data from the immediate supervisors of BTVTED graduates from academic institutions. Purposive sampling was used to select participants who were immediate supervisors with at least three years of experience. Quantitative findings indicate that employers perceive BTVTED graduates as fully prepared in both Subject Knowledge and Pedagogical Content Knowledge. The analysis of variance revealed no significant difference in employer perceptions of preparedness and performance based on their age or sex. However, there was a significant difference in the perception of pedagogical content knowledge based on the employers' years of experience as a school head. Qualitative thematic analysis triangulated these findings, revealing that graduates possess strong foundational and practical knowledge but may have gaps in more advanced theoretical knowledge. Based on these results, the study recommends enhancing the curriculum to strengthen the theoretical foundations of practical skills and developing a continuous feedback loop between the university and industry partners to ensure the curriculum's continued relevance...

Keywords: technical-vocational teacher, curriculum, feedback, employers..

Introduction

As society continues to change, the need for highly trained and skilled human resources must be addressed (Gonzales et al., 2017). Higher education institutions (HEIs) play a crucial role in training students for future employment by providing them with the knowledge, skills, and experiences necessary to succeed in their chosen careers. They are considered one of the best agents in promoting the development of human capital in the country through the provision of quality education and relevant training (Aquino et al., 2015). Bowden and Marton (1998) believed that higher education institutions (HEIs) should prepare students for future employment based on the needs of industry.

Heritage (2007) stated that the main purpose of education is to equip students with the necessary knowledge, competencies and skills necessary to perform their job and throughout life. As such, the Commission on Higher Education (2017) explained in the CMO No. 79, series of 2017 that the main goal of the BTVTED program is to "develop highly competent and motivated teachers in technical-vocational education in their area of specialization."

In the ever-changing landscape of education, the effectiveness of teacher education programs is important in training the future teachers that will lead to the success of students in the future. It is a well-known notion that teachers can only perform their duties and responsibilities effectively when they were trained effectively (Sharma, 2000). In fact, the teacher education graduates are the ones who directly experience the relevance of their programs to their employments (Aquino et al., 2015).

In the Philippines, the Commission on Higher Education (CHED) issues the policies, standards and guidelines to ensure that curricular programs of HEIs are in line with the existing policies, standards and guidelines both in the national and international level. The existing policies, standards and guidelines in the implementation of the Bachelor of Technical-Vocational Teacher Education (BTVTED) program in the Philippines is the embodied in the CHED Memorandum Order (CMO) No. 79, series of 2017 (Commission on Higher Education, 2017).

One of the programs offered at the Catanduanes State University College of Education is the Bachelor of Technical-Vocational Teacher Education (BTVTED) program. This program plays a pivotal role in developing

highly skilled and competent teachers for the technical vocational education sector. It serves as a cornerstone for producing educators equipped with the necessary knowledge, skills, and values to effectively impart technical and vocational competencies to students (CHED, 2017).

Evaluating the BTVTED curriculum supports SDG 4: Quality Education by ensuring that the program aligns with the global goal of providing inclusive, equitable, and quality education for all. Graduates of BTVTED programs are prospective TVET teachers both in basic and higher education programs. Alinea (2021) believed that by assessing the curriculum's alignment with the needs of the industry and society, evaluations help ensure that BTVTED graduates possess the necessary knowledge and skills to contribute to providing quality education.

With this, HEIs must ensure that the goal of the program is being achieved as evident from the performance of the graduates. Feuer et al. (2013) claimed that evaluating teacher education programs is a necessary component to improve the quality of graduates produced by the programs. A curriculum evaluation is the process of deciding what should stay in the curriculum and what should be added, removed, or modified (Ornstein & Hunkins, 2004) based on information available.

The HEIs are considering several steps to better integrate theory and practice and create stronger teacher education programs that will enable pre-service teachers to be more successful with diverse learners in schools and communities (Darling-Hammond et al., 2010), which includes redesigning programs. Redesigning a program may involve revising curriculum, updating instructional materials, modifying assessment methods, integrating new technologies, or adjusting program policies and procedures. Anagnostopoulos et al. (2016) asserted that HEIs are facing intensifying pressure to prove that their programs were effective which requires curriculum redesigning. Building on the necessity of effective program design, recent findings reveal that passive immersion alone is insufficient for pre-service teacher preparedness; instead, sustained communicative engagement, structured mentorship, and authentic instructional experiences are vital to fortifying teaching confidence and translating academic preparation into practical classroom readiness (Dimzon, 2026). In line with this, recent research highlights that implementing strategic innovation, continuous professional learning, and adaptive leadership is critical when integrating emerging technologies, such as Artificial Intelligence, to maintain inclusive, equitable, and effective educational environments (Docdoc, 2026). Supporting this, empirical evidence demonstrates that effective curricular frameworks embedding user-friendly AI tools and motivational supports significantly enhance learners' visual literacy, engagement, and practical execution, particularly when supported by sustained exposure and actionable AI feedback (Wu & Liu, 2025).

To come up with a quality education and relevant preparation of graduates, HEIs must ensure a quality and relevant curriculum to the needs and demands of society. One measurement standard used to redesign curriculum and determine that a program offers quality education is by looking at the employability and the establishment of sustainable career pathways among graduates (Pardo & Relon, 2023). In the same manner, the employability of the teacher education graduates indicates the quality education and relevant preparation they obtained for their future employment (Lira et al., 2023).

Teacher education curricula do not stay the same since the offering of the program. There is a need for its improvement. By incorporating employer perspectives, programs can ensure that their curriculum remains up-to-date, relevant, and aligned with the needs of the education sector, ultimately enhancing the quality of teacher preparation and the success of graduates in the field. One of the practical implications of conducting study about employers' feedback is to offer baseline data for development of new curricular programs, revisions of existing programs, and further enhancement of programs to ensure that programs offered by higher education institutions (HEIs) are relevant to the needs of employment (Shah et al., 2015).

Thus, one important aspect of evaluating the effectiveness of teacher education programs lies in gathering the feedback of employers who directly interact with graduates in the workplace. The insights provided by employers serve as invaluable inputs to curricular enhancement, ensuring that teacher education programs remain relevant, responsive, and aligned with the evolving demands of the educational landscape.

Employers must be considered in the articulation of the attributes of the graduates (Aquino et al., 2015). Feedback from employers provides validation of the outcomes of teacher education programs. Aquino et al. (2015) emphasized the importance of involvement of employers in identifying the attributes of graduates since after graduation the employers are the ones who will decide whether to hire the graduates.

The feedback of the employers serves as evidence of the quality of graduates produced by higher education institutions (Sing & Choo, 2012). Positive feedback indicates that graduates possess the necessary skills, knowledge, and dispositions to excel in their roles as educators (McConnel, 2021). Conversely, constructive feedback highlights areas where graduates may need additional support or development (Miles, 2022). This validation not only enhances the credibility and accountability of teacher education programs but also serves as a catalyst for continuous improvement and innovation.

Employer feedback also plays a crucial role in ensuring the alignment of teacher education curricula with industry needs and standards as well as career development in universities (Mendoza, 2021). By understanding the expectations and requirements of employers, programs can tailor their curriculum to address current trends,

emerging technologies, and evolving pedagogical practices. Furthermore, recent studies emphasize that preparing graduates for modern, technology-driven work environments requires embedding digital communication and adaptability into academic programs to ensure overall workforce readiness (Darao, 2026). This alignment not only enhances the employability of graduates but also strengthens the overall quality and relevance of teacher education programs.

Regularly reviewing and updating curricula is crucial to ensure that educational programs remain relevant and responsive to the evolving needs of the workforce. For BTVTED programs, feedback from employers who hire graduates is particularly valuable since graduates of this program are also hired by different industries other than the education sector. Alinea (2021) believes that by analyzing employer feedback, institutions can identify the extent to which the curriculum equips graduates with the necessary skills and competencies required by the industry. This information is vital for aligning the program's outcomes with the actual demands of the workplace. In determining what needs to be enhanced in the curriculum of program offerings, HEIs is to look into the feedback of employers of the graduates (Naparan et al., 2021). Employers provide insights into the skills, knowledge, and competencies that are most valued in the education sector. This feedback ensures that teacher education programs remain relevant to the current needs and demands of the industry, enhancing the employability of graduates. Aquino et al. (2015) emphasized that feedback from employers helps universities improve their curriculum, take legal and educational responsibilities into account, and evaluate their performance against the standards they set. Feedback mechanisms for graduates and their employers should be considered to maintain accountability and continuously improve the quality of graduates produced by HEIs (Elladora, 2022).

Employers' feedback is a vital piece of information about college graduates that must be considered by college officials to determine the relevance and appropriateness of their educational programs (Marquez et al., 2019). Employers' feedback helps ensure that teacher education programs align with the expectations and standards of the profession. Navarro (2020) believed that feedback from graduates' employers is an authentic measure of a university's success in implementing its educational programs. According to Radermacher et al. (2007), employers can pinpoint specific skills or competencies that graduates lack, allowing the program to address these deficiencies through curriculum enhancement.

The success of any curricular program depends on the employability of its graduates (Tudy, 2017). Through feedback mechanisms, the graduates produced by HEIs are ensured to have met the required criteria of the industry. By understanding what employers seek in candidates, programs can tailor their curriculum and training to better prepare graduates for successful careers in education (Olivia, 2009).

However, this mechanism must not be one-time feedback only that will inform the needs to enhance in a curriculum. It must be a continuous feedback mechanism arrangement between the HEIs and the employers of the graduates (Tudy, 2017). In response to the continuous conduct of feedback mechanisms of employers of graduates of HEIs, several researchers have conducted research about this line of investigation such as Aquino et al. (2015); Darling-Hammond et al. (2010); Elladora et al. (2022); Feuer et al. (2013); Gonzales et al. (2017); Irene (2023); Lira et al. (2023). Marquez et al. (2019), to name a few. Complementing these efforts, recent evidence underscores that continuous curriculum improvement and sustained institutional support are vital strategies for maintaining institutional alignment and ensuring that teacher education programs remain dynamically aligned with evolving societal and workforce expectations (Fallado, 2026).

The conduct of studies determining the feedback from employers of graduates is in line with the issuances of CHED (Gaite, 2022) to award a center of excellence and center of development to a program. The graduate tracer study is also one of the documentary requirements required by accrediting agencies such as the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP), Inc. (Cuadra, 2019).

Considering the importance of gathering feedback of employers of graduates, this study was conducted. The main purpose of this study was to determine the feedback of employers of technical-vocational teacher education graduates of Catanduanes State University. By analyzing the feedback provided by the employers, the researchers recommended inputs and strategies to enhance the existing BTVTED curriculum of the college.

METHODOLOGY

The present study adopted a mixed-method research design, in particular, an explanatory sequential mixed method research design. Creswell and Plano Clark (2018) defined the design as the gathering and analysis of quantitative data, followed by that of qualitative data. The design is mostly used to clarify or broaden quantitative data.

The participants in this study were the employers of the BTVTED graduates. As operationalized in this study, employers referred to the immediate supervisors of the graduates, including the school principal, a head teacher at a school or department, a teacher-in-charge, or an officer-in-charge. A purposive sampling technique was used to determine the participants based on the following criteria: (1) Serves as an Immediate Supervisor; (2) At least 3 years of Experience as an Immediate Supervisor; and (3) Willingness to Participate.

The study used two research instruments to gather feedback from employers regarding the preparedness, performance, strengths, and weaknesses of BTVTED graduates: a survey questionnaire and an interview guide.

The survey questionnaire had five parts. Part 1 gathered the demographic profile of the employers, including their age, sex, position title, and number of years serving as a school head. Part 2 collected the employers' perception of the BTVTED graduates' preparedness in terms of their Subject Knowledge using 15 Likert scale statements. Part 3 collected the employers' perception of the graduates' preparedness in terms of their Pedagogical Content Knowledge, also using 15 Likert scale statements. Part 4 collected the perceived performance of the graduates in terms of their Subject Knowledge, with 15 Likert scale statements. Finally, Part 5 collected the perceived performance of the graduates in terms of their Pedagogical Content Knowledge, also with 15 Likert scale statements.

To triangulate the data, the researchers conducted a one-on-one interview with a minimum of five randomly selected employers. The interviews continued until the data was saturated, and the criteria set to identify the participants were strictly followed.

RESULTS

Preparedness of BTVTED Graduates

The preparedness of BTVTED graduates was examined in terms of subject knowledge (SK) and pedagogical content knowledge (PCK). The findings obtained from graduates with regards to their preparedness in SK and PCK were summarized in Table 1.

Table 1. Preparedness of BTVTED Graduates in terms of Subject Knowledge and Pedagogical Content Knowledge

Variable	Mean	SD	Description
Subject Knowledge	4.40	0.14	Fully Prepared
Pedagogical Content Knowledge	4.50	0.15	Fully Prepared

As noted in Table 3, the graduates as perceived by their employers are fully prepared in terms of SK and PCK. Upon careful analysis of the responses of employers on the survey conducted, the employers strongly agree that "BTVTED graduates are well-equipped to answer technical questions during job interviews." This suggests that employers have a very strong positive impression of the graduates' ability to articulate their technical knowledge in a high-stake setting. In addition to this, the employers strongly disagree that "BTVTED graduates often require significant additional training to reach the required level of subject knowledge for the job." This finding reinforces the overall result of Fully Prepared and indicates that employers feel graduates are ready to contribute immediately without extensive foundational training. It also suggests that the BTVTED curriculum is effective at providing the necessary subject matter foundation for entry-level positions.

With regards to the preparedness of graduates in terms of PCK, the employers strongly agree that "BTVTED graduates demonstrate a strong understanding of how to teach their specific technical-vocational-livelihood skills and competencies." This suggests that employers and educators have a very positive impression of the graduates' ability to effectively teach their vocational skills. Moreover, the employers strongly disagree that "BTVTED graduates lack the ability to assess student learning effectively in their vocational field." This finding reinforces the overall result of fully prepared and indicates that employers and educators believe graduates are proficient in evaluating student progress.

To triangulate the quantitative data, an interview with the employers of the graduates have been conducted. A thematic analysis has been conducted on the responses of the school heads. Results of the thematic analysis revealed six themes about the preparedness of BTVTED graduates in terms of SK and PCK. Table 4 presented the themes identified.

Analysis of both quantitative and qualitative data shows a strong convergence of findings regarding the preparedness of BTVTED graduates. The survey results indicate that graduates are fully prepared. This high level of preparedness is directly supported by the thematic analysis of the interview responses, which identified a key theme of "Strong Foundational and Practical Knowledge." Employers consistently describe graduates as having a "remarkably strong foundation of learning," and being "well-prepared, especially in their technical-vocational subject areas." This qualitative feedback validates the survey's finding that the BTVTED curriculum adequately prepares graduates with the necessary subject knowledge for their roles.

Both data sets highlight the graduates' ability to apply and communicate their subject knowledge effectively. The survey results show a high level of agreement that BTVTED graduates effectively communicate their subject knowledge in a clear and concise manner. This is further reinforced by respondents strongly agreeing that graduates are well-equipped to answer technical questions during job interviews. The qualitative data elaborates on this, with the theme "Ability to Apply and Demonstrate Skills." Interview responses provide concrete examples, such as a graduate who was able to confidently demonstrate proper food handling techniques and troubleshoot minor issues during practical sessions, confirming that their knowledge goes beyond theory and is applied in practical, real-world scenarios.

Table 5. Themes Generated on Preparedness of BTVTED Graduates

Themes	Description	Sample Response
Strong Foundational and Practical Knowledge	Graduates of BTVTED program from CatSU have a strong foundation in their chosen technical-vocational field. They have a solid grasp of hands-on skills required for teaching the subject TLE.	<i>I've consistently observed that TLE teachers from CatSU are equipped with a remarkably strong foundation of learning.</i>
Ability to Apply and Demonstrate Skills	Graduates of BTVTED program from CatSU have high ability to confidently apply their knowledge and demonstrate practical skills.	<i>My TLE teacher in our school didn't just know the theory; she was able to confidently demonstrate proper food handling techniques, use the equipment correctly, and even troubleshoot minor issues during practical sessions.</i>
Gaps in Advanced or Broader Knowledge	Graduates of BTVTED program from CatSU face challenges when teaching advanced topics or subjects outside of their primary specialization.	<i>Sometimes, he finds it difficult to teach subjects outside his primary specialization. I cannot give the subject to other teachers because he is the only TLE teacher in our school.</i>
Strong Foundational and Practical Knowledge:	Graduates of BTVTED program from CatSU possess a strong understanding of core technical concepts and industry standards within their chosen field.	<i>He knows his subject very well and can teach it in the most applicable way that his students can understand it.</i>
Industry Exposure and Real-World Application	The subject knowledge of graduates of BTVTED program from CatSU is enhanced by their industry exposure and practice teaching, which allows them to apply concepts in a real-world setting.	<i>I think the practice teaching and exposure to industry helps him a lot to apply the subject in real-world scenario.</i>
Gaps in Theoretical Underpinnings	Graduates of BTVTED program from CatSU have an occasional struggle with the theoretical or scientific principles behind technical processes.	<i>I've found that BTVTED graduates are strong in the practical application of concepts but sometimes struggle with the theoretical foundation that lies behind the concept.</i>

There is a clear and consistent picture of the pedagogical content knowledge (PCK) preparedness of BTVTED graduates. The survey results show that graduates are perceived as fully prepared in terms of their PCK. This is supported by the thematic analysis, which reveals that employers highly value the graduates' "Practical Application of Skills and Hands-on Teaching Approaches." Survey results indicate strong agreement that graduates demonstrate a strong understanding of how to teach their specific technical-vocational-livelihood skills and competencies.

Both the survey and interview data highlight that a key strength of the graduates is their ability to connect theory to practical application. The qualitative responses emphasize the value of graduates' ability to break down complex procedures into manageable, teachable steps and create authentic learning experiences. This is reinforced by the survey results, which indicate that graduates excel at demonstrating real-world applications of vocational skills. The data also shows that graduates are perceived as highly effective at explaining complex technical concepts.

While the overall perception of PCK preparedness is positive, both data sets suggest that there are specific areas for improvement. The survey indicates a strong belief that on-the-job training is sufficient to compensate for any gaps in BTVTED graduates' PCK. This aligns with interview responses that recommend more explicit development of skills in areas like classroom management specific to a workshop setting, assessment strategies beyond simple task completion, and adapting teaching methods for diverse learners. Additionally, a comparison with other teacher education programs reveals that while BTVTED graduates are experts in hands-on, skills-based instruction, BSED graduates often have a broader grasp of teaching methods and curriculum development.

The thematic analysis of the interviews identified the theme "Gaps in Advanced or Broader Knowledge," noting that some graduates face challenges when teaching advanced topics or subjects outside of their primary specialization. However, survey results show that employers disagree that BTVTED graduates often require significant additional training. This suggests that while minor gaps may exist, they are not significant enough to require extensive foundational training, reinforcing the overall conclusion that BTVTED graduates are fully prepared for entry-level positions. The data also shows employers disagreeing with the statement that graduates

are less knowledgeable than other programs, suggesting that any gaps are not a reflection of a lower overall expertise.

Performance of BTVTED Graduates

The performance of BTVTED graduates was examined in terms of subject knowledge (SK) and pedagogical content knowledge (PCK). The findings obtained from graduates with regards to their preparedness in SK and PCK were summarized in Table 4.

Table 8. Performance of BTVTED Graduates

Variable	Mean	SD	Description
Subject Knowledge	4.38	0.21	Very Good
Pedagogical Content Knowledge	4.42	0.13	Very Good

As shown on the table, BTVTED graduates are perceived to have a very good performance in terms of their subject knowledge, with an overall mean score of 4.38. An analysis of individual items of the survey revealed that employers strongly agreed that “BTVTED graduates’ understanding of their field allows them to tackle tasks requiring specific subject knowledge,” and also that “The technical skills and knowledge BTVTED graduates possess seem to align well with the demands of the job.” These high scores indicate that stakeholders have a very positive perception of the practical applicability and relevance of the graduates’ subject knowledge.

Employers strongly disagree that “BTVTED graduates often need additional training to perform tasks requiring in-depth subject knowledge” and that “BTVTED graduates struggle to keep pace with the latest developments in their field due to knowledge gaps.” This indicates that employers believe graduates are ready to contribute immediately without extensive foundational training and that their knowledge is up to date with industry standards.

An interview has been conducted with the employers to triangulate the findings of the survey. A thematic analysis has been conducted to analyze the interview responses. Results of thematic analysis revealed six themes with regard to performance of BTVTED graduates. Table 11 presents the themes generated.

The survey results indicate that BTVTED graduates have a very good performance in their subject knowledge and pedagogical content knowledge. This is supported by the qualitative data, which consistently identifies a theme of “Strong Foundational and Practical Knowledge.” Employers state that graduates are well-prepared, especially in their technical-vocational subject areas, and that their knowledge stands out particularly in its depth and practical applicability. This hands-on understanding is a key advantage, as noted by an employer who stated that compared to graduates from purely theoretical academic programs, BTVTED graduates possess a hands-on understanding of how concepts and theories translate into real-world practices or applications.

Table 12. Themes Generated from Interview Responses on Performance of BTVTED Graduates

Themes	Description	Sample Response
Strong Foundational and Practical Knowledge:	Graduates of BTVTED program from CatSU possess a strong understanding of core technical concepts and industry standards within their chosen field.	<i>My TLE teacher in our school knows his subject matter very well, particularly in its depth and practical applicability.</i>
Industry Exposure and Real-World Application	Graduates of BTVTED program from CatSU is enhanced by their practice teaching and industry exposure, which allows them to apply concepts in a real-world setting.	<i>I think his practice teaching helps him a lot. He doesn't just know the concepts; he knows how they're applied in a real-world setting.</i>
Need for Additional Training	Graduates of BTVTED program from CatSU often require additional training beyond their technical knowledge.	<i>I think my TLE teacher needs to be trained on DepEd's pedagogical framework and classroom management to become more proficient in our school's specific needs.</i>
Effective in Hands-on and Demonstration-based Teaching	The PCK of graduates of BTVTED program from CatSU is most evident in their ability to use hands-on activities and direct demonstrations to teach skills.	<i>I observed that my TLE teachers are highly effective at demonstrating skills and explaining technical information through hands-on activities.</i>
Challenges with Broader Pedagogical Skills	BTVTED graduates often struggle to balance their technical skills with broader teaching methodologies.	<i>I noticed during my classroom observations that my TLE teacher sometimes lack the pedagogical skills to engage a diverse group</i>

		<i>of students or to adapt their explanations for different learning styles.</i>
Need for Development in Formal and Varied Instruction	Graduates of BTVTED program from CatSU sometimes lack skills in formal presentation and seminar delivery. They may struggle with structuring presentations, creating comprehensive instructional materials, or integrating technology into their teaching.	<i>The challenge that my TLE teacher often face is structuring a formal presentation or seminar in a way that is logical and easy to follow.</i>

The survey results also show high scores for graduates' ability to apply their knowledge. Respondents strongly agree that graduates can tackle tasks requiring specific subject knowledge and that their skills align well with the demands of the job. This is supported by the qualitative theme of "Industry Exposure and Real-World Application." Interview responses provide concrete examples, such as a teacher who was able to immediately set up a practical kitchen layout for a class and another who taught about food costing and inventory management based on actual restaurant practices. This confirms that their knowledge goes beyond theory and is applied effectively in real-world scenarios.

The survey results further show that BTVTED graduates are highly effective in hands-on and demonstration-based teaching. Specifically, they demonstrate a strong ability to break down complex skills into manageable steps. This finding is directly supported by the interview data, which identified a theme of "Effective in Hands-on and Demonstration-based Teaching," with employers noting that graduates are highly effective at providing step-by-step instructions and explaining technical information through demonstrations. These qualitative responses emphasize that their strength lies in showing rather than just telling.

However, the qualitative data also brings to light some nuances and challenges that were not explicitly reflected in the high overall quantitative ratings. The interviews revealed a theme of "Challenges with Broader Pedagogical Skills," where graduates sometimes struggle to adapt explanations for diverse audiences or differentiate instruction. This contradicts the survey finding that graduates are adept at adapting their teaching methods to cater to different learning styles. The qualitative data suggests a gap between perceived ability and actual application of these broader pedagogical skills, indicating a need for development in this area.

Similarly, the qualitative findings highlight a theme of "Need for Development in Formal and Varied Instruction," where graduates may lack skills in structuring formal presentations or integrating technology. This complements the survey results which point to areas for potential growth, such as the observation that BTVTED graduates seem to be more focused on imparting practical skills than theoretical knowledge. This suggests that while their practical skills are strong, there is a need to balance them with more varied instructional methods, such as formal presentations and seminar delivery.

While both data sources show a strong positive trend, the interview results introduce a crucial nuance regarding the need for additional training in specific, non-technical areas. Although graduates are well-versed in their technical fields, employers in a school setting noted that they often need training on pedagogical frameworks, curriculum development, and administrative tasks. This highlights a distinction: while BTVTED graduates' technical subject knowledge is excellent and ready for the job, there are context-specific skills, particularly in an educational environment, that may require further development.

Recommended Enhancement to Existing Curriculum of BTVTED Program

Based on the feedback from employers of Bachelor of Technical Vocational Teacher Education (BTVTED) graduates, several recommendations can be made to enhance the curriculum. The suggestions address key areas where graduates show a need for improvement, including their theoretical knowledge, pedagogical skills, and adaptability in different teaching environments. These recommendations are based on the identified gaps in advanced knowledge, theoretical underpinnings, pedagogical skills, and the need for additional training and development in formal instruction.

Enhancing Theoretical and Foundational Knowledge

To enhance the theoretical and foundational knowledge of BTVTED graduates, faculty members should update their teaching strategies to emphasize the "why" behind technical processes. While graduates excel at practical application, they often struggle with explaining the scientific or theoretical principles that underpin their skills. By integrating more rigorous coursework that connects practical tasks with their theoretical foundations, educators can better prepare students to answer complex student inquiries and adapt to teaching subjects outside of their primary specialization. This approach ensures that students not only demonstrate a skill flawlessly but can also articulate the rationale and scientific background behind it.

Graduates are currently proficient in applying skills but struggle to explain the "why" behind them, such as the scientific principles of a technical process. Faculty should therefore integrate a "dual-focus approach," emphasizing both the flawless execution of a skill and a robust understanding of its underlying principles. This

requires a shift from purely practical, skill-based instruction to a more holistic pedagogical model that merges hands-on training with theoretical coursework.

Furthermore, faculty should adopt teaching methods that foster a deeper connection between technical skills and their scientific foundations. This can be achieved by using case studies, problem-based learning, and Socratic questioning to encourage critical thinking about technical processes. For example, instead of just demonstrating a baking technique, an instructor could lead a discussion on the chemical reactions involved and how different ingredients interact. Faculty could also integrate technology, such as simulations or virtual labs, to provide visual and interactive explanations of complex theories. By structuring presentations and instructional materials logically and clearly, instructors can help students better grasp and retain this crucial theoretical knowledge, preparing them to teach others effectively.

Strengthening Broader Pedagogical and Instructional Skills

The BTVTED curriculum should be enhanced to better balance technical skills with broader pedagogical methodologies. Graduates often struggle with adapting their explanations for diverse audiences, differentiating instruction for students with varying abilities, and moving beyond traditional, teacher-centered approaches. Furthermore, they may lack the skills for formal presentation and seminar delivery, struggling to structure presentations, create comprehensive instructional materials, and integrate technology into their teaching.

Curriculum enhancements should include more training on a variety of teaching methodologies, such as student-centered learning and differentiated instruction. Integrating subjects on instructional design, material development, and formal presentation skills could help graduates create logical and easy-to-follow seminars and presentations⁹. Incorporating practical experiences like mock teaching sessions and seminar presentations would also provide a platform for students to practice these skills before entering the workforce.

Integrating DepEd Pedagogical Frameworks and School-Specific Training

To ensure graduates are fully proficient in a school setting, the curriculum should incorporate training on the Department of Education (DepEd)'s pedagogical frameworks. Employers note that graduates often require additional training on these topics after being hired. This gap suggests a need to integrate school-specific knowledge into the BTVTED program itself, rather than leaving it to post-graduation training.

The curriculum could include a dedicated course on the DepEd's pedagogical frameworks and classroom management. This would better prepare graduates for the realities of teaching in a formal school environment. Collaborations with local DepEd offices or experienced educators could facilitate this, ensuring the curriculum reflects current and relevant practices. This would reduce the need for employers to provide extensive post-hiring training, making BTVTED graduates more immediately valuable and proficient in their roles.

DISCUSSION

The findings of this study reveal an overwhelmingly positive perception of Bachelor of Technical Vocational Teacher Education (BTVTED) graduates among employers, particularly regarding their preparedness and performance in subject knowledge and pedagogical content knowledge (PCK). This strong, positive feedback confirms that the program's core curriculum is effectively preparing students for their professional roles. However, a closer look at both the quantitative and qualitative data also identifies specific nuances and areas for strategic improvement.

Employers perceive BTVTED graduates as fully prepared and performing at a very good level in teaching. This validates the findings of several studies, including one by Alinea (2021), which reported that graduates of this program possess "very adequate" pedagogical and technical skills. This is further supported by Liangyu et al. (2024), whose study found that TVET educators demonstrate a high level of preparedness in knowledge and skills. Similarly, Susanti et al. (2020) reported that vocational teachers exhibit a readiness level of 81.78% in teaching skills and 88.59% in technology mastery, demonstrating strong preparedness to face the demands of the 4th industrial era. This outcome strongly validates the BTVTED program's focus on hands-on, skills-based learning, a key tenet of technical-vocational education that employers highly value. Additionally, Shaari (2001) found a strong relationship between the acquisition of knowledge and expertise and the professional readiness of technical-vocational teacher education graduates, suggesting they are well-prepared for their profession.

Despite these significant findings, some studies reveal contradictory results. For instance, Jeffrey and Zirkle (2020) found that alternatively licensed career and technical education teachers perceived themselves as less prepared across various performance-based assessment tasks. Nurjanah and Ana (2022) also reported that BTVTED graduates may lack sufficient subject knowledge, impacting their overall work readiness. Furthermore, some studies, such as one by Warren (2015), revealed a lack of preparedness among TVET graduates in communication skills. Similarly, Lowry (1983) reported that vocational teacher graduates are limited in their English proficiency level.

While graduates demonstrate a high level of practical skill, a subtle yet important gap was identified in their preparedness and performance during employer interviews. The interviews revealed themes of "Gaps in Advanced or Broader Knowledge" and "Gaps in Theoretical Underpinnings." This suggests that while graduates can

flawlessly demonstrate a skill, they sometimes struggle to explain the theoretical or scientific principles behind it. This qualitative finding provides a nuanced perspective not fully captured by high quantitative scores, suggesting that while graduates are well-prepared for entry-level roles, their ability to handle more complex or advanced theoretical topics may need reinforcement.

This observation is not unique to this study. It aligns with a body of literature on TVET, which notes that training programs often lack alignment with curriculum and teachers' professional needs (Solomon, 2016). The challenge lies in moving from a focus on "what to do" to explaining "why it works," which is essential for higher-level teaching and curriculum development. The finding that graduates excel more in practical tasks than theoretical problems directly corroborate this common challenge in vocational education (Baqadir & Burns, 2011).

To address this gap, the BTVTED program can intentionally strengthen the theoretical underpinnings of its subjects. This could involve integrating courses or modules that explicitly connect practical skills with underlying scientific, mathematical, or artistic principles. By integrating more rigorous coursework that connects practical tasks with their theoretical foundations, faculty members of BTVTED programs can better prepare students to answer complex student inquiries and adapt to teaching subjects outside of their primary specialization, would be a valuable curricular innovation. Such approach where students are required not only to perform a task but also to articulate the scientific and theoretical rationale behind each step. This would directly address employers' feedback and elevate graduates' expertise from being skilled technicians to being highly knowledgeable teachers. The findings on the BTVTED graduates' pedagogical content knowledge (PCK) are also overwhelmingly positive, placing them in the "Very Prepared" category. The highest mean score of 4.68 for the statement that graduates "demonstrate a strong understanding of how to teach their specific technical-vocational-livelihood skills and competencies" is particularly telling. This high rating confirms that the program is doing an excellent job of preparing future teachers to effectively impart vocational skills. This is further supported by the qualitative theme of "Effective in Hands-on and Demonstration-based Teaching," where employers praise the graduates' ability to break down complex tasks into manageable steps. This finding is consistent with the study by Zulnaidi and Majid (2020), which revealed that TVET graduates have a high level of readiness, understanding, and implementation of Industrial Revolution 4.0, suggesting they are well-prepared for their teaching practices.

This strong performance in PCK is crucial, especially since, as the study notes, employers believe that strong industry experience is a more valuable asset for a vocational teacher than in-depth PCK. This highlights the unique nature of vocational education where the ability to "show, not just tell," is paramount, and the study confirms that BTVTED graduates excel at this. Hornido et al. (2024) also reported that teacher education graduates, including BTVTED graduates, exhibit excellent contextual productivity and adaptive performance, with very satisfactory task performance, suggesting they perform well compared to other teacher education graduates in terms of overall work performance.

Despite the strong quantitative data, a closer examination of the qualitative feedback reveals a nuanced area for improvement. While the survey found that graduates are "adept at adapting their teaching methods to different student learning styles," interviews revealed a "Challenges with Broader Pedagogical Skills" theme. Employers noted that graduates sometimes struggle to adapt explanations for diverse audiences and move beyond traditional, teacher-centered approaches. This highlights a potential gap between perceived ability and actual application in diverse classroom settings. This finding aligns with a broader trend in teacher education where technical competence does not always translate into diverse pedagogical skills (Touriñán, 2019). Mariscal (2023) supports this, stating that teachers may possess technical skills yet lack the ability to create effective learning environments or design activities that cater to various learning styles.

The study's thematic analysis also identified a Need for Development in Formal and Varied Instruction, where graduates may lack skills in structuring presentations or integrating technology. While their demonstration skills are strong, their instructional repertoire may be limited. This is a crucial area for curriculum enhancement, as effective teaching requires a variety of instructional strategies to engage different learners and foster a love of learning (Zacher, 2022). This empirical finding also mirrors the real-world instructional problems documented by Antonio (2021) during the institutional transition to flexible blended learning delivery modalities. In his investigation of incumbent university faculty, technology integration and online assessment emerged as severe barriers: several faculty members reported not knowing how to assess student learning in remote formats, some struggled with creating digital video lessons for their subjects, and others lacked foundational knowledge in operating a Learning Management System (LMS) such as Google Classroom. These challenges confirm that adapting instruction across varied learning delivery modalities (LDMs) presents widespread technological and instructional hurdles for educators which supports the theme calling for the need for development in formal and varied instruction.

A significant statistical finding is the difference in perception of PCK preparedness based on the employer's years of experience as a school head. This suggests that more experienced school heads, who have likely seen a wider range of teacher competencies, may have a different standard for what constitutes "preparedness" in PCK. This nuance is not captured by overall mean scores and points to a need for the curriculum to meet the expectations of

seasoned professionals who understand the complexities of the educational system (Chang & Yung, 2017). Greene (2016) noted that experienced teachers in leadership positions possess key elements of PCK, suggesting they may have a different standard for preparedness due to their broader exposure to various teacher competencies.

This finding also aligns with the qualitative feedback that BTVTED graduates may require additional training on specific pedagogical frameworks, like the DepEd framework, and administrative tasks. While the program successfully prepares graduates for the what of teaching, it may not be fully preparing them for the how of teaching within a formal, institutional context. Ganal et al. (2019) confirm this, reporting that teachers, including BTVTED graduates, require professional training in 21st-century pedagogical skills, such as content knowledge and ICT use.

To address this, the BTVTED curriculum could be enhanced by formalizing the transition from a technical-vocational setting to a classroom environment. The study recommends integrating a course in the final year of the program that would focus on specific competencies essential in a school setting, such as developing a curriculum aligned with the K-12 program, creating varied assessment strategies, and implementing effective classroom management techniques. This would directly address the identified needs from the qualitative data and better prepare graduates for the full scope of their roles.

Furthermore, the significant difference in PCK perception based on employer experience could be a catalyst for establishing a more robust feedback loop between the university and its industry partners. Regular, formalized dialogues with experienced school heads and employers could provide continuous, real-time feedback on curriculum effectiveness. This collaborative approach would ensure that the BTVTED curriculum remains relevant and responsive to the evolving needs of the education sector, as well as the specific expectations of seasoned professionals (Mahardhani et al., 2023; Wilson & Slade, 2019).

The overall findings affirm that the BTVTED program is a success story in many respects. Graduates are perceived as highly competent and well-prepared, particularly in their practical subject knowledge and their ability to teach through demonstration. The high ratings from employers and the consistent positive feedback from both quantitative and qualitative data sets demonstrate that the core of the BTVTED curriculum is sound, positioning the program as a leader in technical-vocational teacher education.

CONCLUSION

Findings of the study offer a detailed examination of the feedback of employers of the graduates of Bachelor of Technical Vocational Teacher Education (BTVTED) program. It is clear that while the program is highly successful in preparing graduates with practical skills, there are specific areas for improvement that, if addressed, could elevate the program's overall effectiveness. The analysis draws on both quantitative and qualitative data, providing a nuanced perspective that goes beyond simple metrics. This multifaceted approach is crucial for understanding the complexities of teacher preparedness and performance.

The study's most significant finding is the overwhelmingly positive perception of BTVTED graduates among employers. The data consistently shows that graduates are seen as highly competent and well-prepared, particularly in their subject knowledge and pedagogical content knowledge (PCK). This success is attributed to the program's strong focus on hands-on, skills-based learning, a cornerstone of technical-vocational education. This aligns with existing literature, which confirms that graduates of such programs possess the necessary technical and pedagogical skills to excel in their professional roles. The strong ratings validate the effectiveness of the program's core curriculum in preparing students for real-world application.

Despite this strong performance, the study also reveals a subtle but important gap in graduates' preparedness. While they are adept at demonstrating practical skills, they often struggle to explain the theoretical and scientific principles behind them. The qualitative data from employer interviews highlights a need for graduates to move beyond simply knowing what to do to also understanding why it works. This finding is not unique to this study and reflects a common challenge in vocational education. Addressing this gap would enhance graduates' ability to handle more complex topics and adapt to diverse teaching needs.

In addition to the theoretical gap, the study identifies a need for improvement in broader pedagogical skills. While graduates receive high marks for their ability to teach through demonstration, qualitative feedback suggests they may struggle with adapting teaching methods for diverse audiences and integrating technology into their instruction. This indicates a potential limitation in their instructional repertoire, which may not be fully captured by quantitative scores. The need to enhance skills in areas like structured presentations and varied instructional strategies is a crucial area for future curriculum enhancement.

The study's findings also underscore the importance of aligning curriculum with the expectations of experienced educational leaders. The statistical difference in PCK perception based on an employer's years of experience as a school head suggests that seasoned professionals may hold different standards for what constitutes preparedness. This nuance highlights the need for a more robust feedback loop between the university and its industry partners. Regular dialogue with experienced school heads could ensure that the BTVTED curriculum remains relevant and responsive to the evolving needs and expectations of the educational sector.

The BTVTED program has successfully established a strong foundation by producing highly capable and well-prepared graduates. However, to truly elevate the program's quality, it must strategically address the identified gaps in theoretical knowledge and broader pedagogical skills. By integrating coursework that connects practical tasks with their theoretical underpinnings and by formalizing training in varied instructional strategies and administrative tasks, the program can better prepare graduates for the full scope of their roles. This will transform graduates from skilled technicians into highly knowledgeable and versatile teachers, ensuring the program's continued relevance and success.

Based on the study's findings, the following recommendations are proposed to enhance the Bachelor of Technical Vocational Teacher Education (BTVTED) program. First, the curriculum should be strategically strengthened to bridge the identified gap between practical skills and their theoretical foundations. This can be achieved by integrating core courses that explicitly connect technical-vocational skills with underlying scientific and mathematical principles. Furthermore, faculty should adopt a pedagogical approach that requires students not only to perform a task but also to articulate the theoretical rationale behind each step. This approach would directly address the feedback from employers and elevate graduates from being skilled technicians to highly knowledgeable teachers.

Second, the program should focus on broadening graduates' pedagogical skills and instructional strategies. To achieve this, it is recommended to introduce a capstone course in the final year that focuses on competencies essential for a formal school setting, such as curriculum development aligned with the K-12 program, varied assessment strategies, and effective classroom management. The program should also provide modules or workshops that diversify teaching repertoires beyond demonstration-based instruction, specifically incorporating training on structured presentations, educational technology, and adapting methods for diverse learning styles. This will ensure graduates are well-equipped to handle the full scope of their professional roles.

Third, a robust and continuous feedback loop between the university and its industry partners must be established. This is particularly crucial to align the curriculum with the high standards of experienced educational leaders. The university should formalize collaborative dialogues with school heads and employers through regular advisory council meetings or structured surveys. The feedback gathered from these collaborations should be systematically used to inform and update the BTVTED curriculum, ensuring its relevance and responsiveness to the evolving needs and expectations of the educational sector. This collaborative approach will also help to develop a shared understanding of what constitutes preparedness in pedagogical content knowledge.

Finally, further research is recommended to build upon the current findings. Future studies should investigate the reasons behind the discrepancy in PCK perception between school heads with varying years of experience, perhaps through qualitative interviews. It would also be beneficial to conduct a follow-up study after the proposed curriculum changes have been implemented to assess their impact on graduate preparedness and employer perceptions. Additionally, a longitudinal study examining the long-term career trajectories of BTVTED graduates could provide valuable insights into how the program's foundation influences professional growth and leadership roles.

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