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Investigating the policies, the resources and gaps in the competencies of Bachelor of Technical-Vocational Teacher Education (BTVTEd) prescribed by: TESDA and K to 12 Basic Education Curriculum and a proposed curriculum revision for Bachelor of Technical - Vocational Teacher Education in the Philippines

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ABSTRACT

This study aimed to revise the Bachelor of Technical-Vocational Teacher Education (BTVTEd) Program at Mariano Marcos State University to meet changing societal and educational needs. Using a research and development approach, the study included document analysis, focus group discussions with key stakeholders, and validation by curriculum experts. The findings identified gaps in resources and curriculum, such as inadequate facilities, unqualified faculty, lack of funding, and mismatched competencies in areas like Computer Hardware Servicing and Electrical Technology with TESDA and K to 12 standards. Stakeholders emphasized the need for better course organization, alignment with objectives, skill integration, faculty development, and a supportive learning environment. A revised curriculum was developed and validated as highly acceptable for implementation. The study recommends adopting this new curriculum to address competency gaps and better meet the needs of students, educational institutions, and industry partners.

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Introduction

In today's fast-paced world, it is important for learners to acquire practical skills that not only

contribute to nation-building but also enable them to succeed in their careers. Traditional academic programs often fall short, as hands-on learning is essential for developing critical thinking and problem-solving abilities (National Center for Education Statistics, 2018). In this context, the role of skilled educators becomes particularly important, especially in Technical- Vocational (TechVoc) education, where instructors with real-world experience can provide valuable insights and better prepare students for employment (Li & Li, 2017). A well-designed curriculum that aligns with industry standards and emphasizes experiential learning is key to the success of Technical Vocational Institutions (TVIs) in producing competent graduates.

Recognizing this need, the Philippine educational system, through the Commission on Higher Education (CHED), has acknowledged the importance of reform. CHED's CMO No. 79 series of 2017 calls for a shift to competency-based education in the Bachelor of Technical-Vocational Teacher Education (BTVTEd) program. This initiative aims to ensure that curricula are responsive to industry demands and continuously updated to incorporate technological advancements and best practices. Despite these efforts, challenges persist, including curriculum misalignment with workplace needs (Kumar & Gupta, 2018), outdated resources (Gambhir & Singh, 2018), and a shortage of qualified instructors (Ramdass & Isaacs, 2019). To overcome these issues, it is essential to foster collaboration and continuous improvement, ensuring that BTVTEd students gain the competencies needed to succeed in their careers and meet the expectations of industries and communities.

Given the changing educational and industrial landscape, there is a critical need to address the challenges within the Bachelor of Technical-Vocational Teacher Education (BTVTEd) curriculum, particularly across its four areas of specialization. The researcher proposes a revised curriculum that incorporates essential competencies for students, schools, and industries. By updating the curriculum, we can ensure that teaching and learning remain relevant in an ever- evolving world, promote collaboration among stakeholders, and establish clear, measurable goals for success. This study aims to explore and implement these necessary improvements.

Literature review

The literature review seeks to deepen the understanding of the concepts and theories pertinent to the study, providing a foundation for the development of the theoretical framework. The findings are organized around key themes that align with the focus of the current research.

The Bachelor in Technical-Vocational Teacher (BTVTEd) Education program

The Bachelor in Technical-Vocational Teacher Education (BTVTEd) program, initiated under CHED Memorandum Order No. 56 s. 2007 and subsequently revised by No. 79 s. 2017, is designed to prepare educators for roles in Technical Vocational Education and Training (TVET) as well as higher education (CHED, 2017). This comprehensive four-year program provides aspiring teachers with both theoretical foundations and practical experiences relevant to Grades 9-10 Technology and Livelihood Education (TLE), Senior High School Tech-Voc tracks, and TVET training, ensuring compliance with TESDA's Trainer's Methodology standards. The curriculum is centered on

competency-based education that aligns with the K to 12 Enhanced Curriculum and the Philippine Qualifications Framework (CHED, 2011), with the objective of cultivating educators proficient in subject expertise, specialized knowledge, and a variety of teaching methodologies. In response to challenges such as aligning educational outcomes with industry needs and adapting to rapid technological changes (Kumar & Gupta, 2018), the program promotes collaboration and innovation, ultimately aiming to develop skilled educators who can effectively contribute to workforce enhancement and community development.

Educational quality: Quality of inputs

In education, the quality of inputs refers to the resources that contribute to a high-quality learning environment, including policies, physical resources, human resources, fiscal resources, and curriculum content. Effective educational policies establish frameworks for resource allocation and ensure access to quality learning opportunities (Madani, 2019). In the Philippines, policies such as the Enhanced Basic Education Act and the establishment of TESDA have aimed to enhance Technical Vocational Education and Training (TVET), although challenges remain (Bautista, 2017).

Resources and their impact

Adequate physical resources—classrooms, libraries, and equipment—are essential for a conducive learning environment. Quality human resources, particularly effective teachers and administrators, play a critical role in facilitating learning (Bandalaria, 2016). Fiscal resources are also vital; sufficient funding supports infrastructure and ongoing professional development for educators (Mendoza et al., 2019). Curriculum content significantly influences educational quality by providing relevant learning experiences that foster critical thinking and problem-solving skills. However, gaps in funding, outdated curricula, and limited access to technology hinder progress in TVET (Kumar & Gupta, 2018). Addressing these issues through strategic investments in teacher training and curriculum alignment with industry demands is crucial for improving educational quality.

Processes in curriculum revision

The University Curriculum Committee (UCC) oversees curriculum matters, requiring proposals for changes to be reviewed. Initiatives typically originate from departments seeking to innovate their academic programs. Key factors in curriculum revision include adherence to CHED Memorandum Orders, alignment with the university's vision and mission, and responsiveness to workplace demands. The revision process involves forums with stakeholders—industry representatives, teachers, students, and parents—guided by structured interview protocols. The initial step involves preparing and deliberating on the proposed curriculum draft, which is then reviewed for formatting and content before being resubmitted for further evaluation. This structured approach ensures that revisions meet educational standards and effectively respond to contemporary needs in TVET (CHED, 2017).

The Philippine qualification framework

The Philippine Qualifications Framework (PQF) is a national system designed to develop, recognize, and award qualifications based on knowledge, skills, and values acquired through various educational methods, ensuring quality in education (Republic Act No. 10968). It categorizes qualifications into

eight levels, with descriptors for learning outcomes in knowledge, skills, and values; application; and independence. The framework includes sub-frameworks for different education systems, such as TESDA for National Certificates and CHED for higher education degrees. PQF reforms also promote competency-based TVET aligned with industry standards through Training Regulations. Additionally, Republic Act No. 10912 mandates the strengthening of continuing professional development programs to adapt to labor market needs, while Republic Act No. 10533 emphasizes collaboration between CHED and DepEd to develop standardized curricula that allow for localization and ensure global competitiveness. This collaborative approach aims to align curriculum offerings with learner demands and industry requirements, enhancing the quality of Bachelor of Technical-Vocational Teacher Education (BTVTEd) programs in the Philippines (Bautista, 2019).

K to 12 TLE and TVL curricula

Technology and Livelihood Education (TLE), also known as Career Pathways in TLE (CP-TLE), is a vital part of the Philippine Secondary Education Curriculum, covering Home Economics, Agri-Fishery Arts, Industrial Arts, and Information and Communication Technology (Manitoba Education and Training, 2018). It allocates 240 minutes per week, including practical work beyond school hours, and emphasizes skill-based, experiential learning through contextualized teaching. TLE is divided into two phases: the exploratory phase for Grades 7-8, focusing on basic competencies like technical drafting and tool maintenance, and the specialization phase for Grades 9-12, which integrates entrepreneurship to prepare students for small enterprises. This structure aligns with TESDA's mandate to provide flexible career pathways and equip students with the skills needed for the evolving 21st-century workforce (Republic Act No. 7796).

Revision of curriculum

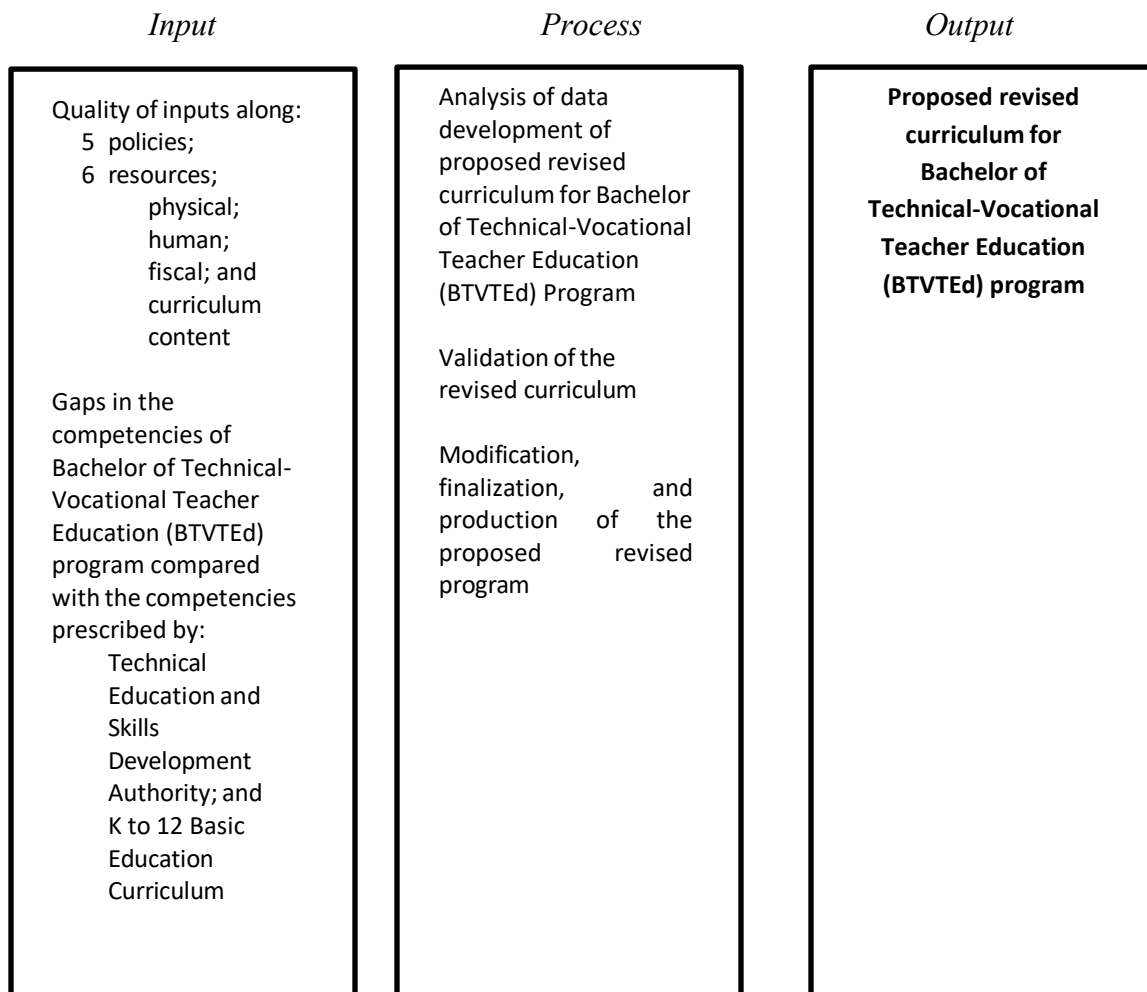
Curriculum revisions are driven by factors such as rapid scientific advancements, evolving educational purposes, and a better understanding of children's learning processes (UNESCO, n.d.). Johnson (2019) highlights three key aspects: societal obligations of educational programs, the role of education in sustaining society, and the challenges of implementing systemic changes. Effective revisions require initial communication between educational developers and academic staff to understand the context (Neil, 2015). Adjustments in content and methods are necessary to equip students with relevant skills, addressing past issues of program duplication and unmet standards through rigorous evaluation (Mindanao State University, 2002). Hagos and Dejarme (2018) stress that schools must adapt curricula to societal changes, with collaboration among academia, government, and industry being essential for improvement, particularly through agencies like CHED and DepEd.

Factors affecting curriculum revision in education

The ICEEPSY (2012) study identified key factors that influence student learning, including the learning process, content, theory, and teachers' management skills. It implemented a development program across 30 schools in Khon Kaen, where 83.30% of teachers reported increased satisfaction and improved competencies. Scholtz (2018) examined the evolution of South Africa's higher education system, particularly within the University of Technology sector, where curriculum revisions face complex challenges following the 2007 Higher Education Qualifications Framework. Villanueva

(2018) found that technical-vocational teachers at Bulacan State University demonstrated moderate competency levels according to TESDA standards, indicating readiness for educational shifts but highlighting the need for additional training. On a global scale, factors such as globalization, technological advancements, and evolving social needs drive the need for curriculum revisions (Al-Harthy, 2013; Abdu-Raheem, 2014), emphasizing the importance of aligning curricula with international standards and labor market demands. In the Philippines, CHED Memorandum Orders have played a crucial role in shifting technical teacher education curricula to enhance global competitiveness and adapt to frameworks like the K to 12 Program (CHED, 2007; CMO No. 79 s. 2017).

Conceptual framework



Statement of the problem

This study designed a proposed revised curriculum for Bachelor of Technical-Vocational Teacher Education (BTVTEd) program to meet the demands of basic education and industry requirements.

Specifically, it sought answers to the following questions:

1. **What is the quality of inputs of the program along with:**

- 1.1. **policies;**
- 1.2. **resources;**
 - 1.2.1. **physical;**
 - 1.2.2. **human;**
 - 1.2.3. **fiscal;**
 - 1.2.4. **curriculum content?**
2. **What are the gaps in the competencies of Bachelor of Technical-Vocational Teacher Education (BTVTEd) program when compared with the competencies prescribed by:**
 - 2.1. **Technical Education and Skills Development Authority; and**
 - 2.2. **K to 12 Basic Education Curriculum?**
3. **What are the perceptions of the stakeholders about the curriculum of BTVTEd program?**
4. **What curriculum revisions can be proposed for BTVTEd program?**
5. **What is the validity of the proposed revised curriculum for BTVTEd program along:**
 - 5.1. **objectives;**
 - 5.2. **content;**
 - 5.3. **activities;**
 - 5.4. **evaluation techniques; and**
 - 5.5. **appropriateness of competency integration?**

Research methodology

This study employed a research and development (R&D) design with a descriptive research approach, focusing on the quality of program inputs such as policies, resources, and curriculum content. It identified gaps in the BTVTEd program's competencies compared to TESDA and K to 12 standards and explored stakeholder perceptions to inform curriculum revisions.

The research was conducted at Mariano Marcos State University (MMSU), specifically within the College of Teacher Education (MMSU-CTE) and College of Industrial Technology (MMSU- CIT), offering technical vocational programs. The study also extended to 58 public secondary schools in Ilocos Norte, Laoag City, and Batac City that offer Technical and Vocational Education (TVE) and Technical-Vocational Livelihood (TVL) programs.

Participants included BTVTEd professors and TVE/TVL teachers from MMSU and local schools, selected through purposive sampling based on experience and specialization in fields such as Computer Hardware Servicing, Electrical Technology, and Food Service Management. A total of 7 faculty members and 4 teachers from each division participated.

Data were collected using a document analysis checklist, semi-structured interview guide, and a validation rating scale. The documents analyzed included the BTVTEd curriculum, K to 12 curriculum guide, and TESDA training regulations. Focus group discussions were conducted to gather stakeholder input, while a validation tool assessed the proposed curriculum revisions through expert feedback. Ethical approval was obtained, and informed consent was secured from all participants. The research

commenced once the ethics committee reviewed and approved the paper, confirming its adherence to ethical guidelines and ensuring it would not harm individuals or the environment.

Data were analyzed using both descriptive statistics (mean) and thematic analysis. Thematic analysis involved coding interview data, categorizing them into themes, and identifying patterns or recurring concepts relevant to the study.

The following ranges of values with their descriptive interpretation were used:

Content Validity:

| <i>Range of Means</i> | <i>Descriptive Interpretation</i> |
|-----------------------|-----------------------------------|
| 4.51-5.00 | <i>Very Highly Valid (VHV)</i> |
| 3.51-4.50 | <i>Highly Valid (HV)</i> |
| 2.51-3.50 | <i>Moderately Valid (MV)</i> |
| 1.51-2.50 | <i>Slightly Valid (SV)</i> |
| 1.00-1.50 | <i>Not Valid (NV)</i> |

Level of acceptability:

| <i>Range of Means</i> | <i>Descriptive interpretation</i> |
|-----------------------|-------------------------------------|
| 4.51 – 5.00 | <i>Very Highly Acceptable (VHA)</i> |
| 3.51 – 4.50 | <i>Highly Acceptable (HA)</i> |
| 2.51 – 3.50 | <i>Moderately Acceptable (MA)</i> |
| 1.51 – 2.50 | <i>Slightly Acceptable (SA)</i> |
| 1.00 – 1.50 | <i>Not Acceptable (NA)</i> |

Data presentation and analysis

The findings of the study are presented based on the sequence of the statement of the problem.

1. What is the quality of inputs of the program along with:

1.1 policies;

1.2 resources;

1.3 physical facilities;

1.1.1 human resources;

1.1.2 fiscal resources; and

1.1.3 curriculum content?

Policies

The Bachelor of Technical-Vocational Teacher Education (BTVTEd) program prepares future educators for Teaching Learning Experiences (TLE) in Grades 9-10 within the Technical Vocational Livelihood (TVL) track, as well as for Technical-Vocational Education and Training (TVET) and higher education institutions. It equips pre-service teachers with a robust theoretical foundation, technological skills, and industry experience, guided by CHED Memorandum No. 79 series 2017,

which promotes academic freedom while ensuring compliance with minimum standards for programs. The curriculum framework established by CHED outlines a "minimum unit requirement" under RA 7722, allowing institutions to customize their curricula to achieve desired outcomes. Additionally, the Technical Education and Skills Development Authority (TESDA) provides Training Regulations that guide curriculum development and mandates regular revisions to maintain industry relevance, as stipulated in TESDA Circular No. 054 s. 2019 and DepEd Order No. 021 s. 2019, emphasizing learner-centered approaches adaptable to local contexts.

Resources

Resources are crucial to the success of educational programs like the Bachelor of Technical-Vocational Teacher Education (BTVTEd), as they significantly influence both input quality and student outcomes. These resources encompass financial support, equipment, facilities, curriculum materials, human resources, and technology, along with the availability of training and employment opportunities for graduates. The World Bank highlights that the quality and availability of resources can greatly affect the effectiveness of vocational and technical education programs. Insufficient funding may result in inadequate equipment, outdated materials, and poorly trained instructors, all of which can detrimentally impact educational quality. Conversely, sufficient resources—such as well-equipped workshops and qualified instructors—enhance learning experiences, leading to improved job prospects and higher income for graduates.

Physical facilities

Laboratory and physical facilities must be sufficient to support various specializations and align with TESDA's training regulations. Per CHED Memorandum No. 79 s. 2017, institutions are required to maintain both a practicum laboratory and specialized laboratories for key fields, ensuring that technology and facilities adhere to TESDA standards. Equipment and resources for the BTVTEd program are procured annually through the Project Procurement Management Program (PPMP), submitted by each college as part of the Agency Procurement Plan (APP), allowing proactive planning to meet student and faculty needs. Shared facilities between the College of Teacher Education (CTE) and the College of Industrial Technology (CIT) enable laboratory classes for major courses. However, current teaching-learning spaces lack full compliance with CHED and TESDA standards and are missing essential tools and equipment for effective instruction. To bridge these gaps, collaboration with industry partners is crucial to provide specialized resources that reflect real-world industry needs. Additionally, all specializations should have dedicated lecture and laboratory spaces to enhance educational effectiveness. Regularly reviewing and updating tools and equipment will ensure compliance with training regulations and uphold high standards in vocational education.

Human resources

The University Faculty Merit Selection and Promotion Board (UFMSPB) ensures that faculty meet the university's qualification standards, which include a master's degree in education or their teaching discipline, a minimum of one year of satisfactory teaching experience in technical- vocational institutions, and compliance with TESDA training regulations, such as holding National Certificates (NCs), as mandated by CHED Memorandum No. 79 s. 2017. Faculty qualifications within the

BTVTEd program vary by specialization. In Electrical Technology, three faculty members teach major courses; two hold MAEd degrees, and one is pursuing one, though none have assessor or NTTC certifications. In Garments and Fashion Design Technology, three faculty members have MAEd degrees and NCs, and one is currently enrolled in a PhD program. The Computer Hardware Servicing (CHS) specialization includes one PhD graduate, two MAEd graduates, one MAEd student, two NC holders, and one NTTC certificate holder. Food Technology is taught by four faculty members: one PhD graduate, one MAEd graduate, two MAEd students, and three NC holders. Overall, the BTVTEd program maintains a highly qualified faculty to deliver quality education in technical-vocational fields.

Fiscal resources

Fiscal resources are essential for the quality of inputs in the Bachelor of Technical-Vocational Teacher Education (BTVTEd) program, providing necessary infrastructure, equipment, materials, and human resources. Adequate funding is crucial; UNESCO-UNEVOC highlights that insufficient financial support can lead to inadequate facilities, outdated materials, and poorly trained instructors, negatively affecting education quality. Conversely, sufficient funding enables the purchase of modern equipment, facility upgrades, and the development of innovative curriculum materials aligned with industry needs. The university's budget consists of an original budget based on RA No. 11518 and a supplemental budget supported by special allotment release orders (SAROs). In the College of Teacher Education (CTE), the budget is allocated as follows: 15.6% for training, 15.6% for supplies, 62.5% for facilities, and 6.3% for maintenance and other operating expenses (MOOE) (Figure 7). Specialization heads submit annual requests for necessary tools and equipment to ensure adequate funding for their programs.

Curriculum Content

The Bachelor of Technical-Vocational Teacher Education (BTVTEd) curriculum encompasses general education, professional education, major courses, mandated courses, experiential learning, and industry immersion. While certain courses are required as foundational prerequisites, higher education institutions (HEIs) can adapt their curricular offerings to align with their unique contexts and missions (CMO No. 79, series 2017, Article 3, Section 4). Table 3 provides an overview of the BTVTEd curriculum, listing the unit allocation for each component: general education courses (36 units), professional education courses (54 units), foundation/theoretical courses (12 units), pedagogical content knowledge (PCK) courses (21 units), experiential learning courses (12 units), additional courses (9 units), and specialization/major courses (69 units). The major courses include 27 units of introductory TLE courses and specialized courses in areas such as Industrial Arts, Home Economics, and Information and Communications Technology. Additionally, mandated courses account for 14 units.

2. What are the gaps in the competencies of Bachelor of Technical - Vocational Teacher Education (BTVTEd) program when compared with the competencies prescribed by:

- 2.1. Technical Education and Skills Development Authority; and**
- 2.2. K to 12 Basic Education Curriculum?**

Gaps in the Major Competencies of Bachelor in Technical-Vocational Teacher Education (BTVTEd) as compared to TESDA and K to 12 Basic Education Program

TESDA versus BTVTEd Program

The Bachelor of Technical-Vocational Teacher Education (BTVTEd) program, as outlined in CHED Memorandum No. 79, Series of 2017, is designed to prepare future educators with competencies aligned to the Philippine TVET Trainers-Assessors Qualification Framework (PTQF). The curriculum includes four specializations with syllabi reflecting the university's vision, mission, core values, and course outcomes. These syllabi are tailored to address competencies based on TESDA's training regulations, covering basic, common, and core competencies crucial for effective teaching. Courses leading to the National Competency Assessment, such as those in Computer Hardware Servicing and Electrical Technology, help identify and address competency gaps. Delivered over 18 weeks per semester, major courses meet two to three times weekly, emphasizing the need for dedicated facilities and updated tools to meet educational and industry standards.

One notable gap is the absence of competencies related to the installation of CCTV, fire devices, and alarm systems, which are mandated by TESDA. To fill this gap, updating the curriculum to include these competencies would enhance graduates' skills for the National Competency Assessment, boosting their employability and program quality. Regular curriculum reviews are essential to maintain alignment with TESDA standards and address evolving industry needs, ensuring students acquire relevant skills.

A closer analysis reveals that the BTVTEd program aligns well with TESDA requirements, supporting students' achievement of National Certificate (NC) Level II qualifications without major competency gaps. The curriculum effectively integrates basic and common competencies within its major courses and prerequisites, preparing graduates for the National Competency Assessment and industry requirements. However, further curriculum refinement, such as adding the competency "prepare and display petits fours" to the Food Service Management Technology (FSMT) curriculum, could improve readiness for certification in Bread and Pastry Production (BPP) NC II.

In summary, while the BTVTEd program aligns with TESDA requirements, it can be strengthened by incorporating missing competencies critical for certification and employability. Coordinators and specialization faculty should collaborate to revise the curriculum, integrating essential competencies within major courses. Maintaining open communication with TESDA will be key in identifying improvement areas and ensuring continuous alignment with government standards. This proactive approach will better equip students for the workforce and enhance the BTVTEd program's effectiveness.

K to 12 Basic Education Curriculum versus BTVTEd Program

The Bachelor of Technical-Vocational Teacher Education (BTVTEd) program is designed to align

with the K to 12 curriculum, particularly in the area of Computer System Servicing (CSS), which includes competencies essential for installing and configuring computer systems, setting up networks, and maintaining these systems as outlined in TESDA's Training Regulations. The program offers four major specializations: Electrical Technology, Garment and Fashion Design Technology, Computer Hardware Servicing, and Food Service Management Technology. Each specialization integrates General Education, Professional Education, Major courses, and Industry immersion to ensure comprehensive training.

In the BTVTEd program, the Computer Hardware Servicing specialization includes five courses leading to the CSS National Certificate (NC) II, adhering to current TESDA standards. Similarly, the Electrical Installation and Maintenance (EIM) specialization comprises six courses that fulfill the requirements for EIM NC II. The curriculum for Dressmaking aligns with TESDA's Training Regulations, indicating no gaps in competencies. However, in the Bread and Pastry Production (BPP) specialization, two competencies—preparing iced petit fours and fresh petit fours—are missing. Incorporating these competencies is recommended to maintain alignment with K to 12 standards and ensure a seamless transition from basic education to tertiary training.

Overall, the BTVTEd program effectively equips students with the necessary skills and knowledge to meet industry demands while ensuring compliance with national competency standards. Regular curriculum reviews are advised to adapt to evolving industry needs and maintain relevance in technical vocational education.

3. What are the perceptions of the stakeholders about the curriculum of BTVTEd program?

Stakeholders play a vital role in the development of programs such as the Bachelor of Technical-Vocational Teacher Education (BTVTEd). By considering the expectations and feedback from diverse stakeholders, the program can better align itself with the needs of students and the industries it serves. This alignment fosters a more relevant and effective learning experience, ultimately preparing students for successful careers. The stakeholders' perceptions about the BTVTEd program are organized into several key themes: the organization of courses in the curriculum, alignment of the curriculum to program goals, integration of relevant skills, recruitment, placement, and professional development of faculty, and the creation of an enabling learning environment. Ensuring that the program's goals and outcomes reflect the requirements of students, the community, and industry stakeholders enhances graduates' preparedness for their respective fields. This approach can also bolster the program's reputation and increase its significance within the community.

4. What curriculum revisions can be proposed for BTVTEd program?

To enhance the Bachelor of Technical-Vocational Teacher Education (BTVTEd) program, several curriculum revisions are proposed, including the integration of industry-relevant competencies aligned with TESDA's Training Regulations, particularly in areas like CCTV installation and fire safety systems. The curriculum should be systematically reviewed to ensure alignment with program goals and incorporate enhanced experiential learning opportunities through partnerships with local industries. Additionally, ongoing professional development for faculty is essential to keep them

updated on current teaching methodologies and industry practices. Emphasizing the development of soft skills, incorporating technology-enhanced learning tools, and ensuring regular stakeholder engagement will further prepare graduates for success in a digitalized workforce.

5. *What is the validity of the proposed revised curriculum for BTVTEd program along:*

5.1. objectives;

5.2. content;

5.3. activities;

5.4. evaluation techniques; and

5.5. appropriateness of competency integration?

The validators of the Proposed Revised Curriculum for the Bachelor of Technical-Vocational Teacher Education (BTVTEd) program rated the material as highly valid, achieving an overall mean score of 4.84. The individual components of validity—including objectives, content, activities, evaluation techniques, and the appropriateness of competency integration—also received very high ratings, ranging from 4.73 to 5.00. This strong validation underscores the curriculum's alignment with educational standards and its effectiveness in preparing students for successful careers in technical and vocational education.

Results and discussions

The Bachelor of Technical-Vocational Teacher Education (BTVTEd) program is structured according to CHED Memorandum No. 79 s. 2017, integrating TESDA Training Regulations and national standards to effectively prepare educators for the Technical-Vocational Livelihood (TVL) track. Nonetheless, there are noticeable gaps in the program's alignment with the changing demands of the industry, particularly concerning technical skills such as CCTV installation and fire safety systems. The adequacy of resources and facilities is crucial for the program's success, yet many institutions do not meet TESDA's standards. While faculty qualifications generally align with the program's requirements, inconsistencies in assessors and NTTC certifications across various specializations have been identified. Although financial support meets basic operational needs, it lacks the stability necessary for ongoing enhancements in training quality and readiness for the industry. The curriculum, while comprehensive in blending professional education with industry exposure, necessitates regular updates to remain pertinent, addressing not only technical skills but also the latest trends in soft skills and digital competencies.

Stakeholders, including educators and industry representatives, have highlighted the importance of aligning the curriculum more closely with real-world requirements, particularly through improved facilities and ongoing professional development for faculty. Proposed curriculum revisions, which include the incorporation of essential competencies and an emphasis on industry immersion, have received strong validation from experts, achieving a mean score of 4.84, indicating their compliance with national standards. These updates will ensure that the BTVTEd program continues to meet the expectations of both TESDA and the K to 12 curriculum, equipping graduates with the necessary

technical and professional skills to thrive in a competitive and dynamic job market.

By addressing the identified challenges and implementing the recommended improvements, the BTVTEd program can ensure its relevance, quality, and alignment with industry standards, ultimately equipping students with the necessary skills and knowledge for successful careers in their chosen fields.

Conclusions

The Bachelor of Technical-Vocational Teacher Education (BTVTEd) program faces pressing challenges that require immediate action to meet both CHED and TESDA standards effectively. Key competencies, particularly those essential for passing the National Competency Assessment, need strengthening, highlighting the importance of refining course sequencing, investing in faculty development, and ensuring alignment with industry demands. Furthermore, limited resources and disparities in faculty qualifications impact the program's ability to fully support student success. Addressing these issues is essential to equipping graduates with the skills necessary for professional growth and to elevate the program's overall quality and effectiveness.

A revised curriculum, thoroughly evaluated for validity and grounded in educational models such as Prosser's theorems, Tyler's framework, and Taba's grassroots approach, emphasizes the importance of relevance, coherence, stakeholder involvement, and competency-based strategies. By implementing these curriculum improvements, the BTVTEd program can enhance its quality, equipping graduates to meet industry standards and excel in their careers.

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