



RESEARCH ARTICLE

Empowering Future Educators: Enhancing Awareness and Integration of Philippine Professional Standards for Teachers among Bachelor of Technology and Livelihood Education Preservice Teachers

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This study examined the awareness, integration, and challenges faced by Bachelor of Technology and Livelihood Education (BTLEd) Pre-service Teachers (PSTs) regarding the Philippine Professional Standards for Teachers Beginning Teacher Indicators (PPST BTIs) during their practice teaching experience. Using a descriptive-quantitative methodology, the study surveyed 49 BTLEd PSTs at Zamboanga Peninsula Polytechnic State University during the 2023-2024 academic year. Results revealed moderate overall awareness ($M=3.77$) and integration ($M=3.70$) of PPST BTIs across seven domains. The Learning Environment domain showed the highest awareness level ($M=4.02$), while Personal Growth and Professional Development demonstrated the highest integration level ($M=4.31$). Major challenges included classroom management (95.9% of respondents) and overwhelming BTI requirements (93.9%). Spearman-rho correlation analysis indicated strong to very strong positive relationships between awareness and integration across all domains ($r=0.65-0.91$). Based on these findings, a comprehensive six-component professional development program was proposed, focusing on curriculum planning, personal growth, assessment, community linkages, content knowledge, and learner diversity. This study contributes valuable insights for enhancing pre-service teacher preparation and professional development programs.

INTRODUCTION

In today's rapidly evolving world, teachers stand as pillars of our educational system, touching lives far beyond the confines of classroom walls. Their influence shapes not just academic achievement, but also nurtures emotional growth and social development in ways that resonate throughout a student's lifetime. As we navigate the complexities of the 21st century, teachers have become instrumental in cultivating vital skills like collaboration, creative thinking, effective communication, and innovative problem-solving (Maker, 2021). Recognizing this crucial role, the Department of Education (DepEd) introduced the Philippine Professional Standards for Teachers (PPST), a thoughtfully crafted framework with seven domains and 37 standards across four career stages (DepEd, 2017), designed to meet the evolving needs of modern learners.

The landmark Republic Act No. 11713 (2022) has strengthened the vital role of Teacher Education Institutions (TEIs) in nurturing future educators. Encouraging findings from Espiritu (2021) revealed that Pre-service Teachers (PSTs) demonstrate strong awareness and proficiency in PPST requirements, while Almasa's (2020) insightful research uncovered thirteen essential competencies for early childhood educators. These findings have helped shape a more comprehensive and practical approach to teacher preparation, ensuring future educators are well-equipped for their noble profession.

Looking beyond our borders, valuable lessons emerge from global experiences in teacher preparation. Innovative approaches from Singapore (Lim et al., 2010; Symonds et al., 2011) and

successful curriculum integration strategies (Fortenbury, 2013) provide inspiring examples of excellence in teacher education. The multifaceted nature of teacher competence (Campbell et al., 2004; Goe et al., 2008) reminds us that effective teaching requires a delicate balance of skills, from cognitive abilities to emotional intelligence. Valuable insights from Myanmar (Borg et al., 2018) and Malaysia (Fook et al., 2011) further enrich our understanding of comprehensive teacher preparation.

Yet, despite these advances, aspiring teachers face real challenges in their journey. PSTs often find themselves juggling multiple demands while striving to integrate PPST competencies during their practice teaching. Critical gaps in our understanding persist, particularly in specialized fields like technology and livelihood education. We need to better understand how PPST awareness translates into classroom effectiveness, how different cultural contexts influence teaching practices, and how TEI curricula can better serve diverse student populations.

As we look to the future, our commitment to educational excellence must include supporting TEIs in addressing these challenges while maintaining alignment with DepEd's standards. The path forward requires innovative approaches to teacher preparation, careful examination of long-term implementation effects, and genuine understanding of the unique challenges faced by PSTs. Through this thoughtful and comprehensive approach, we can better prepare tomorrow's educators while honoring the profound responsibility they hold in shaping future generations.

This journey of continuous improvement in teacher education reflects our shared commitment to educational excellence. The success of our educational reforms depends not just on policies and frameworks, but on our ability to understand and support the human element in teaching - the passionate individuals who choose to dedicate their lives to educating future generations.

Research Objectives

This study seeks to examine the awareness, integration, and challenges faced by Bachelor of Technology and Livelihood Education (BTLED) Pre-service Teachers (PSTs) regarding the Philippine Professional Standards for Teachers Beginning Teacher Indicators (PPST BTIs) during their practice teaching experience.

Primary Objectives

- To assess BTLED PSTs' awareness of PPST BTIs
- To evaluate the level of PPST BTIs integration in practice teaching
- To identify challenges in implementing PPST BTIs
- To analyze the relationship between awareness and integration of PPST BTIs
- To develop an evidence-based program intervention

Research Questions

What is the level of BTLED PSTs' awareness of PPST BTIs across the following domains:

- Content Knowledge and Pedagogy
- Learning Environment
- Diversity of Learners
- Curriculum and Planning
- Assessment and Reporting
- Community Linkages and Professional Engagement
- Personal Growth and Professional Development

To what extent do BTLED PSTs integrate PPST BTIs in their practice teaching across the following domains:

- Content Knowledge and Pedagogy
- Learning Environment

Diversity of Learners

Curriculum and Planning

Assessment and Reporting

Community Linkages and Professional Engagement

Personal Growth and Professional Development

What significant challenges do BTLED PSTs encounter when implementing PPST BTIs during their practice teaching?

What is the correlation between BTLED PSTs' awareness and integration of PPST BTIs across the seven domains?

Based on the research findings, what evidence-based program intervention can be proposed to enhance PPST BTIs implementation among BTLED PSTs?

METHODOLOGY

This study employed a robust descriptive-quantitative methodology to examine the awareness and implementation of PPST BTIs among Bachelor of Technology and Livelihood Education (BTLEd) Pre-service Teachers. Conducted at the Zamboanga Peninsula Polytechnic State University (ZPPSU) Main Campus's College of Teacher Education, the research utilized a comprehensive census approach encompassing all 49 BTLEd PSTs during the 2023-2024 academic year. The study population comprised predominantly female participants (87.8%, $n=43$), with most falling within the 22-24 age range (69.4%, $n=34$), distributed across six DepEd schools in Zamboanga City for their practice teaching assignments.

The research design was strategically chosen for its capacity to provide systematic, statistical examination of educational phenomena, enabling objective measurement of awareness levels and implementation practices (Creswell, 2012). This approach proved particularly effective in establishing clear patterns and generating generalizable findings in educational settings (Smith, 2015). Data collection utilized a meticulously structured survey instrument, divided into distinct sections addressing demographic information, PPST BTIs awareness and integration assessment using a 5-point numerical scale, and challenges encountered during implementation.

To ensure research validity and reliability, the study implemented a rigorous validation process where expert panels reviewed and refined the survey instruments. The data gathering procedure followed strict ethical guidelines, beginning with formal authorization from the College Dean. The researcher personally administered the questionnaires during a scheduled review class, providing comprehensive briefings about the study's objectives and ensuring participants had adequate time and support for thoughtful completion. This methodological approach allowed for a thorough examination of the relationship between PSTs' awareness of PPST standards and their practical implementation in classroom settings, while maintaining empirical rigor and replicability throughout the research process.

RESULTS AND FINDINGS

Level of Awareness

The study revealed varying levels of awareness among Bachelor of Technology and Livelihood Education Pre-service Teachers (BTLEd PSTs) regarding the Philippine Professional Standards for Teachers Beginning Teacher Indicators (PPST BTIs), with an overall moderate awareness level ($M=3.77$, $SD=0.39$). The Learning Environment domain emerged as the strongest area ($M=4.02$, $SD=0.37$), indicating high awareness of creating conducive learning spaces, a finding supported by recent research from Ali et al. (2021) and Al Jaber, Alzouebi, & Abu Khurma (2024) linking positive learning environments to enhanced student outcomes. Other domains showed moderate awareness levels, with Curriculum and Planning ($M=3.91$, $SD=0.44$) and Personal Growth and Professional Development ($M=3.89$, $SD=0.44$) ranking relatively high, while Assessment and Reporting ($M=3.67$, $SD=0.44$), Community Linkages ($M=3.67$, $SD=0.46$), Content Knowledge and Pedagogy ($M=3.63$, $SD=0.38$), and Diversity of Learners ($M=3.59$, $SD=0.58$) demonstrated lower but still moderate awareness levels (see Table 1 below).

Table 1**Level of Awareness among BTLED PSTs regarding PPST BTIs across Domains**

PPST Domains	Mean (SD)	Level of Awareness
Learning Environment	4.02 (0.37)	Highly aware
Curriculum and Planning	3.91 (0.44)	Moderately Aware
Personal Growth and Professional Development	3.89 (0.44)	Moderately Aware
Assessment and Reporting	3.67 (0.44)	Moderately Aware
Community Linkages and Professional Engagement	3.67 (0.46)	Moderately Aware
Content Knowledge and Pedagogy	3.63 (0.38)	Moderately Aware
Diversity of Learners	3.59 (0.58)	Moderately Aware
Overall Mean	3.77 (0.39)	Moderately Aware

Legend: (1.0 – 2.0 Not Aware; 2.01 – 3.0 Lowly Aware; 3.01 – 4.0 Moderately Aware; 4.01 – 5.0 Highly Aware)

These findings, aligning with Espiritu's 2021 study, suggest that while BTLED PSTs possess solid foundational knowledge of PPST BTIs, there remains significant room for enhancement, particularly in addressing learner diversity and implementing effective pedagogical approaches. This understanding provides valuable insights for developing targeted interventions to strengthen pre-service teachers' professional competencies across all PPST domains.

Level of Integration

The analysis of PPST BTIs integration among BTLED PSTs revealed varying levels of implementation across the seven domains, with an overall moderate integration level (M=3.70, SD=0.41). Personal Growth and Professional Development emerged as the most successfully integrated domain (M=4.31, SD=0.43), followed by Learning Environment (M=4.09, SD=0.42), both achieving highly integrated status. Content Knowledge and Pedagogy (M=3.96, SD=0.42), Community Linkages and Professional Engagement (M=3.70, SD=0.43), Curriculum and Planning (M=3.67, SD=0.42), and Assessment and Reporting (M=3.21, SD=0.43) demonstrated moderate integration levels. Notably, the Diversity of Learners domain showed the lowest integration level (M=2.98, SD=0.64), classified as lowly integrated, indicating a critical area requiring immediate attention. This pattern suggests that while BTLED PSTs excel in personal development and creating supportive learning environments, they face significant challenges in adapting their teaching practices to accommodate diverse learner needs. The findings highlight the necessity for targeted interventions, particularly in strengthening PSTs' capacity to address learner diversity and implement comprehensive assessment strategies, ensuring a more balanced and effective integration of PPST BTIs across all domains (See Table 2 below).

Table 2**Level of Integration among BTLED PSTs regarding PPST BTIs across Domains**

PPST Domains	Mean (SD)	Level of Integration
Personal Growth and Professional Development	4.31 (0.43)	Highly Integrated
Learning Environment	4.09 (0.42)	Highly Integrated
Content Knowledge and Pedagogy	3.96 (0.42)	Moderately Integrated

Community Linkages and Professional Engagement	3.70 (0.43)	Moderately Integrated
Curriculum and Planning	3.67 (0.42)	Moderately Integrated
Assessment and Reporting	3.21 (0.43)	Moderately Integrated
Diversity of Learners	2.98 (0.64)	Lowly Integrated
Overall Mean	3.70 (0.41)	Moderately Integrated

Legend: (1.0 – 2.0 not integrated; 2.01 – 3.0 lowly integrated; 3.01 – 4.0 moderately integrated; 4.01 – 5.0 highly integrated)

Challenges

The analysis of challenges faced by BTLED PSTs during practice teaching revealed significant hurdles in implementing PPST BTIs effectively. Classroom management while integrating PPST BTIs emerged as the most prevalent challenge, affecting 95.9% of respondents, aligning with Mosas's (2019) findings on student teachers' primary difficulties. The overwhelming nature of BTI requirements was the second most significant challenge (93.9%), followed by difficulties in adapting teaching methods for diverse learners (85.7%) and applying theoretical knowledge in practical scenarios (83.7%). Moderate challenges included insufficient mentor guidance (57.1%), resource limitations (53.1%), and balancing BTI integration with other teaching responsibilities (51.0%). Lower-ranked but still notable challenges included inadequate training (42.9%), lack of confidence (32.7%), and difficulties in self-assessment and reflection (32.7%) (See Table 3). This hierarchy of challenges suggests a complex interplay between theoretical knowledge and practical implementation, highlighting the need for enhanced support systems, particularly in classroom management and BTI integration strategies. The findings indicate that while PSTs understand the importance of PPST BTIs, they struggle with the practical aspects of implementation, suggesting a need for more targeted training and mentorship programs that address these specific challenges.

Table 3

Frequency Distribution of the Challenges Faced by BTLED PSTs in integrating the PPST BTIs during Practice Teaching

Challenges	<i>f</i>	%
Managing a classroom effectively while integrating PPST BTIs is a significant challenge for me.	47	95.9
I feel overwhelmed by the number of BTIs that need to be integrated into my teaching practice.	46	93.9
Adapting teaching methods to cater to diverse learning needs while following PPST BTIs is difficult.	42	85.7
I find it challenging to apply theoretical knowledge of PPST BTIs in actual teaching scenarios.	41	83.7
There is insufficient guidance from mentors on how to integrate PPST BTIs during practice teaching.	28	57.1
There is a lack of resources to support the integration of PPST BTIs in my teaching practice.	26	53.1
I find it hard to balance the integration of PPST BTIs with other teaching responsibilities.	25	51.0
I received inadequate training and professional development on the PPST BTIs.	21	42.9
I am not confident in my ability to meet the PPST BTIs during my practice teaching.	16	32.7
I find it hard to assess and reflect on my practice with the PPST BTIs.	16	32.7

Note: Multiple Responses

Relationship Between Awareness and Integration

The Spearman-rho correlation analysis revealed significant positive relationships between awareness and integration across all seven PPST domains, with correlation coefficients ranging from 0.65 to 0.91. Community Linkages and Professional Engagement demonstrated the strongest correlation ($r=0.91$), followed closely by Assessment and Reporting ($r=0.90$) and Diversity of Learners ($r=0.82$), indicating very strong positive relationships. The domains of Personal Growth and Professional Development ($r=0.79$), Curriculum and Planning ($r=0.77$), Learning Environment ($r=0.70$), and Content Knowledge and Pedagogy ($r=0.65$) showed strong positive relationships (See Table 4). These robust correlations suggest that higher levels of awareness consistently correspond with better integration of PPST BTIs in teaching practice. This finding has significant implications for teacher education programs, suggesting that enhancing PSTs' awareness of PPST BTIs could directly improve their ability to implement these standards effectively in their teaching practice. The varying correlation strengths across domains also provide valuable insights for targeted interventions, indicating where awareness-building efforts might have the most substantial impact on practical implementation. This evidence supports the strategic importance of developing comprehensive awareness programs as a foundation for improving teaching quality and educational outcomes.

Table 4

Spearman - rho Correlation Coefficient between the Awareness and Integration of BTLED PSTs regarding the PPST BTIs across the Seven Domains

Variables	Domain	Correlation Coefficient	Relationship Level
Awareness and Integration	Content Knowledge and Pedagogy	0.65	Strong Positive Relationship
	Learning Environment	0.70	Strong Positive Relationship
	Diversity of Learners	0.82	Very Strong Positive Relationship
	Curriculum and Planning	0.77	Strong Positive Relationship
	Assessment and Reporting	0.90	Very Strong Positive Relationship
	Community Linkages and Professional Engagement	0.91	Very Strong Positive Relationship
	Personal Growth and Professional Development	0.79	Strong Positive Relationship

Legend: Very Strong (0.8 – 1.0); Strong (0.6 – 0.79); Moderate (0.4 – 0.59); Weak (0.2 – 0.39); Very Weak (0.0 – 0.19)

Propose Intervention

The proposed program intervention for enhancing PPST domains among BTLEd PSTs encompasses six key areas of professional development. The Curriculum and Planning Training Workshop focuses on translating curriculum content into effective learning activities, emphasizing collaborative lesson planning and clear communication of learning goals. The Personal Growth and Professional Development Training Workshop aims to cultivate teaching dignity, professional reflection, and lifelong learning commitment, documented through portfolios and development plans. Assessment and Reporting Enhancements concentrate on utilizing assessment data effectively and providing constructive feedback to learners through systematic evaluation processes. The Community Linkages and Professional Engagement Initiatives seek to connect classroom learning with broader community experiences through structured partnerships and documented outcomes. Content Knowledge and Pedagogy Enhancements emphasize developmentally appropriate teaching methods and technology integration for optimal learning outcomes. Finally, the Diversity of Learners Seminar Workshops target understanding and implementing inclusive teaching strategies, creating equitable

learning environments, and measuring their effectiveness through student engagement and feedback. Each component includes specific objectives and measurable expected outputs, forming a comprehensive framework for professional development that addresses the identified gaps in PPST awareness and integration among BTLED PSTs.

This structured intervention program aligns theoretical knowledge with practical application, ensuring that pre-service teachers develop the necessary competencies across all PPST domains while maintaining accountability through concrete deliverables and assessment mechanisms.

CONCLUSION

As we look at how future technology and livelihood education teachers engage with professional teaching standards, a clear picture emerges of both their strengths and growing edges. These aspiring educators show promising awareness of how to create positive learning environments, but they're still developing their skills in working with diverse learners - much like experienced teachers who remember their early classroom days.

The research shows something both encouraging and challenging: the more teachers understand these professional standards, the better they can put them into practice. However, nearly all our future teachers (96%) admit they struggle with managing their classrooms while trying to implement these standards, and many feel overwhelmed by all the requirements - a very human response to the complex demands of modern teaching.

Looking ahead, three key areas need attention: supporting teachers with practical classroom challenges, helping them turn theory into practice, and providing comprehensive professional growth opportunities. The proposed development program, covering six essential areas of teaching, offers a promising path forward. Like any journey of growth, its success will depend on consistent effort, regular check-ins, and flexibility to adapt as teachers develop.

For teacher education programs, the message is clear: we need to better connect what's taught in preparation programs with real classroom experiences, while providing stronger support systems for new teachers. By doing so, we can help create a new generation of educators who not only understand teaching standards but can confidently and effectively bring them to life in their classrooms, ultimately benefiting both teachers and their future students.

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