International Journal of Learning, Teaching and Educational Research Vol. 24, No. 4, pp. 111-126, April 2025 https://doi.org/10.26803/ijlter.24.4.6 Received Feb 25, 2025; Revised Apr 2, 2025; Accepted Apr 11, 2025

The Voice of Primary Teacher Education Alumni: From Satisfaction to Suggestions for Training Enhancement

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Abstract. This study explores the satisfaction of Vietnamese Primary Teacher Education (PTE) alumni of their academic undergraduate programs and their suggestions for training enhancement. Utilizing a divergent mixed-methods case design with an explanatory sequential approach, data were collected through surveys and structured interviews with alumni graduating between 2021 and 2024. The quantitative phase aimed to identify patterns in 88 alumni's satisfaction towards their gained knowledge, competence, and attitude/value. Subsequently, the qualitative phase with 12 participants, sought to clarify these results by exploring alumni reflections and suggestions for program improvement based on their real-world teaching experiences. Guided by Kirkpatrick's Four-Level Model, the study aligns alumni responses about their academic training and real-world teaching practice. Findings revealed high overall satisfaction, particularly with foundational pedagogical knowledge and professional values. However, alumni expressed a need for additional support in practical training, emotional education, and the integration of modern technologies in teaching. In short, the study brings attention to the value of alumni feedback to help the target university enhance its strengths and address its limitations, offering transferable insights for similar institutional contexts. It contributes to understanding Vietnamese PTE alumni satisfaction and suggests future research to explore the long-term impact of these factors on teaching effectiveness and student outcomes.

Keywords: alumni satisfaction, primary teacher education, suggestions, interdisciplinary, emotional education.

1. Introduction

In education, alumni satisfaction is a key measure of both personal and professional development, influencing graduates' confidence, engagement, and real-world application of their skills (Hanson, 2024, p. 4). In teacher education, alumni satisfaction is more than an indicator of immediate academic success; it

reflects how well a program prepares future educators to navigate the evolving challenges of modern classrooms (Wiranto & Slameto, 2021). Alumni perspectives offer a unique lens through which institutions can evaluate the long-term effectiveness of their programs, particularly as former students bridge the gap between academic theory and practical application in school environments. Teacher training programs have been expected to adapt accordingly, ensuring that graduates are well-equipped to meet the complex demands of primary education (Langelaan et al., 2024). In the context of Vietnamese Primary Teacher Education (PTE), the need to examine alumni satisfaction is especially critical. The Vietnamese education system has undergone substantial reforms, including curriculum updates and a shift toward competency-based learning, driven by national policies and global educational trends (Trinh, Phan, & Phan, 2025). Yet, there remains a gap in understanding how these programs are perceived by their graduates and whether they effectively prepare teachers for diverse and dynamic classroom settings. This study aims to fill that gap by investigating the satisfaction levels of Vietnamese PTE alumni across three core areas, knowledge, competence, and attitude/value, while also capturing their reflections and suggestions for program enhancement. In doing so, this research contributes to the broader discourse on primary teacher education quality, emphasizing the importance of alumni voices in shaping future curricula and training strategies. Insights gained from this study could hold considerable implications for policymakers, educators, and institutions to prepare primary teachers who are not only knowledgeable and competent but also adaptable, empathetic, and equipped to thrive in modern educational landscapes.

2. Literature Review

2.1 The role of alumni's satisfaction on academic program

Human satisfaction is often described as a psychological state resulting from the fulfillment of desires, needs, or expectations (Martela & Sheldon, 2019). In educational settings, this translates into learners' perceptions of the quality of instruction, curriculum relevance, learning resources, and classroom infrastructure (Weerasinghe & Fernando, 2017). Satisfaction is not "merely about academic achievement"; it also involves personal growth, the development of critical thinking, and the acquisition of skills necessary for professional success (Wach et al., 2016, p. 3). Numerous studies emphasize the directly proportional role of learner satisfaction in academic success, motivation, and long-term learning outcomes (Mohamed, 2024; Rooij, Jansen, & Grift, 2018). For learners, when they perceive that their educational experiences have positively influenced their personal and professional development, they report higher levels of satisfaction (Vasileva-Stojanovska et al., 2015). In addition to acting as an intrinsic motivator for learners, satisfaction is a critical indicator of educational quality and effectiveness. There are many ways and diverse targets for gathering feedback, including current learners, faculty members, staff, short-term trainees, and external cooperators, each offering collective insights to inform the evaluation and development of academic programs. Among these, alumni feedback holds particular value, as former students provide unique perspectives based on their workforce experiences, highlighting the practical applicability of the knowledge and skills they acquired (Schenkenfelder, 2020). Riegel (2021)

inferred that the satisfaction rate of program completers helps educators understand the evolving demands of the job market, enabling them to adapt curricula to better prepare future graduates. Gere et al.'s (2021) investigation into the impact of undergraduate coursework on alumni suggested that alumni perspectives provide valuable contextual and empirical contributions to ongoing educational goals, offering an inclusive view of program effectiveness beyond immediate academic achievements. Additionally, Doyle et al.'s (2022) exploration of alumni engagement implicated that satisfied alumni are more likely to contribute to their alma mater through mentorship, donations, and advocacy, thereby supporting institutional growth and sustainability. High levels of alumni satisfaction are also linked to favorable program outcomes, including higher employability rates, stronger alumni networks, and an enhanced institutional reputation that attracts prospective newcomers with a culture of excellence (Steward, Walk, & Kuenzi, 2020).

2.2 Overview of Primary teacher education in Vietnam

Vietnamese PTE has experienced significant transformations in response to curriculum reforms and evolving educational standards. Internal quality assurance (IQA) practices play a pivotal role in maintaining and enhancing the quality of teacher education programs. Thai and Phan (2020) explored IQA practices in five Vietnamese teacher education programs through survey questionnaires targeting teachers/managers, student teachers/alumni, and employers. Their findings indicated that while programs had integrated IQA policies to align with stakeholder expectations, gaps remained in equipping future teachers with practical teaching skills. The study suggested the need for closer collaboration between academic institutions and schools to ensure that expected learning outcomes meet real-world classroom demands. Professional development (PD) is another cornerstone of PTE in Vietnam. Nguyen, Ha and Tran (2022) examined PD needs among primary school teachers during curriculum reforms, revealing a strong demand for practical and work-relevant training. Teachers valued hands-on activities and interactive learning opportunities, highlighting the importance of PD programs that directly address their classroom challenges. Similarly, Pham et al. (2024) analysed PD practices from a sociocultural perspective, identifying self-directedness, collegiality, and situatedness as key characteristics. However, barriers such as limited IT access, financial constraints, and unsupportive family conditions often hinder teachers' full participation in PD activities. The study also clarified the influential role of school leadership in fostering collaborative professional environments. Despite these insights, research gaps remain, particularly regarding alumni satisfaction with primary education programs. In the evolving educational landscape, elaborating on former learners' perspectives can inform timely improvements and ensure that teacher education programs dynamically prepare graduates for their professional roles. By understanding alumni reflections on their academic preparation and the real-world demands they face, institutions can identify strengths and areas for strategic development in ongoing training programs.

2.3 Conceptual and theoretical frameworks underlying the research questions According to Circular No. 02/2021/TT-BGDĐT by the Ministry of Education and Training (MoET), Vietnamese PTE programs are designed to align with

national standards for teacher qualifications, competencies, and ethical practices. The circular called for the adaptation of international frameworks, concurring with Tuning Model and Singapore Educational Standards, to enhance the quality of teacher training while meeting local educational demands. The Tuning Model offers a structured approach to defining and distributing learning outcomes, competencies, and objectives with international benchmarks (Ferreras & Wagenaar, 2023). Meanwhile, the Singapore Standards, recognized for their emphasis on high-quality education and practical teaching competencies, provide a framework that ensures the program meets both academic rigor and practical classroom needs (Bui et al., 2017). In this case study at a university in the south of Vietnam, the Vietnamese PTE program focuses on three core areas for alumni satisfaction evaluation: knowledge, competence, and attitude/value. This specified approach ensures a holistic assessment of the program's effectiveness, capturing not only the academic preparedness of graduates but also their ability to apply skills and uphold professional values in real-world teaching contexts. To unpack alumni satisfaction comprehensively, this study employs Kirkpatrick's Four-Level Model as its primary theoretical framework (see Figure 1).

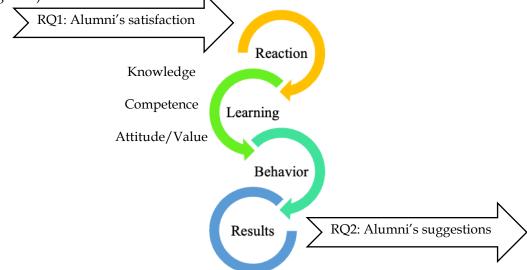


Figure 1. Kirkpatrick's four-level model of evaluation, adapted from Niemann and Thielsch (2020, p. 4)

Commonly used in program evaluation, this model assesses the effectiveness of training and education through four interconnected levels (Alsalamah & Callinan, 2021). As a result, it serves as an appropriate adopted paradigm for the current study to unravel alumni satisfaction and suggestions for continuing training programs. According to Kirkpatrick and Kirkpatrick (2016), reaction focuses on alumni's perceptions and overall satisfaction with the program, reflecting their initial impressions and engagement. Learning assesses the extent to which alumni acquired the intended knowledge, skills, and attitudes during their studies, highlighting the program's academic effectiveness. Behaviour evaluates how effectively alumni apply their learning in real-world teaching contexts, demonstrating the transfer of theory into practice. Finally, Results

considers the broader impact of the program on alumni's professional success and their contributions to student learning outcomes, capturing the value of the education received. By using these frameworks above, this study has captured alumni reflections not only on their academic experiences but also on how these experiences have translated into professional practice through two aims:

First, it aims to explore Vietnamese PTE alumni's satisfaction with their academic programs, focusing on their perceptions of the knowledge, skills, and attitudes/values acquired during their training.

RQ1: To what extent are Vietnamese PTE alumni satisfied with their academic programs, and which aspects of knowledge, skills, and attitudes/values do they find most and least satisfactory?

Second, it seeks to gather alumni suggestions on how PTE programs can be improved to better equip future teachers with the competencies required to navigate the challenges of real-world primary education settings.

RQ2: What suggestions do alumni offer for PTE programs to align with real-world teaching demands?

3. Methodology

3.1 Research design and participant selection

This study adopted a divergent mixed-methods case design through an explanatory sequential approach, beginning with a quantitative phase followed by a qualitative phase (Creswell & Poth, 2016; Subedi, 2016). The research setting was at a university, given a pseudonym as Briar University, in the South of Vietnam. The participants graduated between 2021 and 2024, ensuring that they experienced a consistent curriculum without significant reforms, which allowed for a more uniform evaluation of the academic program. To further ensure relevance and consistency in the responses, all alumni were currently employed in primary schools, enabling the study to directly assess how their academic preparation translated into real-world teaching contexts. The study began with a quantitative phase for answering research question 1, where a questionnaire was conducted to explore key patterns and connections in the participants' selfreported insights. A total of 88 alumni through purposive sampling took part in the online survey, chosen for its convenience and ability to reach graduates now working in primary schools across different regions in the South of Vietnam (as summarized in Table 1).

Table 1. Questionnaire participants' demographic features

Variables	Demographic features	Number (N=88)
Gender	Male	13 (14.8%)
	Female	75 (85.2%)
Year of graduation	2021-2022	38 (43.2%)
	2023-2024	50 (56.8%)

The qualitative phase followed, aiming to address research question 2 regarding alumni suggestions for improving primary teacher education programs. Structured interviews were conducted with 12 PTE alumni, purposefully

selected based on insights from the quantitative phase. Participants were chosen through purposive sampling (Robinson, 2024), considering demographic factors such as gender and year of graduation. To capture diverse perspectives, alumni were grouped based on their graduation years: 2021, 2022, 2023, and 2024. Three alumni from each group were selected to explore how their academic experiences shaped their views and to gather targeted suggestions for enhancing the program (as detailed in Table 2).

Table 2. Participants' demographic features for interviews

Alumni ID	Gender	Graduation Year
A1	Male	2021
A2	Male	
A3	Female	
A4	Female	2022
A5	Male	
A6	Male	
A7	Female	2023
A8	Female	
A9	Male	
A10	Male	2024
A11	Female	
A12	Female	

3.2 Research instruments and data collection

Two primary instruments were utilized to collect data for this study. The questionnaire was designed to capture alumni's evaluations of their PTE program, focusing on their satisfaction with the knowledge, competence, and attitude/value components they have been equipped with. Following this, structured interviews were carried out to explore alumni's suggestions for improving the program application into real-world teaching demands, providing qualitative insights to enrich the survey findings (see Table 3).

Table 3. Research instruments and their purposes

Instrument	Purpose
Questionnaire	Examine PTE alumni's evaluations of their academic program, focusing on knowledge, competence, and attitude/value.
Structured interviews	Explore PTE alumni's suggestions for improving the program to better align with real-world teaching demands.

A questionnaire is cost-effective, quick, and anonymous for broad data collection within a thesis timeline (Belisario et al., 2015). This study's Likert-scale questionnaire included a demographic section covering gender and graduation year, along with evaluations of the academic program across three core areas: (1) knowledge, (2) competence, and (3) attitude/value, to address research question 1. Items were structured using a 5-point Likert scale for these clusters (1. Very Dissatisfied – 2. Dissatisfied – 3. Neutral – 4. Satisfied – 5. Very Satisfied) (see Table 4).

Cluster Items Conceptual references Knowledge 1, 2, 3, 4, 5, 6, 7, 8, Subject matter understanding (PTE program, Briar University) Competence 10, 11, 12, 13, 14, Practical teaching abilities (PTE program, 15, 16, 17, 18 Briar University) 19, 20, 21, 22, 23, Attitude/Value Professional ethics and values 24, 25 program, Briar University)

Table 4. Summary of the questionnaire components

The structured interviews, lasting approximately 30 minutes each, were conducted to systematically explore participants' reflections and suggestions for improving the academic program, guided by Kirkpatrick's Four-Level Model. The interview questions were designed to address the study's second research question, focusing on alumni's perceptions of how their academic experiences prepared them for real-world teaching demands and their suggestions for ongoing program enhancement. The interviews explored four key areas based on Kirkpatrick's framework: Reaction (alumni's immediate feelings about the program), Learning (knowledge, skills, and attitudes gained), Behaviour (how they applied acquired skills in their current teaching roles), and Results (the impact on their professional practices and student outcomes). Participants were asked to reflect on their academic experiences, their transition into primary education, and the specific aspects of the program that either supported or hindered their professional readiness. Interviews were scheduled at mutually convenient times and conducted either online or at participants' workplaces. Ethical standards, including informed consent, anonymity, and voluntary participation, were strictly upheld throughout the study.

3.3 Data analysis

The questionnaire underwent a rigorous development process, including piloting and expert consultations to ensure item clarity, relevance, and alignment with the study's objectives. Following finalization, reliability testing using SPSS 26.0 revealed a high internal consistency, with a Cronbach's alpha coefficient of 0.955. Descriptive statistics were utilized to summarize participants' demographic information and their responses across the three clusters: knowledge, competence, and attitude/value. To examine potential differences in alumni satisfaction based on demographic factors, an independent t-test was conducted to compare responses between male and female participants, while a one-way ANOVA was applied to analyse variations among alumni based on their graduation years (2021–2024). The quantitative findings were interpreted using Oxford's scale for 5-point Likert scale items, providing clear insights into alumni satisfaction levels (Khatri et al., 2024).

The qualitative data were gathered through structured interviews conducted in Vietnamese, allowing participants to express their perspectives and suggestions in their native language, fostering richer and more authentic responses. With participants' consent, all interviews were audio-recorded, transcribed verbatim, and translated into English for analysis, while the original Vietnamese transcripts were retained to ensure confirmability. Thematic analysis was

applied, guided by Kirkpatrick's Four-Level Model, with a focus on alumni reflections regarding their academic experiences and their suggestions for program improvement. To ensure the credibility and trustworthiness of the qualitative findings, the study employed member checking, triangulation with quantitative data, and peer debriefing, enhancing the reliability and depth of the interpretations.

4. Findings and discussion

4.1 PTE alumni's satisfaction with their training program

The questionnaire, comprising three clusters with a total of 25 items, was completed by 88 PTE alumni. This instrument aimed to evaluate their satisfaction with the academic program based on knowledge, competence, and attitude/value dimensions. Descriptive statistical analysis was conducted to assess participants' responses, providing an overview of alumni satisfaction levels. The results of this analysis are presented in Table 5. To address RQ1 on overall satisfaction and the most and least satisfactory aspects, Table 5 colors the highest-rated items in red and the lowest-rated in blue for clarity.

Table 5. Descriptive statistics (N=88)

Cluster 1: Satisfaction with learnt knowledge (M _K =4.16)		SD
I have been equipped with knowledge of		
1. political science, social sciences, and legal studies.	4.14	.730
2. physical education and national defense education.	4.10	.743
3. the use of Vietnamese in daily communication.	4.10	.712
4. the use of Vietnamese in educational professional activities.	4.33	.707
5. use of English or French equivalent to level B1 (CEFR).	4.03	.780
6. educational sciences, developmental psychology, and pedagogical psychology for teaching primary school children.		.697
7. teaching trends and principles for designing primary school curricula.	4.18	.670
8. assessment methods and evaluation techniques for primary education.		.745
9. educational policy and how it affects primary education.	4.17	.731
Cluster 2: Satisfaction with achieved competences (M _C =4.15)		
I have been given chances to develop my skills to		
10. design lesson plans that promote the development of students' qualities and capabilities.		.601
11. applying teaching methods and techniques to meet educational goals.		.575
12. assess student learning and provide constructive feedback.		.692
13. apply effective classroom management techniques.		.695
14. use educational technology to enhance teaching and learning.		.625
15. provide psychological counselling and support to students.		1.018
16. adapt teaching strategies to meet diverse learning needs.		.633
17. collaborate effectively with colleagues in a school environment.		.751

18. guide and support students' personal development.		.698		
Cluster 3: Satisfaction with gained attitude/value (M _A =4.18)				
I have been supported to develop				
19. a professional attitude toward teaching and education.		.590		
20. a sense of responsibility toward my students, school, and		.690		
community.				
21. a sense of belonging with colleagues, students, and parents.		.653		
22. a mindset of lifelong learning and professional		.714		
development.				
23. an awareness of ethical standards in education.		.638		
24. a sense of self-discipline in education.		.667		
25. a sense of agency in educational contexts with evolving		.898		
challenges.				

Participants expressed a high level of satisfaction with their acquired knowledge (MK=4.16), particularly in professional communication (M=4.33, SD=.707), child development and assessment (M=4.20, SD=.697; M=4.20, SD=.745), curriculum design (M=4.18, SD=.670), and educational policy (M=4.17, SD=.731), indicating their perceived relevance to primary education. Moderate satisfaction was reported for political science (M=4.14, SD=.730) and physical education (M=4.10, SD=.743), suggesting these subjects were valuable but not central to their teaching roles. The lowest-rated area was foreign language proficiency (M=4.03, SD=.780), reflecting a need for improvement in multilingual competency within the training program.

Regarding achieved competencies, participants were most satisfied with their ability to select effective teaching methods (M=4.31, SD=.575), design student-centered lesson plans (M=4.23, SD=.601), and utilize educational technology (M=4.24, SD=.625), highlighting strengths in modern instructional approaches. They also rated classroom management (M=4.24, SD=.695) and inclusive teaching strategies (M=4.22, SD=.633) positively, underscoring the program's emphasis on fostering adaptable teaching skills. However, moderate satisfaction was observed in assessment practices (M=4.13, SD=.692) and collaboration with colleagues (M=4.15, SD=.751), suggesting room for further development in these areas. The lowest-rated competence was psychological counselling and student support (M=3.65, SD=1.018), indicating that training in emotional and psychological aspects of education remains insufficient.

In terms of attitudes and professional values, participants highly valued fostering self-discipline (M=4.31, SD=.667), ethical awareness (M=4.27, SD=.638), and a strong sense of responsibility toward students and the community (M=4.23, SD=.690), reflecting the influence of Vietnam's Confucian educational values. They also appreciated the focus on lifelong learning (M=4.20, SD=.714) and professional engagement (M=4.18, SD=.653), reinforcing the program's role in promoting continuous teacher development. However, adaptability to evolving educational contexts (M=3.90, SD=.898) received the lowest rating, suggesting that participants felt less prepared to navigate changes and challenges in their teaching environments.

The correlation analysis reveals significant positive relationships among M_K (knowledge), M_C (competence), and M_A (attitude/value), indicating that these constructs are closely interrelated (see Table 6). The strongest correlation (r = .677, p < .01) shows that higher levels of competence are strongly associated with more positive attitudes and values. This suggests that alumni who perceive themselves as more competent tend to hold stronger attitudes and values aligned with effective educational practices. The correlation between knowledge and attitude/value (r = .604, p < .01) indicates that greater satisfaction with learnt knowledge is linked to more positive attitudes and values, implying that foundational knowledge supports the development of constructive mindsets. Finally, the correlation between knowledge and competence (r = .583, p < .01) highlights that a solid knowledge base contributes to alumni's perceived competence in professional practices.

Table 6. Pearson Correlation results (N=88)

To further explore these relationships, two independent t-tests and a one-way ANOVA were conducted to compare alumni' satisfaction levels regarding learnt knowledge, achieved competences, and gained attitudes/values across demographic groups. The findings revealed that neither gender nor years since graduation significantly influenced their satisfaction with the PTE program.

4.2 PTE alumni's suggestions for their training program

4.2.1 Promoting interdisciplinary teaching through foreign language integration Alumni emphasized the importance of integrating foreign languages into various subjects in a gradual and flexible manner to enhance both language skills and subject knowledge among primary school students. Rather than fully conducting lessons in English or French, they suggested a balanced approach that allows for seamless code-switching, making the learning process more engaging and accessible. A2 explained, "It's about gradually and slowly integrating English, seamlessly code-switching to get learners' attention, especially during key moments in lessons. Kids are happy to see teachers sing or speak in other languages in the classrooms..." This method helps avoid overwhelming young learners while still exposing them to authentic language use in meaningful contexts. A3 further highlighted how primary students are already exposed to English through everyday media, which can be leveraged in the classroom. "Young learners nowadays engage with many video games, movies, and fast-forward commercials, so English naturally sparks their curiosity, like some catchy slogans and everyday phrases related to food, clothes, and transport..." By tapping into these familiar references,

teachers can make both content learning and foreign language acquisition feel more relevant and enjoyable for students.

Their suggestions concur with the broader shift in educational goals toward interdisciplinary teaching, aligning with frameworks like Science, Technology, Engineering, Arts, and Mathematics (STEAM) and Science, Technology, Engineering, and Mathematics (STEM) that promote creativity, problem-solving, and critical thinking from a young age (Abd Ghani, Rosli, & Maat, 2025). Integrating foreign languages into subjects like science, mathematics, and social studies not only supports bilingual development but also fosters cognitive flexibility and global awareness, which are key objectives in modern education (Abdulah & Mahmud, 2025; Trinh, Phan, & Ngo, 2025). Traditionally, Vietnamese learners began studying English later in their academic journey, typically in secondary or even high school (Nguyen & Lo, 2022). However, educational reforms have recognized the advantages of earlier language exposure, leading to primary students now starting English much sooner (Nguyen, Ha, & Tran, 2022). This aligns with established principles of language acquisition, which emphasize the benefits of early and consistent input for longterm language development (Huang et al., 2018). When framed under Kirkpatrick's learning-result level, alumni, through their field experiences, see the value in these evolving methods and advocate for teacher education programs to better prepare future educators for this integrated approach. Their reflections show the massive needs of equipping PTE with strategies for gradual language integration and culturally responsive practices, ensuring that young learners are engaged and supported in bilingual learning environments.

4.2.2 Integrating psychological studies to address young learners' needs

Alumni highlighted the importance of embedding psychological studies into teacher education programs to better equip future primary educators in understanding and supporting young learners' diverse emotional and cognitive needs. A8 emphasized, "Teachers need more than just subject knowledge; we must recognize signs of anxiety, stress, or behavioural changes in children. But it's uneasy, every child is unique." A12 added, "In modern classrooms, especially in urban areas, cases of depression, autism, or social withdrawal are becoming more visible, and teachers need the skills to respond appropriately. In the past, teachers often considered kids like that were rebellious and deserved punishment. That's not simple like that these days." Alumni suggested including modules on child psychology, emotional regulation, and inclusive education strategies to help future teachers create supportive and inclusive learning environments without misinterpretation about misbehaviours or off-tasks.

Their recommendations share the growing awareness of mental health issues among young learners, particularly in urban and modern contexts where children face increased academic pressures, social expectations, and exposure to excessive technology. Rising cases of depression, anxiety, and autism spectrum disorders have made it crucial for primary educators to recognize early signs and apply supportive interventions. Despite this, alumni expressed concern that these areas remain underexplored in current teacher education programs, echoing findings from (Çelikkaleli & Ökmen, 2021). These responses echoed the

questionnaire results, where alumni reported low satisfaction with how the training prepared them to consult and support young learners with psychological disorders. When viewed through Kirkpatrick's model, particularly at the Behaviour level, it becomes clear that while alumni were exposed to substantial theoretical knowledge in psychology, this did not translate into practical classroom competencies. Alumni noted that much of their coursework focused on reading and presenting psychological theories, rather than engaging in hands-on strategies or case-based practices. As a result, their ability to apply psychological principles to real-life classroom situations remained limited. Alumni advocated for more experiential learning, such as role-playing, classroom simulations, and real-life case studies, to narrow down the gap between theoretical understanding and practical application, ensuring future teachers can responsively and proactively deal with the complex emotional and developmental needs of young learners.

4.2.3 Developing multipurpose digital competence in the AI era

With the growing influence of technology in education, alumni called for a stronger focus on building digital skills, especially the use of AI tools to create engaging learning experiences. They suggested that future teachers should be trained to integrate educational technology into lessons to make learning more interactive and adaptable to individual student needs. A5 shared, "Kids today are digital natives. As geography teachers, we need to use tech-driven tools and other AI tools to make lessons more exciting and relevant." A9 additionally emphasized, "It's not just about using technology in teaching Maths, it's about using it creatively to foster critical thinking and problem-solving. If we as teachers do not go a step ahead about tech use, disasters are coming as we cannot prevent our learners from using it with the wrong purpose."

Alumni further highlighted that young learners tend to trust and feel more connected to teachers who they perceive as "modern" and "trendy." In today's classrooms, where students are already familiar with AI-driven games, social media, and interactive apps, teachers who skilfully incorporate similar tools into their lessons are often seen as more relatable and engaging (Torres-Peña et al., 2024). In line with Dickman (2023), human-technology connection fosters a stronger sense of belonging among students, as they feel that their interests, preferences, and ways of learning are acknowledged and valued. A8 reported, "My subject focus is Vietnamese literature, which is often perceived as long and hard to swallow. If I can skillfully use technology to refresh the traditional value into their 'gen Alpha languages' that learners recognize or enjoy, it breaks down barriers. It shows students that their teacher understands them, which boosts motivation and classroom participation." Through Kirkpatrick's framework, particularly at the level of learning behaviour, these alumni illuminate a clear desire to develop their professional agency. While they were trained by adult educators, their field experiences with much younger, tech-savvy learners revealed the pressing need to adapt and innovate. They recognized that simply applying traditional approaches falls short in today's dynamic classrooms. Instead, they seek training that empowers them to harmonize the energies across generational gaps. This opens much optimism about the alumni's proactive stance in reshaping their teaching practices to align with the evolving needs of primary school learners,

then advocating for teacher education programs that support their adaptive and forward-thinking mindset.

Findings revealed that while alumni were satisfied with the foundational pedagogical knowledge and professional values instilled by their lecturers, they found the lack of hands-on training and limited focus on psychological and emotional education problematic. Despite valuing their lecturers' expertise, they still felt unprepared for real-world teaching, particularly in managing diverse learning needs, student behaviors, and integrating modern technology. To address these gaps, they strongly advocated for lóp học thực chiến (real-life classroom simulations) to enhance problem-solving skills, adaptability, and confidence. They also emphasized the need for interdisciplinary learning and cross-faculty collaboration to refine teaching strategies. Alumni mentioned limited training facilities and access to modern teaching technologies as barriers to effective practice. They called for the integration of digital tools like interactive whiteboards, e-learning platforms, and AI-assisted teaching aids to align training with contemporary classrooms. Emotional education was another key concern, especially in Vietnamese classrooms, where the traditional mindset of "spare the rod, spoil the child" still influences teaching philosophies. Alumni urged a shift toward structured guidance, metacognitive strategies, and emotional support instead of physical discipline, fostering resilience, accountability, and student well-being. While their training provided strong theoretical foundations, they often felt unprepared for classroom complexities. These insights underscore the need for PTE programs to enhance hands-on learning, update technological resources, and embed emotional education to bridge the gap between theory and practice.

4.3 Limitations and recommendations

While this study has provided valuable insights into Vietnamese PTE alumni's satisfaction with their academic programs, certain limitations should be acknowledged. Firstly, the reliance on self-reported data may introduce biases, such as social desirability or subjective perceptions, which may not fully capture the actual impact of the academic programs on alumni's professional competence. Future research could mitigate the limitations of self-reported data by incorporating diverse data sources of classroom observations, school leader evaluations, or student learning outcome analyses, to provide a more objective and comprehensive assessment of how training translates into real teaching practices. Expanding the sample size and including alumni from various institutions and regions would enhance the generalizability of findings and offer a broader perspective on program effectiveness. About the lack of statistically significant results, possibly due to sample size constraints, comparative studies could be conducted across institutions with different training models, resources, and educational priorities. Addressing these limitations would allow future research to generate deeper, more nuanced insights into how PTE programs can be refined to better prepare future primary school teachers for their specific teaching contexts.

5. Conclusion

This study has explored PTE alumni's satisfaction with their academic programs and identified their suggestions for improvement. Findings indicate that while alumni recognized the program's efforts in providing strong theoretical foundations, they expressed concerns over the limited practical training and insufficient exposure to real-world teaching challenges. Many emphasized the need for hands-on experiences that simulate actual classroom scenarios, enabling pre-service teachers to develop problem-solving skills, adaptability, and confidence in managing diverse learning environments. Alumni also advocated for more interdisciplinary learning and collaboration with other education-related fields to enhance teaching effectiveness, allowing future educators to gain a broader perspective on pedagogy and classroom management. The study also highlighted the growing importance of emotional education in primary classrooms, with alumni calling for a shift from rigid disciplinary methods to a more structured yet empathetic approach that fosters students' emotional and social well-being. They stressed the need for teacher training programs to integrate strategies that promote student engagement, resilience, and inclusivity. These insights reinforce the necessity for PTE programs to evolve in response to the complexities of modern teaching, ensuring that future educators are equipped not only with pedagogical expertise but also with the practical competencies and emotional intelligence needed to create supportive and effective learning environments.

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