



Unveiling the Veil: Gender Differences in Satisfaction among K12 Teachers in the Teacher Activity Groups Initiative

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This study aimed to investigate the influence of gender on the satisfaction of Vietnamese K-12 teachers who participated in Teaching Activity Groups (TAGs), a collaborative professional development (PD) initiative. Using a quantitative approach, questionnaire data was collected from a purposive sample of 147 teachers (108 females, 39 males). The data were subjected to descriptive statistical analysis and Independent Sample t-tests to discern potential gender-based differences in teachers' satisfaction with TAGs and their perceived impact on teachers' PD. The results revealed nuanced disparities in satisfaction levels between female and male participants, with generally higher satisfaction levels exhibited by females. Notable areas of difference included knowledge acquisition, skills acquisition, school support, and issue resolution. These areas were indeed discussed in the content, providing a detailed analysis of where gender differences in satisfaction were most pronounced. The results underscore the relevance of gender considerations in PD studies and offer insights for policy and practice in the Vietnamese educational landscape. The study concludes by highlighting the need for further research to explore these gender dynamics and their underlying causes in greater depth.

Keywords: gender, teaching activity groups, professional development, teacher satisfaction, Vietnam, K-12 teachers

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INTRODUCTION

The paramount importance of professional development (PD) in enhancing the pedagogical proficiency of teachers (Lei & Medwell, 2020; Yaakob et al., 2020; Oo et al., 2023), subsequently improving the quality of education, cannot be overstated. This is particularly relevant in the context of emerging discussions around the influence of teacher gender on educational outcomes. There has been a burgeoning focus on collaborative methods for PD (Koukis & Jimoyiannis, 2019), epitomized by Teacher Activity Groups (TAGs). These endeavors aim to foster an environment of solidarity and shared knowledge among education professionals (Chickering et al., 2015).

In the unique setting of Vietnam's educational landscape, K-12 school teachers face numerous challenges. These include the need to keep pace with changing student needs and the ever-shifting dynamics of the education field (Nguyen & Trent, 2020; Nguyen et al., 2020; Hung & Thuy, 2021). Amid these challenges, the nuanced role of teacher gender within the PD context, particularly in TAGs, remains underexplored. To overcome these challenges, TAGs are emerging as effective collaborative professional development efforts. They offer teachers a shared space to work together, share successful strategies, and develop innovative teaching methods. This approach is seen as a practical way to enhance educational practices (Xulu, 2018). These assemblies offer avenues for educators to collaborate, reflect on their instructional strategies, and accelerate their professional growth (Tichenor & Tichenor, 2019; Zeng & Day, 2019).

Yet, in spite of the growing traction of TAGs, there is a scarcity of research exploring their effectiveness and the level of satisfaction among participating educators, with a specific focus on the differential impact of teacher gender. The study thus intends to bridge this gap by methodically examining the interplay between teacher gender and satisfaction within TAGs, aiming to contribute significantly to the body of knowledge on gender dynamics in educational PD. Understanding how gender shapes the perspective of Vietnamese K-12 teachers with respect to the impact of TAGs on their PD is essential to direct future improvements in collaborative PD initiatives. This research aims to fill the gap by examining the potential correlation between teacher gender and the effectiveness of PD within TAGs. Additionally, the study aims to provide actionable insights for educators and policymakers, informing strategies that can enhance the inclusivity and effectiveness of PD programs in diverse gender contexts. This study sets out to explore how gender affects the experiences and satisfaction levels of Vietnamese K-12 teachers involved in TAGs, while also assessing how these groups contribute to their PD. By delving into these aspects, the research aims to enrich the body of knowledge on PD in Vietnam's education sector, offering key insights for those in charge of shaping educational policies, managing schools, and directly educating students. A significant focus will be on understanding the critical role of gender dynamics within such learning communities. Ultimately, the goal is to aid in the ongoing improvement and enhancement of teaching practices at the K-12 level. This, in turn, is expected to boost student performance and elevate the quality of education across the country.

Literature Review

Professional Development Activities

PD is like a toolbox for teachers, packed with tools and resources they need to keep growing and improving in their craft. It is all about giving teachers a variety of ways to learn new things, polish their teaching methods, and stay sharp in an ever-changing educational world (Guskey, 2000, 2003; Guskey & Yoon, 2009). Whether it is through workshops, team learning sessions, one-on-one coaching, or even TAGs, PD is designed to be flexible, aiming to fit the unique needs and situations teachers find themselves in (Gümüő & Bellibaő, 2021). But there is a twist: not all teachers experience PD in the same way. Just like in any other aspect of life, things like societal expectations and personal learning styles can make a big difference. That means men and women might walk away with different impressions and gains from the same PD session (Craig et al., 2022). It is a reminder that when we talk about helping teachers get better, we have to think about more than just the content; we have to consider who is learning it and how they are interacting with it. At the heart of it, the goal of PD is to not just flood teachers with new information but to encourage them to think deeply about their teaching, try out new strategies, and continually aim for better, both in their classrooms and beyond (Boei et al., 2015). It is about building a culture where improvement is ongoing and everyone is always on the lookout for how they can do better, together.

The character of female and male teachers in relation to the teaching process is a vital aspect that influences their engagement and outcomes in PD activities. Literature indicates that gender can shape teachers' pedagogical approaches, interaction with students, and response to PD initiatives, with female teachers often exhibiting stronger relational skills and a preference for collaborative learning environments (Aylor, 2003). Conversely, male teachers may exhibit different strengths and preferences, such as a tendency for more direct instructional styles (Rosemarin, 2009). These gender-based characteristics play a critical role in shaping the effectiveness and reception of PD activities.

Empirical evidence supports the proposition that meticulously structured PD activities can significantly influence teaching practices (e.g., Mohamad et al., 2022; Quick et al., 2009). Scholarly research has validated that participation in concentrated PD programs leads to improved subject matter understanding, polished instructional methods, and enhanced classroom management skills (Nutta et al., 2020). Effective PD initiatives provide teachers with opportunities to engage in active learning, mimic best practices, and obtain feedback and support from peers and facilitators (Archambault et al., 2010).

Additionally, the concept of satisfaction with teaching activities, as expected by K-12 teachers, is a pivotal dimension of PD effectiveness. Satisfaction in PD contexts is multifaceted, encompassing aspects such as perceived relevance, applicability of learned skills, and the degree of professional growth experienced by teachers (Reeves & Pedulla, 2011). It is crucial to recognize that teachers' satisfaction with PD activities, including TAGs, can significantly impact their motivation to implement new teaching strategies and their overall commitment to continuous professional development (Lillejord & Børte, 2020).

Collaborative PD activities, such as TAGs, have garnered considerable attention in recent years. TAGs provide a structured platform for educators to collaborate, exchange personal experiences, and partake in reflective dialogue (Lipscombe et al., 2020). The nature of TAGs, which emphasizes cooperative learning and peer support, may align more closely with the preferences and strengths of female teachers, as suggested by some studies (Hargreaves, 2019), but it is essential to explore how this format resonates with male teachers and identify ways to enhance its inclusivity and effectiveness for all genders. Empirical data uphold the argument that such collaborative endeavors amplify pedagogical learning and positively mold instructional practices (Darling-Hammond et al., 2020). Through engagement in collaborative activities, teachers can expand their repertoire of teaching techniques, incorporate new viewpoints, and hone their instructional approaches based on collective knowledge and experiences (Darling-Hammond & Bransford, 2007).

There are several elements that play a crucial role in making PD programs work well. Experts in the field stress the importance of keeping teachers engaged over time, providing opportunities for active participation in their learning, and ensuring that the content of PD programs meets the unique needs and goals of the educators involved. Additionally, having support and follow-up mechanisms in place is essential for helping teachers apply what they have learned directly to their teaching practice. The availability of sufficient resources, enough time, and strong backing from their institutions are also key factors that determine whether PD efforts can thrive and continue making a difference (Desimone, 2002; Ottenbreit-Leftwich et al., 2010; Putnam & Borko, 2000).

Research has shown a clear link between teachers engaging in high-quality PD programs and boosts in student performance (Baker et al., 2018). When PD is effective, it leads to students being more involved in their learning, creates better classroom atmospheres, and sees teachers using proven teaching methods that directly benefit students' academic success (Nishimura, 2014).

How do TAGs Distinguish Themselves from Other Forms of Collaborative PD Activities?

TAGs, characterized as a specific category of collaborative PD platforms, are anticipated to stimulate cooperative learning and problem-solving among teachers (Lipscombe et al., 2020). By engendering a supportive environment and endorsing professional progression, TAGs empower teachers, thereby enhancing self-efficacy and motivation (Bray-Clark & Bates, 2003). Their effectiveness is contingent on trust, respect, transparent communication, and alignment with teachers' professional necessities. Despite hurdles such as limited time and onerous workloads, the incorporation of TAGs into existing PD structures, assurance of resource provision, and synchronization with teacher timetables can boost their effectiveness.

In addition, TAGs represent an inventive embodiment of collaborative PD, deviating from traditional models in multiple significant aspects. Initially, TAGs create a dynamic setting where everyone gets involved and exchanges ideas, moving away from the traditional top-down approach of professional development (Dickson et al., 2021). This approach is grounded in the collective pooling of knowledge and hands-on experiences,

enabling a deeper understanding that teachers can directly apply in their classrooms. Additionally, the formation of TAGs is usually driven by the urgent need to address real-life issues educators face. This direct relevance to their daily challenges makes the professional development more practical and immediately beneficial, surpassing the often abstract concepts covered in conventional training programs (Njenga, 2023). Thirdly, TAGs underscore the concept of autonomous learning, empowering educators to shape their learning pathways. Thus, it challenges the uniform approach commonplace in traditional PD (Waitoller & Artiles, 2013). Fourthly, the power of TAGs is invariably tied to the nurturing of a supportive community of practice, underpinned by trust. The synergy within these communities stimulates comprehensive engagement in PD activities (Bond & Lockee, 2018), a phenomenon infrequently observed in alternative PD paradigms. Fifthly, TAGs entail a continuous commitment over a prolonged period, facilitating a cyclic process of learning, implementation, reflection, and refinement (Saint-Onge & Wallace, 2012). This iterative progression is a vital avenue for sustained professional growth, often lacking in intermittent PD workshops or courses. Sixthly, TAGs are organically formed within specific institutional or district contexts, ensuring PD activities are finely tuned to local needs, objectives, and resources (Vangrieken et al., 2017). This context-specific alignment frequently evades other PD forms designed and delivered by external bodies.

Bringing native English speakers on board as mentors in the TAGs approach adds a fresh layer to this teaching strategy. These individuals double up as both guides and a source of knowledge, shedding light on the intricate details of English teaching that enrich the educational experience significantly (Richards & Rodgers, 2014). Their involvement goes a long way in creating a real-world feel to the language learning environment, making it possible for teachers to dive deep into cultural nuances and broaden their understanding on a global scale (Truong & Murray, 2020). These facilitators stand out by explaining the practicalities and cultural intricacies of English, something that is often missed in regular professional development sessions (Prabjandee, 2020). More than just teaching, they act as mentors, fostering a supportive and dynamic learning space. This encourages teachers to rethink, question, and play with new teaching ideas (Mann & Walsh, 2017). This mutual engagement within TAGs deeply enriches the professional journey of teachers and enhances the collaborative nature of the learning process. As a result, TAGs offer a refreshing alternative to traditional professional development routes, steering clear of their common drawbacks.

Five-Level Evaluation of the Effectiveness of PD Activities

Assessment serves as a crucial constituent of efficacious PD endeavors, vital in determining the impact and effectiveness of such initiatives. Guskey (2000) devised a comprehensive five-tier evaluation model that introduces a comprehensive strategy to assess the outcomes and efficacy of PD activities. This literature review scrutinizes extant research and theoretical perspectives on Guskey's (2000) quintuple-tiered evaluation model and its application in assessing the effectiveness of PD initiatives.

Level 1: Participants' Reactions

The initial tier of the model concentrates on the participants' responses to PD activities. Empirical studies highlight the significance of soliciting feedback from participants to

assess their satisfaction, engagement, and perceptions of the program (Main & Pendergast, 2015). Evidence implies that positive reactions, such as strong engagement, interest, and perceived value, are integral to efficacious PD outcomes (Bragg et al., 2021). Evaluating participants' reactions aids in identifying areas for enhancement, tailoring subsequent programs to participant requirements, and ensuring sustained engagement and motivation (De Vries et al., 2014).

Level 2: Participants' Learning

At the second tier, we dive into what the participants actually take away from the PD sessions. It is all about measuring how much new knowledge, skills, and tactics they have picked up. Research suggests that for PD to truly hit the mark, it needs to spark deep, impactful learning and offer teachers chances to get hands-on, engage in significant activities, and collaborate with others (Hord & Tobia, 2015). When we look at how successful this stage is, we are checking to see if the folks involved have really grasped the material, can show they have mastered it, and are able to apply what they have learned in real-world scenarios (Guskey, 2000).

Level 3: Organization Support and Change

At the model's third level, the emphasis is on how PD activities impact the organization and the support it provides to participants. For PD to be truly effective, it requires the backing of the organization, including resources and alignment with the organization's goals and priorities (Bryk, 2010). Research indicates that support from the organization plays a critical role in how new practices are adopted and maintained over time (Gao, 2022; Zhou et al., 2022). To evaluate this aspect, it is necessary to look at the degree of support, resources, and collaborative opportunities the organization provides, and how well the PD activities fit within the larger framework of the organization's mission and context (Guskey, 2000).

Level 4: Participants' Use of New Knowledge and Skills

The fourth level scrutinizes the extent to which participants apply and integrate their recently acquired knowledge and skills into their pedagogical practices. Literature suggests that efficacious PD activities should stimulate ongoing reflection, provide opportunities for practice, and offer support for implementation (Darling-Hammond & McLaughlin, 1995). Evaluating the application and utilization of newfound knowledge and skills helps determine the impact of PD on instructional practices and student outcomes (Earley & Porritt, 2014).

Level 5: Student Learning Outcomes

The concluding tier of the model centers on the ultimate goal of PD activities: the enhancement of student learning outcomes. Empirical evidence indicates that high-quality PD has a positive impact on student achievement, engagement, and attitudes towards learning (Shagrir, 2011). Evaluation at this level involves assessing changes in student performance, engagement, and other relevant outcome measures to ascertain the efficacy of PD in enhancing student learning (Guskey, 2000).

At its core, the five-level evaluation model is like a multi-tool for assessing PD programs. It is like taking a journey through different stages - starting with how

participants react to the program, diving into what they learn, checking if the organization supports them, seeing how they use what they have learned, and finally, looking at the impact on student learning. This approach is like having a Swiss Army knife for understanding PD programs; it helps us see not just one aspect but the full picture. When we apply this Swiss Army knife to TAGs, it is like zooming in on a specific part of the map. We get to ask: How do teachers feel about these sessions? What new insights or skills are they gaining? Are they getting the support they need to apply these new ideas? And most importantly, how is this affecting their teaching and their students' learning? This model, introduced by Guskey (2000), is not just a fancy academic theory. It is a practical tool that helps us figure out if TAGs are really hitting the mark. Are teachers walking away satisfied and ready to try new things in the classroom? Are they feeling supported and seeing the value in their professional growth? By taking a closer look with this model, we can understand the real impact of TAGs on teaching practices, pinpointing exactly where they shine and where they might need a bit more polish. In the end, using this evaluation framework is not just about ticking boxes. It is about making sure that PD activities, like TAGs, are genuinely helping teachers grow, leading to better teaching and, ultimately, better learning for students. It is a way to make sure we are not just going through the motions, but really making a difference in the educational landscape.

Theoretical Frameworks

Our study is built on a foundation of three key ideas that help us understand how people learn and grow together, especially when it comes to teaching adults and considering the roles of gender in education. First up, we lean on what is known as Adult Learning Theory, thanks to the insights from Zepeda et al. (2014). This idea gets into the heart of adult learners, who often like to steer their own learning ship, using their life experiences as a map. It is a cool way of seeing how teachers, as adults, might thrive when they get to call some of the shots in their learning, especially in a setup like TAGs. This theory is like a window into why TAGs could be really clicking with teachers. It suggests that when teachers get to learn in a way that feels natural to them—driven by their curiosity and past experiences—they are likely to be more satisfied and get more out of these PD sessions. It is about tapping into what makes adult learners tick, recognizing that they are not just empty vessels waiting to be filled with knowledge but active participants who bring a lot to the table. This perspective is super helpful for us as we dive into understanding how TAGs might be making a positive impact on teachers' professional lives.

CoP theory, posited by Mak and Pun (2015), is the second integral component of the theoretical framework. CoP theory underscores learning as a social phenomenon, propelled by the interaction, collaboration, and knowledge exchange within a community sharing a common interest or practice. This theory is particularly pertinent to understanding the communal and collaborative nature of TAGs. It provides a theoretical grounding for examining how the collective engagement within TAGs could cultivate a supportive environment, fostering knowledge exchange and collaborative problem-solving. In this respect, it potentially influences teachers' satisfaction and professional growth.

To examine the role of gender in shaping teachers' satisfaction with TAGs, the Gender and Education Theory is integrated into the theoretical framework. Rooted in the broader field of Gender Studies, this theory postulates that gender can significantly influence educational experiences and outcomes (Kailin, 1994). It acknowledges the existence of gender-related disparities in various aspects of education including PD experiences and outcomes. Consequently, it provides a theoretical underpinning to analyze potential gender-based disparities in the perceptions and experiences of Vietnamese K-12 teachers participating in TAGs. The Gender and Education Theory aligns with the inquiry's objective to understand how gender may influence teachers' satisfaction with TAGs. By incorporating this theory into the theoretical framework, this study aims to shed light on potential differences in how male and female teachers perceive, experience, and benefit from their participation in TAGs.

METHOD

Research Design

This quantitative research design was employed to investigate the research questions derived from the theoretical perspectives presented in the Literature Review section systematically. Through the utilization of a questionnaire as the primary instrument for data collection, this study gathered quantifiable data from the participant group. This approach facilitates a rigorous statistical analysis to discern potential gender-based differences in teachers' satisfaction with TAGs and their perceived impact on PD.

Participants

Participants for this study were identified and recruited through a purposive sampling strategy. Initially, schools across Vietnam were contacted through email or phone, wherein the principal investigators explained the purpose and scope of the study. A comprehensive list of K-12 teachers, who were currently participating or had previously participated in TAGs, was sought from these institutions. Following this, an invitation email detailing the nature of the study, its objectives, the researchers' affiliations, and the voluntary nature of participation was dispatched to all potential participants. Also, a detailed explanation of the research process, data handling, ethical considerations, and confidentiality measures was provided. Respondents who expressed interest in participation were then formally recruited for the study. In compliance with ethical considerations, written informed consent was obtained from all participants before commencing the data collection process. The consent form explicitly clarified participants' rights, such as the right to withdraw from the study at any stage without penalty, anonymity, confidentiality, and the intended use of the data. Assurance was provided that all responses would be anonymized, and individual identifiers would not be linked with the data in any ensuing publications or presentations. During the recruitment process, particular attention was given to ensure a balanced gender representation. Although the proportion of female teachers was larger ($n=108$) than male teachers ($n=39$), this ratio is reflective of the gender distribution within the teaching profession in Vietnam. Besides, the ratio between males and females in the study does not preclude a meaningful comparison of outcomes, thanks to the robust statistical methods employed, including the Independent Sample t-test and effect size analysis, alongside the normal distribution of the data (See the Data Analysis section).

Data Collection Instrument

The instrument used for this study aimed to discern the satisfaction of Vietnamese K-12 teachers in the context of the influence of TAGs on their PD. The questionnaire, consisting of 21 distinct items, was meticulously designed to gauge the respondents' satisfaction in accordance with the quintuple-tiered evaluation framework propounded by Guskey (2000) pertaining to PD activities. Participants were requested to denote their satisfaction on a 5-point Likert scale, with "1 - Strongly Unsatisfactory" indicating the least satisfaction and "5 - Strongly Satisfactory" indicating the highest.

A plethora of measures were initiated to ensure the validity and reliability of the questionnaire. It was conceived subsequent to a comprehensive exploration of scholarly literature encompassing the domains of PD, TAGs, and Guskey's (2000) evaluative framework. The constituents of the questionnaire were diligently structured to resonate with the constructs under scrutiny, thereby bolstering content validity. Moreover, the questionnaire was subjected to critical review by two experts within the realm of education and PD, to affirm the pertinence and appropriateness of the items. Prior to formal dissemination, the questionnaire was piloted with a representative sample of 30 teachers, soliciting their feedback regarding the instructions, language, and overall design of the questionnaire, leading to necessary refinements to enhance comprehension and clarity. The instrument's reliability was verified by computing its internal consistency through the calculation of Cronbach's alpha coefficient ($\alpha=.82$), providing evidence of the item consistency. This reliability analysis was executed utilizing SPSS version 20.0 to ensure the items within the questionnaire provided reliable metrics of the constructs under examination.

The ethical guidelines were adhered to scrupulously throughout the questionnaire design and data collection process. Participants' informed consent was obtained, and stringent measures were instituted to safeguard their anonymity and confidentiality. The objectives of the study, the voluntary nature of participation, and data protection measures were explicated transparently to the participants. These methodical approaches reinforced the validity and reliability of the questionnaire, thereby ensuring its efficacy in ascertaining participants' satisfaction levels with the TAGs program and its perceived influence on their PD.

Data Analysis

The assembled data deriving from the questionnaire was subject to a comprehensive descriptive statistical analysis. It aimed at summarizing, interpreting, and visually representing the distribution and central tendency of participant responses. This included the calculation of measures of central tendency (Mean), dispersion (Standard Deviation), and frequency distributions for all items on the questionnaire. These measures provided a generalized understanding of the data and allowed for easy interpretation of the complex data set. The distribution of the data was tested for normality using the Shapiro-Wilk test, a standard test for evaluating the normality of a data distribution. The results revealed a W statistic of 0.98, which indicates a reasonable fit to a normal distribution. The p-value was determined to be 0.15, which is greater than the conventional 0.05 threshold, informing that the data followed a normal distribution. In order to discern any significant differences in the responses provided by

male and female teachers, Independent Sample t-tests were executed. This inferential statistical test was utilized to ascertain whether there was a statistically significant discrepancy between the means of two independent groups, in this case, male and female teachers. In terms of determining the practical significance of these differences, effect size analyses were conducted using Cohen's d. A threshold of statistical significance was predetermined at $p < .05$, in accordance with Cohen's (2013) guidelines. Effect sizes were then interpreted following Cohen's (2013) benchmarks: a d-value ranging from 0.2 to 0.5 was considered indicative of a small effect size, from 0.5 to 0.8 indicated a medium effect size, from 0.8 to 1.2, a large effect size, and if the d-value surpassed 1.2, the effect size was deemed very large. Understanding effect sizes helps gauge how significant the observed differences are, providing insight into the real-world relevance of the results, without getting swayed by how large or small the sample size is. By blending both descriptive and inferential statistical methods, and taking effect sizes into account, we have managed to get a detailed and subtle grasp of the data at hand. This approach boosts both the credibility and dependability of our conclusions, making it possible to apply these insights across comparable educational settings with confidence.

FINDINGS

The results of the Independent Sample T-test conducted on the questionnaire to compare male and female participants' satisfaction with the TAGs program are presented in Table 1.

Table 1
Gender effects on K12 teachers' satisfaction with TAGs

Measuring Aspects	Gender	N	Mean	SD	SEM	p	d
Program's interesting	Male	39	4.13	.80	.13	.82	X
	Female	108	4.09	.82	.08		
Reasonableness of training course duration	Male	39	3.56	.72	.12	.21	X
	Female	108	3.75	.81	.08		
Value of training course materials	Male	39	3.72	.83	.13	.26	X
	Female	108	3.90	.86	.08		
Future usefulness of training course	Male	39	3.82	.76	.12	.07	X
	Female	108	4.07	.75	.07		
Trainers' knowledge	Male	39	4.23	.90	.14	.14	X
	Female	108	4.44	.66	.06		
Level 1 - Participants' Reactions	Male	39	3.89	.65	.10	.19	X
	Female	108	4.05	.64	.06		
Knowledge acquisition	Male	39	3.74	.85	.14	.05	.37
	Female	108	4.04	.78	.08		
Skills acquisition	Male	39	3.64	.84	.14	.02	.41
	Female	108	3.97	.76	.07		
Impact on organizing future professional development events	Male	39	3.56	.97	.16	.10	X
	Female	108	3.83	.85	.08		
Level 2 - Participants' Learning	Male	39	3.65	.81	.13	.04	.38
	Female	108	3.95	.74	.07		
School support	Male	39	3.82	.85	.14	.03	.41
	Female	108	4.15	.76	.07		
Recognition of trainees	Male	39	3.49	.94	.15	.17	X
	Female	108	3.72	.91	.09		

Issue resolution	Male	39	3.74	.94	.15	.01	.62
	Female	108	4.19	.60	.06		
Adequacy of course materials	Male	39	3.69	.77	.12	.79	X
	Female	108	3.73	.80	.08		
Recognition of outstanding teachers	Male	39	3.49	.91	.15	.16	X
	Female	108	3.71	.82	.08		
Level 3 - Organization Support and Change	Male	39	3.65	.69	.11	.03	.40
	Female	108	3.90	.57	.06		
Acquisition of new and useful knowledge	Male	39	3.69	.69	.11	.11	X
	Female	108	3.93	.79	.08		
Gain of teaching effectiveness improvement skills	Male	39	3.69	.69	.11	.11	X
	Female	108	3.91	.72	.07		
Impact on students' learning outcomes	Male	39	3.77	.71	.11	.26	X
	Female	108	3.93	.76	.07		
Students' performance improvement	Male	39	3.69	.73	.12	.10	X
	Female	108	3.92	.73	.07		
Level 4 - Participants' Use of New Knowledge and Skills	Male	39	3.71	.65	.10	.10	X
	Female	108	3.92	.69	.07		
Positive impact on students' physical and mental well-being	Male	39	3.64	.81	.13	.17	X
	Female	108	3.85	.81	.08		
Boost in learners' self-confidence	Male	39	3.69	.69	.11	.11	X
	Female	108	3.92	.75	.07		
Increase in class attendance	Male	39	3.54	.88	.14	.26	X
	Female	108	3.71	.81	.08		
Reduction in student dropout rate	Male	39	3.44	.75	.12	.28	X
	Female	108	3.60	.83	.08		
Level 5 - Student Learning Outcomes	Male	39	3.58	.72	.12	.15	X
	Female	108	3.77	.71	.07		
Overall	Male	39	3.70	.64	.10	.05	.36
	Female	108	3.92	.57	.06		

The findings reveal a nuanced disparity in satisfaction levels between female and male participants towards the TAGs program, with females generally exhibiting higher satisfaction ($M_{\text{female}}=3.92$) compared to males ($M_{\text{male}}=3.70$). The statistical significance was set at $p=.05$, suggesting that this difference in satisfaction levels was statistically significant, albeit accompanied by a small effect size as indicated by Cohen's d value ($d=.36$).

Examining specific aspects, participant satisfaction at level 2 ($M_{\text{male}}=3.65$; $M_{\text{female}}=3.95$; $p=.04$) and level 3 ($M_{\text{male}}=3.65$; $M_{\text{female}}=3.90$; $p=.03$) exhibited variance, as revealed by small effect sizes ($d=.38$ and $d=.40$, respectively). At levels 1, 4, and 5, however, no statistically significant disparity was detected between male and female teachers' perceived satisfaction, indicated by p -values greater than .05.

When delving deeper into level 2, apart from the impact on organizing future PD events ($p>.05$), a significant difference was detected in how male and female teachers perceived the remaining two constructs. More specifically, females reported higher levels of satisfaction in relation to knowledge acquisition ($M_{\text{male}}=3.74$; $M_{\text{female}}=4.04$; $p=.05$) and skills acquisition ($M_{\text{male}}=3.64$; $M_{\text{female}}=3.97$; $p=.02$), with these disparities demonstrating small effect sizes ($d=.37$ and $d=.41$, respectively).

At level 3, a significant difference was observed in teachers' satisfaction concerning school support ($M_{\text{male}}=3.82$; $M_{\text{female}}=4.15$; $p=.03$) and issue resolution

($M_{\text{male}}=3.74$; $M_{\text{female}}=4.19$; $p=.01$). The Cohen's d value for school support ($d=.41$) indicated a small effect size, while for issue resolution ($d=.62$), it signified a medium effect size.

In essence, while male and female teachers exhibited varied satisfaction levels towards the TAGs program and its different facets, including knowledge acquisition, skills acquisition, and school support, these differences were predominantly small. The presence of a medium effect size in only one area (issue resolution) further underscores the complexity and non-uniformity of the findings. A medium effect size was only observed for issue resolution.

DISCUSSIONS

The observed differences in satisfaction levels between male and female teachers regarding the TAGs program underscore the importance of considering gender as a relevant factor in PD studies. While these results resonate with previous research that has identified gender-based disparities in various areas of education (Fernández Puente & Sánchez-Sánchez, 2021), the nuances presented by this study deepen our understanding of how gender may impact the perceived impact and satisfaction of PD activities.

In discussing the influence of gender on TAGs satisfaction, it is imperative to delve into how each level of satisfaction in the questionnaire differs between male and female teachers. Regarding knowledge acquisition and skills acquisition, the results demonstrate that female teachers had a slightly higher degree of satisfaction compared to their male counterparts. This supports previous findings by Ehrich et al. (2004), who observed a higher degree of enthusiasm and engagement among female teachers participating in a mentorship program, potentially leading to increased satisfaction with their learning outcomes.

Furthermore, this disparity in satisfaction levels can be attributed to the different learning and interaction styles that are generally prevalent among male and female teachers. The fact that the observed effect size was small suggests that while the difference is statistically significant, it may not be substantial in practical terms. A similar conclusion was reached by Martin and Marsh (2005) in their study of gender differences in mathematics and science, where they found small effect sizes but significant gender differences. They suggested that these findings are indicative of a broad pattern rather than large, systemic differences.

In explaining the relationship between each aspect of satisfaction and gender in K-12 teachers, we must consider the intrinsic character and professional needs of both male and female teachers. As for the medium effect size identified for issue resolution, it indicates a more substantial difference in how male and female teachers perceive the success of issue resolution in the TAGs program. This could be due to the traditionally different approaches to problem-solving and conflict resolution observed between the genders, with women potentially seeking more comprehensive and communicative resolutions (Aylor, 2003). While research directly addressing this aspect is limited, studies in organizational behavior and leadership suggest that females may have higher

expectations for resolution strategies and support systems (Eagly & Carli, 2003), which may explain the observed disparity.

However, the results of the study were not in line with the previous literature, such as the study conducted by Gorozidis and Papaioannou (2014), which did not address any significant gender-based differences in teachers' self-reported attitudes towards PD. Such discrepancies may be attributed to the specific context of the present study, that is, the TAGs program, and its unique characteristics compared to other PD activities. This highlights the need for TAGs to be tailored to suit the characters of both male and female teachers, ensuring the success of TAGs not only for female teachers but also for male teachers in the professional development process.

To achieve this, TAGs should incorporate diverse teaching and learning strategies that cater to the varied preferences of both genders. For instance, integrating more competitive and task-oriented activities could potentially enhance male teachers' engagement and satisfaction, while maintaining collaborative and reflective components that appeal to female teachers. The study conducted by Gorozidis and Papaioannou (2014) took place in Greece, a context where gender differences are typically less emphasized or prioritized, resulting in no significant gender-based differences in teachers' attitudes towards PD (Gorozidis & Papaioannou, 2014). This contrasts with the current study, conducted in the context of Vietnam with more traditionally defined gender norms and roles, where gender differences appeared more pronounced. Therefore, understanding the cultural context and gender dynamics is crucial for designing effective PD programs like TAGs that are inclusive and beneficial for all teachers.

Further, the unique structure of the TAGs program seemed to contribute to divergent experiences for male and female teachers. The TAGs program emphasized substantial group work and collaboration, facets of PD which are often more appealing to female teachers. Women are often socialized to be more cooperative, and past research supports the assertion that women in educational settings are generally more inclined to share ideas and engage in collaborative work (Balliet et al., 2011). This may explain why female teachers reported higher levels of satisfaction with the TAGs program in comparison to their male counterparts.

CONCLUSION

This study, focusing on the TAGs program in Vietnam, sought to explore the influence of gender on teacher satisfaction. While the primary findings centered on gender-based satisfaction levels, the study's implications extend beyond mere satisfaction metrics, addressing broader concerns of the PD process through TAGs. Despite females generally exhibiting a higher degree of satisfaction, the study's significance lies in its nuanced approach to understanding how this satisfaction translates into the overall effectiveness of the PD process. The small to medium effect sizes, while indicating statistical significance, also suggest that both genders derive substantial benefit from their participation in TAGs. This is crucial, as it implies that while there are differences in the degrees of satisfaction, the overall positive impact of TAGs on PD is experienced by both male and female teachers.

It is essential to emphasize that the study's examination of satisfaction levels serves as a proxy for evaluating the impact perceived in the PD process. Satisfaction is a critical indicator of a program's effectiveness and can influence long-term engagement and the eventual success of PD initiatives. In the case of TAGs, higher satisfaction levels among female teachers in areas like knowledge acquisition and skills acquisition suggest that these components of the PD process are particularly effective. For male teachers, the data indicates a favorable reception, though slightly less pronounced, which still points to the overall positive impact of TAGs.

Moreover, the study's findings on the medium effect size in issue resolution among female teachers underscore the importance of tailoring PD programs to address specific needs and preferences of different genders. This insight is pivotal for developing future TAGs iterations that are more inclusive and effective for both genders, potentially leading to a more balanced satisfaction level and, by extension, a more equitable PD experience.

In conclusion, while the study primarily presents data on satisfaction levels, these findings are integral to understanding the overall impact of TAGs in the PD process. They provide a starting point for deeper explorations into how different aspects of TAGs influence teacher development, and how these programs can be refined to better serve the diverse needs of male and female teachers. The results contribute to a broader conversation about gender dynamics in education and professional development, offering valuable insights for policymakers and educators aiming to enhance PD programs like TAGs in Vietnam and beyond. This research marks an important step in acknowledging and addressing gender differences in PD, paving the way for more nuanced and effective educational strategies.

IMPLICATIONS

Implications for Teachers

The observed variations in satisfaction among male and female teachers underscore the need for teachers to actively participate in shaping their PD experiences. Teachers should advocate for their unique needs and preferences within PD initiatives like TAGs to maximize their benefit and satisfaction from such programs. The distinct satisfaction levels found in this study could indicate differing needs or expectations between male and female teachers, suggesting that a one-size-fits-all approach to PD may not be ideal in the Vietnamese contexts as well as in other countries. Teachers could leverage this information to request more personalized or gender-responsive PD opportunities that cater to their specific needs.

Implications for Policymakers

The findings of this study could also have important implications for policymakers, specifically those responsible for designing and implementing PD programs. The differences in satisfaction levels based on gender found in this study could inform policy decisions around the design and implementation of PD programs. Policymakers could consider incorporating gender-responsive strategies into PD initiatives to cater to the distinct needs and expectations of male and female teachers. Policymakers could

also explore strategies for equalizing satisfaction levels, such as providing additional support for male teachers in areas where they reported lower satisfaction. Further, in light of the small to medium effect sizes observed in this study, policymakers should also ensure that efforts to address gender disparities in PD satisfaction do not inadvertently reinforce gender stereotypes or bias.

Implications for School Leaders and Administrators

The findings of this study also have implications for other stakeholders, such as school leaders and administrators. Understanding the different satisfaction levels among male and female teachers could help administrators shape more effective PD programs at the school level. This could include offering a variety of PD opportunities to cater to diverse needs and preferences, or facilitating discussions around gender and PD to encourage more open dialogue among teachers. PD providers could also benefit from this research, using these findings to better tailor their offerings to meet the diverse needs of male and female teachers. By ensuring their programs are responsive to the varying satisfaction levels and needs of teachers based on gender, these providers could enhance the effectiveness of their programs and their overall contribution to teacher PD.

Limitations and Recommendations

While this study provides valuable insights into the influence of gender on teachers' satisfaction with PD through TAGs, it is not without limitations. First, the scope of the study was limited to Vietnamese K-12 teachers who have participated in TAGs, potentially limiting the generalizability of the findings to other contexts and educational levels. Second, while the study sought to maintain a balanced gender representation, the number of female participants was significantly larger than male participants, which could have influenced the results. Furthermore, the study used a quantitative approach, which, although beneficial in terms of statistical analysis, might not fully capture the complexities and nuances of teacher satisfaction. The study's reliance on self-reported data could also introduce bias, as participants might provide socially desirable responses or interpret questionnaire items differently. Finally, the study did not control for potential confounding factors, such as teaching experience, subject taught, or cultural factors, which might influence teachers' satisfaction with PD.

Future studies could aim to address these limitations to provide a more comprehensive understanding of gender disparities in teacher satisfaction with PD. Firstly, similar research could be conducted in different geographical and educational contexts to explore the generalizability of the findings. The gender balance in future studies could be improved, potentially by oversampling male teachers or by stratified sampling methods. Researchers could also consider employing mixed-methods or qualitative approaches to supplement the quantitative findings and provide a more nuanced understanding of teacher satisfaction. This could involve conducting interviews or focus groups to delve deeper into teachers' experiences and perceptions. Future research could also control for potential confounding factors to isolate the effects of gender on satisfaction. Finally, longitudinal studies could be conducted to explore how gender disparities in satisfaction change over time or in response to different PD initiatives, TAGs in particular. These recommendations, if implemented, could significantly

contribute to the understanding of gender dynamics in teacher PD and inform efforts to enhance teacher satisfaction and effectiveness.

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