Analysis of The Professional Development Program of General Foundation Course Teachers In Higher Vocational Colleges in China:Basis for The Teacher Professional Development Framework

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Abstract: Higher vocational education in China plays a vital role in national economic development by preparing a skilled workforce. General Foundation Courses (GFC) are crucial in this system, providing essential skills in mathematics, language, and basic sciences, yet they often receive less attention and fewer resources compared to specialized courses. This disparity leads to outdated teaching methods and insufficient professional development for GFC teachers. Professional Development Programs (PDPs) aim to address these issues, but their effectiveness needs thorough evaluation. This study assesses the current state of PDPs for GFC teachers in China's higher vocational colleges, identifying challenges and proposing a comprehensive framework for improvement. Using qualitative research methods, including semi-structured interviews with 12 GFC teachers and document analysis, the study highlights the importance of institutional support, relevance of training programs, and continuous professional development. Findings suggest that increased resources, customized PDPs, and ongoing professional growth opportunities are crucial for enhancing teaching practices and student outcomes. The study's implications underscore the need for policymakers and educational administrators to prioritize resource allocation, design tailored PDPs, and promote continuous learning to improve the quality of vocational education and contribute valuable insights to the literature on teacher professional development.

Keywords: Professional Development Programs, General Foundation Course Teachers, Higher Vocational Colleges, Teacher Professional Development Framework, Vocational Education

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Introduction

1.1 Background and Context

Higher vocational education in China has experienced rapid growth and transformation over the past few decades, playing a crucial role in the nation's economic development and workforce preparation. These institutions primarily focus on equipping students with practical skills and specialized knowledge to meet the demands of various industries. Within this educational landscape, General Foundation Courses (GFC) are integral as they provide essential skills in areas such as mathematics, language, and basic sciences, forming the bedrock upon which specialized vocational training is built. Despite their importance, General Foundation Courses in higher vocational colleges have historically received less attention compared to specialized courses. This disparity has led to a range of challenges, including insufficient resource allocation, outdated teaching methods, and a lack of professional development opportunities for GFC teachers. These issues can hinder the overall quality of education, limiting students' foundational knowledge and their ability to excel in specialized vocational training.

Professional Development Programs (PDPs) are designed to address these challenges by enhancing the skills and knowledge of teachers. PDPs aim to keep educators updated with the latest pedagogical techniques, integrate modern technology into the classroom, and foster a collaborative environment for continuous professional growth. However, the implementation and effectiveness of PDPs for GFC teachers in higher vocational colleges in China require thorough investigation to ensure these programs are meeting their intended goals.

1.2 Significance of the Study

The significance of this study lies in its potential to illuminate the current state of professional development for General Foundation Course (GFC) teachers in China's higher vocational colleges. The findings are expected to have several important implications: enhancing teaching quality by understanding the specific needs and challenges faced by GFC teachers, which can inform the design of more effective Professional Development Programs (PDPs); aiding policymakers and educational institutions in developing targeted strategies and policies that support the professional growth of GFC teachers, ensuring these courses receive adequate attention and resources; improving student learning by providing teachers with enhanced teaching methods and updated knowledge, contributing to a more engaging and effective learning

environment; and filling a gap in the existing literature on teacher professional development in vocational education settings, particularly in China, by providing empirical evidence and practical recommendations for researchers, educators, and policymakers globally.

1.3 Objectives of the Research

The primary objectives of this research are to analyze the current state of Professional Development Programs (PDPs) for General Foundation Course (GFC) teachers in higher vocational colleges in China and to develop a comprehensive framework for teacher professional development. Specifically, the research aims to evaluate the effectiveness of existing PDPs in meeting the needs of GFC teachers, including the acquisition of new teaching methods, strategies, and competition techniques; identify the main challenges and opportunities in GFC teachers' professional development, such as insufficient support, outdated teaching methods, and students' weak foundational knowledge, as well as the opportunities PDPs present for overcoming these challenges; understand the impact of PDPs on teaching practices, including changes in teaching methods, collaboration with colleagues, and the integration of new technologies and pedagogical strategies; and develop a comprehensive framework for GFC teachers' professional development that addresses identified challenges and leverages opportunities, ensuring continuous improvement in teaching quality and student learning outcomes.

I. **Literature Review**

Overview of General Foundation Courses in Higher Vocational Colleges

General Foundation Courses (GFC) in higher vocational colleges in China form the essential educational groundwork that supports specialized vocational training. These courses encompass fundamental subjects such as mathematics, language, science, and general knowledge, which are crucial for students' overall intellectual development and their future vocational education. GFCs are designed to cultivate students' basic skills, critical thinking abilities, and general knowledge, thus preparing them for more advanced and specialized vocational training.

Despite their importance, GFCs often suffer from a lack of attention and resources compared to specialized courses. Liu [1] emphasizes the value and function of GFCs, arguing that these courses are pivotal for students' holistic development and the enhancement of their employability. However, the teaching methods and curriculum design for GFCs often lag behind those of specialized courses, necessitating significant improvements to meet contemporary educational standards [2].

Importance of Professional Development Programs for Teachers

Professional Development Programs (PDPs) are critical for enhancing the skills, knowledge, and effectiveness of teachers. These programs are especially important for GFC teachers in higher vocational colleges, who face unique challenges due to the foundational nature of their courses and the diverse student populations they serve. Effective PDPs can help teachers stay abreast of the latest pedagogical strategies, integrate technology into their teaching, and collaborate with colleagues to share best practices.

Costa et al. [3] highlight the importance of PDPs in STEM education, demonstrating how real-world scenarios can enhance teacher competence. This approach is equally relevant for GFC teachers, who can benefit from practical training that directly impacts their teaching effectiveness. Macaro, Akincioglu, and Han (2020) further illustrate the significance of professional development in higher education, noting that well-designed PDPs can lead to improved teaching quality and student outcomes.

The professional development of GFC teachers is essential for several reasons. Firstly, it ensures that teachers are equipped with the latest teaching methods and technologies, which can significantly enhance the learning experience for students. Secondly, ongoing professional development helps teachers address the diverse needs of their students, particularly those with weak foundational knowledge [4]. Lastly, effective PDPs contribute to teachers' job satisfaction and professional growth, fostering a positive and productive educational environment [5].

Existing Frameworks and Models for Teacher Professional Development

Several frameworks and models for teacher professional development have been proposed and implemented worldwide. These models typically emphasize continuous learning, collaboration, and the integration of new teaching methods and technologies.

One widely recognized model is the Professional Learning Community (PLC), which encourages teachers to collaborate, share knowledge, and support each other's professional growth [6]. PLCs create a culture of continuous improvement and reflective practice, which is essential for the effective professional development of teachers.

Another model is the Teacher Competence Inventory, which focuses on future-oriented competencies required in higher education[7]. This model emphasizes the need for teachers to develop skills that are relevant to the evolving educational landscape, including digital literacy, critical thinking, and the ability to facilitate student-centered learning.

Relevance of Social Learning Theory in Professional Development

Social Learning Theory (SLT), developed by Albert Bandura, provides a valuable framework for understanding and enhancing professional development programs for teachers. SLT posits that learning occurs through observation, imitation, and modeling, emphasizing the role of social interactions and the environment in shaping behavior and skills [8].
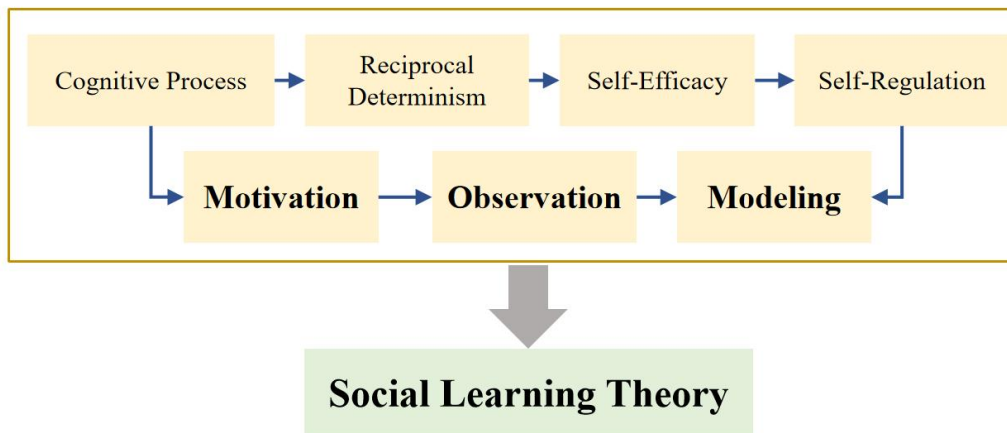
Figure 1 Key Components of Social Learning Theory proposed by A. Bandura

SLT highlights the importance of role models and collaborative learning environments. Teachers can learn new teaching methods and strategies by observing experienced colleagues and participating in collaborative professional development activities. This theory also underscores the significance of self-efficacy, or the belief in one's ability to succeed, which is crucial for teachers' professional growth and effectiveness [9].

Ahn, Hu, and Vega [10] demonstrate the application of SLT in education, showing how role models can positively impact students' outcomes. This principle is equally applicable to teachers, who can benefit from observing and emulating successful teaching practices. Crittenden [11]further explores the role of social learning in cross-functional case education, illustrating how collaborative learning environments can enhance professional competence.

Conceptual Framework

The Framework underlying teacher professional development is following the construct from Social Learning Theory and properly covering the Research Questions aforementioned. Three components of the study, i.e., "Teachers' Interpretation on Objective & Content of PDP", "PDP Influence on General Foundation Course Teachers" and "Challenges & Opportunities in PDP", respectively correspond to the three phases in IPO model discussed above in Figure 2. Following the guidance of these three topics, this thesis will devise an interview outline for qualitative research.
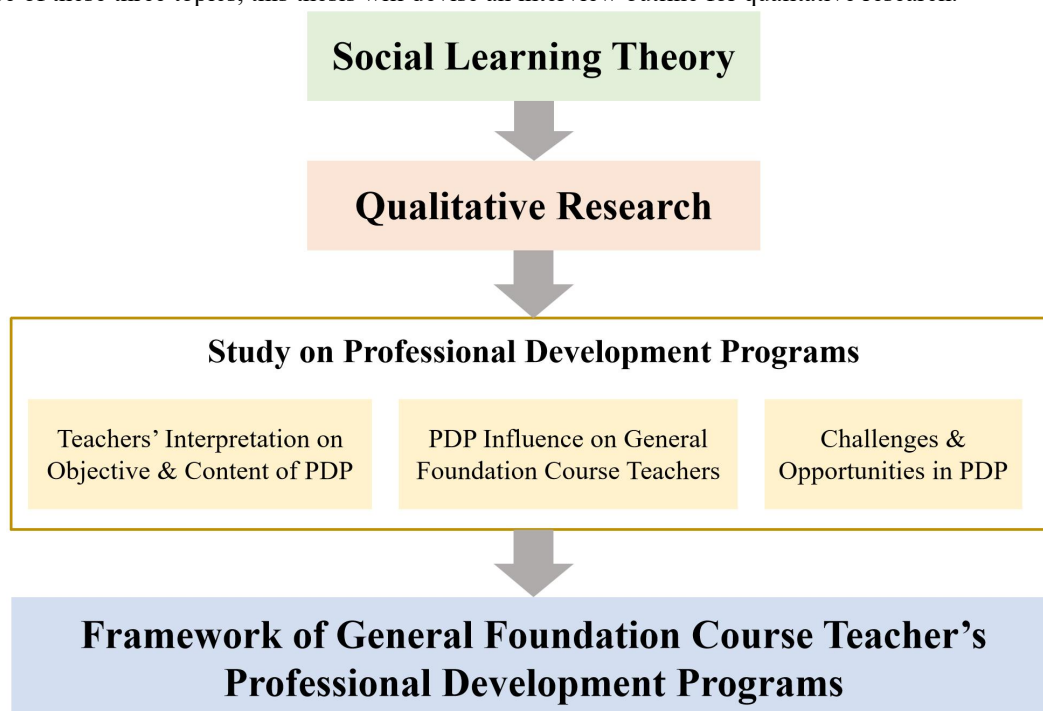

Figure 2 Social Learning Theory supports the framework of Professional Development Programs

Given the conceptual framework, the result of this study can include the following aspects:

- Understanding Teacher Perspectives: The study could reveal how teachers perceive the objectives and content of professional development programs. This could include their expectations, values, and the perceived relevance of the program to their teaching practices.
- Influence Assessment: The research might assess the influence of professional development on teachers' instructional strategies, student engagement, and learning outcomes in general foundation courses. It could identify which aspects of professional development lead to improvements in teaching effectiveness and student performance.
- Challenges Faced: The study could highlight the challenges that teachers encounter during professional development, such as time constraints, resource limitations, or misalignment with their specific needs.
- Opportunities for Growth: It might also uncover opportunities for enhancing professional development programs, such as incorporating more collaborative elements, leveraging technology, or aligning the content more closely with the teachers' current and future needs.
- Strategies for Improvement: The research could provide strategies for overcoming challenges, such as personalized learning paths, ongoing support systems, or feedback mechanisms to continuously improve professional development offerings.

III. Methodology

3.1 Research Design

This study employs a qualitative research design to analyze the Professional Development Programs (PDPs) of General Foundation Course (GFC) teachers in higher vocational colleges in China. The qualitative approach is chosen to provide an in-depth understanding of teachers' experiences, perspectives, and the effectiveness of current PDPs. This method allows for rich, detailed data collection and analysis, facilitating a comprehensive exploration of the nuanced factors influencing teacher development in this context.

The study is structured around semi-structured interviews with GFC teachers, complemented by document analysis of existing PDP frameworks and policies. The semi-structured interview format ensures that core topics are covered while allowing for flexibility to explore emergent themes and issues raised by the participants.

3.2 Sampling Strategy

A purposive sampling strategy is employed to select participants who can provide rich, relevant, and diverse insights into the Professional Development Programs (PDPs). The sample comprises 12 General Foundation Course (GFC) teachers from various higher vocational colleges across China. The selection criteria include varying levels of teaching experience, from novice to veteran educators, to capture a broad spectrum of perspectives; diversity of institutions, ensuring representation from different types of vocational colleges (e.g., urban vs. rural, large vs. small institutions) to reflect the broader educational landscape; and active participation in PDPs, ensuring that selected teachers can provide informed insights into the effectiveness and impact of these programs. The final sample includes a balanced mix of gender, age, and subject specializations within the GFCs, enhancing the representativeness and richness of the data.

3.3 Data Collection Methods

The primary data collection method is semi-structured interviews with the selected General Foundation Course (GFC) teachers. Each interview lasts approximately 60 minutes and is conducted either in person or via video conferencing, depending on the participants' availability and preference. The interview guide, developed based on the research objectives and literature review, covers key topics such as teachers' experiences with current Professional Development Programs (PDPs), perceived strengths and weaknesses of these programs, the impact of PDPs on teaching practices and student outcomes, suggestions for improving PDPs, and the role of institutional support and resources in facilitating professional development. In addition to interviews, the study includes document analysis of PDP frameworks and policies from the selected vocational colleges. This secondary data provides context and supports the triangulation of findings, ensuring a comprehensive understanding of the PDP landscape.

3.4 Data Analysis Techniques

The data analysis process involves several stages, ensuring systematic and rigorous examination of the collected data. The steps include:

(1) Transcription: All interviews are transcribed verbatim to create accurate records of the discussions. This process ensures that the nuances of the participants' responses are captured for detailed analysis.
(2) Coding: The transcribed data is coded using thematic analysis. Initial codes are generated based on the interview guide topics and emergent themes from the data. This step involves multiple readings of the transcripts to identify recurring patterns, concepts, and categories.
(3) Thematic Analysis: The codes are organized into broader themes and sub-themes, providing a structured framework for analyzing the data. Key themes include teachers' experiences with PDPs, the impact of these programs, challenges faced, and recommendations for improvement.
(4) Triangulation: Findings from the interviews are triangulated with the document analysis to ensure consistency and robustness. This step involves comparing the interview data with the documented PDP frameworks and policies to identify convergences and divergences.

(5) Interpretation: The final stage involves interpreting the themes and patterns in the context of the research objectives and theoretical framework. This process includes linking the findings to relevant literature and theoretical concepts, particularly Social Learning Theory, to provide deeper insights and implications for PDPs.

IV. Results

4.1 Analysis of Interview Records with General Foundation Course Teachers

This section delves into the insights gathered from in-depth interviews conducted with 12 General Foundation Course teachers from various higher vocational colleges in China. These interviews aimed to uncover the current state of professional development programs (PDPs) and their impact on teaching practices and educational outcomes.

The interviews revealed a broad spectrum of experiences and perspectives regarding PDPs. Key points discussed included the level of institutional support, the relevance and applicability of training programs, and the perceived effectiveness of these initiatives in enhancing teaching quality and student outcomes.

4.2 Institutional Support and Resource Allocation

A recurring theme in the interviews was the lack of sufficient institutional support and resource allocation for general education courses. Teachers reported that general education often received less attention and fewer resources compared to specialized vocational training courses. This disparity in resource allocation was seen as a significant barrier to effective professional development.

For instance, one teacher remarked, "The focus is always on vocational skills training. General education is sidelined, and we rarely get the funding or support we need for meaningful professional development." This sentiment was echoed by several other interviewees, highlighting a systemic issue that undermines the potential benefits of PDPs.

4.3 Relevance and Applicability of Training Programs

Another critical area discussed was the relevance and applicability of the training programs offered. Teachers expressed a need for PDPs that are tailored to their specific context and challenges. Generic training programs were often deemed insufficient in addressing the unique needs of general education teachers in vocational colleges.

One participant noted, "The training programs we attend are often too broad. They don't address the specific issues we face in vocational colleges. We need more targeted support that is directly applicable to our teaching environment." This highlights the necessity for PDPs to be customized to the needs of their participants to be truly effective.

4.4 Perceived Effectiveness of Professional Development Initiatives

Despite the challenges, teachers acknowledged the positive impacts of effective PDPs. Those who had access to well-structured and relevant training reported improvements in their teaching practices and student engagement. Effective PDPs were seen to foster a greater sense of professional accomplishment and motivation among teachers.

For example, a teacher shared, "After attending a series of targeted workshops, I noticed a significant improvement in my students' engagement and understanding. It was a direct result of the new strategies and techniques I learned." This underscores the potential benefits of well-designed professional development initiatives.

4.5 Categorization and Discussion of Findings based on Research Questions

The findings from the interviews can be categorized and discussed based on the primary research questions:

1. What are the current challenges faced by General Foundation Course teachers in higher vocational colleges?

The interviews highlighted several challenges, including insufficient institutional support and resources, as general education courses are often underfunded and undervalued compared to vocational training; a lack of relevant and specific professional development, with existing Professional Development Programs (PDPs) often being too broad and not tailored to the specific needs of general education teachers; and weak foundational knowledge of students, making it difficult for teachers to improve educational outcomes.

2. How do existing Professional Development Programs address these challenges?

The interviews revealed mixed responses regarding the effectiveness of existing Professional Development Programs (PDPs): many generic training programs are not sufficiently tailored, making it difficult for teachers to apply what they learn in their specific teaching contexts, while teachers who participated in well-designed, relevant training reported positive outcomes, such as improvements in their teaching practices and increased student engagement.

3. What improvements can be made to enhance the effectiveness of PDPs?

Teachers suggested several improvements to enhance the effectiveness of Professional Development Programs (PDPs), including increased institutional support and funding to ensure general education courses and PDPs receive the necessary resources; customization of training programs to address the specific needs and challenges of general education teachers in vocational colleges; and a focus on practical, applicable strategies that teachers can directly implement in their classrooms.

4.6 Thematic Analysis of the Influence of Professional Development Programs on Teachers

The thematic analysis of the interviews revealed several key themes regarding the influence of PDPs on teachers:

Professional Growth and Development

Effective PDPs were seen to significantly contribute to the professional growth and development of teachers. Those who participated in targeted, relevant training reported enhanced teaching skills, greater confidence, and a renewed sense of

professional purpose. This professional growth was closely linked to improvements in teaching practices and student outcomes.

Enhanced Teaching Practices

Teachers who engaged in effective PDPs reported adopting new teaching strategies and techniques that improved student engagement and learning outcomes. These enhancements in teaching practices were often attributed to the practical, applicable nature of the training they received. For instance, teachers learned how to integrate technology into their lessons, use interactive teaching methods, and better manage their classrooms.

Increased Motivation and Job Satisfaction

Participation in PDPs also had a positive impact on teachers' motivation and job satisfaction. Teachers felt more valued and supported when they had access to professional development opportunities, leading to increased job satisfaction and a greater sense of professional accomplishment. This, in turn, positively influenced their commitment to teaching and their willingness to invest in their students' success.

Challenges and Areas for Improvement

Despite the positive impacts, the interviews also highlighted several challenges and areas for improvement. The need for more tailored, relevant training programs was a common theme, as was the need for greater institutional support and resource allocation. Teachers also emphasized the importance of continuous, ongoing professional development rather than one-off training sessions.

V. Discussion

5.1 Institutional Support and Resource Allocation

The interviews revealed that General Foundation Courses in vocational colleges often receive insufficient institutional support and resources. This lack of support hampers the effectiveness of PDPs and highlights a significant area for improvement. Teachers feel that their courses are undervalued compared to vocational subjects, which affects their morale and the quality of education they can provide.

5.2 Relevance and Applicability of Training Programs

The teachers expressed a need for PDPs that are specifically tailored to their unique context and challenges. Generic training programs are seen as inadequate, failing to address the specific needs of general education teachers in vocational colleges. This finding underscores the importance of designing PDPs that are relevant and directly applicable to the teachers' everyday experiences and challenges.

5.3 Effectiveness of Professional Development Initiatives

Despite the challenges, effective PDPs have a notable positive impact on teachers' professional growth, teaching practices, and student engagement. Teachers who participated in well-structured and relevant training reported significant improvements in their teaching methods and classroom management skills. This indicates that when PDPs are well-designed and relevant, they can substantially enhance the quality of education.

5.4 Implications of Findings for Teacher Professional Development

The study's findings have several implications for the design and implementation of PDPs for General Foundation Course teachers in higher vocational colleges.

Need for Increased Institutional Support

To maximize the effectiveness of PDPs, vocational colleges need to allocate more resources and support to general education courses. This includes funding, access to modern teaching tools, and administrative backing. Increased support will not only enhance the quality of PDPs but also improve teachers' morale and commitment.

Customization of Professional Development Programs

PDPs should be customized to address the specific challenges and needs of general education teachers. Tailored training programs that focus on practical, applicable strategies can significantly improve teaching practices and student outcomes. Vocational colleges should involve teachers in the design of PDPs to ensure they are relevant and effective.

Continuous Professional Development

The study highlights the importance of continuous, ongoing professional development. One-off training sessions are insufficient for sustained improvement. Instead, PDPs should be part of a continuous learning process that includes regular workshops, seminars, and collaborative learning opportunities. This continuous approach will help teachers stay updated with the latest teaching methodologies and educational technologies.

5.5 Implications for Practice and Policy

Based on the study's findings, several practical and policy implications can be drawn:

Enhanced Resource Allocation: Policymakers and educational administrators should prioritize the allocation of resources to general education courses in vocational colleges to ensure that PDPs are well-supported and effective.

Tailored Professional Development: Vocational colleges should design PDPs that are tailored to the specific needs and challenges of general education teachers. This includes involving teachers in the development process to ensure relevance and applicability.

Continuous Learning Opportunities: Institutions should implement continuous professional development initiatives that include regular training sessions, workshops, and collaborative learning opportunities to foster ongoing professional growth.

Collaboration and Peer Learning: Encouraging collaboration and peer learning among teachers can enhance the effectiveness of PDPs. Teachers should have opportunities to observe and learn from experienced colleagues and share best practices.

VI. Conclusion

This study analyzed the professional development programs (PDPs) for General Foundation Course teachers in higher vocational colleges in China, aiming to establish a robust Teacher Professional Development Framework. Key findings from the study reveal significant gaps in institutional support, relevance of training programs, and the need for continuous professional development. Teachers highlighted the importance of tailored, context-specific training and the benefits of collaborative learning and peer observation. Increased institutional support is paramount for the success of PDPs. Vocational colleges need to allocate more resources, provide access to modern teaching tools, and offer administrative backing to general education courses. Enhanced support will not only improve teaching practices but also elevate the overall quality of education.

Customization of professional development programs is essential to meet the specific needs of General Foundation Course teachers. By involving teachers in the design process, PDPs can become more relevant and directly applicable to their unique challenges and classroom environments. Continuous professional development, incorporating regular workshops, seminars, and collaborative learning opportunities, is crucial for sustained improvements in teaching practices. Despite the valuable insights gained, this study has limitations, including a small sample size and the qualitative nature of the research. Future studies should involve larger and more diverse samples and incorporate quantitative methods to complement the qualitative data. Comparative studies across different regions and longitudinal research tracking long-term impacts of PDPs would provide a more comprehensive understanding.

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