

**Staff Learning as it Relates to Student Learning: A Look at Effective Professional
Development**

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Abstract

This culminating project studies and explores the effectiveness of professional development (PD) programs and their impact on long-term teaching practices and student learning outcomes. By synthesizing existing literature and examining various studies, the research identifies key factors contributing to PD efficacy, including targeted interventions, the importance of continuous engagement, and the role of teacher identity and growth mindset. The findings emphasize the value of diverse PD strategies and collaborative opportunities, highlighting that participation in PD activities, regardless of the level of involvement, yields positive outcomes. The study also underscores the dynamic nature of educators' engagement with PD across different career stages and the need for tailored PD programs that address these evolving needs. The research provides actionable insights for education leaders to design and implement flexible PD initiatives that enhance teacher performance and foster a culture of continuous improvement, ultimately benefiting student success.

Keywords: professional development, teacher identity, community of practice, growth mindset

Staff Learning as it Relates to Student Learning: A Look at Effective Professional Development

This culminating project studies and explores the effectiveness of professional development (PD) programs and their impact on long-term teaching practices and student learning outcomes. The effectiveness of professional development (PD) programs for educators has long been a topic of discussion and concern within the education community. While PD offers opportunities for continuous learning and growth, there is often a disconnect between the investment of time and resources and the resulting impact on teacher effectiveness and student outcomes. This discrepancy highlights the need for a closer examination of how PD can be optimized to better support staff learning and, ultimately, enhance student learning and success. The focal problem addressed in this project is the effective use of professional development in education as guided by research. Despite the intention of PD programs to improve educator effectiveness, many teachers perceive them as ineffective or irrelevant to their needs. This perception not only leads to disengagement among educators but also hampers their ability to effectively support student learning. The overarching goal is to explore strategies for optimizing PD to cultivate more competent and engaged educators.

Context

National statistics reveal that professional development (PD) programs for educators frequently fall short in enhancing teacher effectiveness in the classroom and their development as professionals. A significant percentage of teachers express dissatisfaction with the effectiveness and relevance of PD offerings (Yoon, 2007). This gap between the investment of time and resources in PD and its impact on teacher effectiveness underscores the urgent need to

reevaluate and optimize PD practices to better support staff learning and enhance student outcomes.

As a member of a nationally recognized Professional Learning Community (PLC) District and a department PLC team leader, I have firsthand experience with the challenges and opportunities associated with professional development. Observing areas of opportunity within my team and across my district has sparked my interest in diving deeper into this topic. My exploration has revealed that concerns about PD efficacy are not confined to my district or even to education in America but are widespread and of global significance. From rural Africa to asynchronous PD pathways, the need to optimize staff learning transcends geographical and cultural boundaries. By strategically designing and implementing PD programs, education leaders can better equip educators to prepare students for success in their educational journeys and beyond.

Discuss the importance of this focal problem

The importance of addressing the effectiveness of professional development in education cannot be overstated. As educators, the effectiveness directly impacts student learning and success. By optimizing PD practices, I can curate a community of highly competent and engaged educators who are better equipped to meet the diverse needs of their students. This, in turn, has the potential to enhance student achievement levels and broaden students' outlook on their educational pathways. Ultimately, investing in high-quality PD programs is an investment in the future of the students and the communities.

Purpose

Drawing on my experiences in the military and academia, both as a student and an educator, I have observed a wide range of leadership styles and PD programs. Some have been highly effective in enhancing my professional growth, while others have left me feeling uninspired and disengaged. This disparity has fueled my desire to dive deeper into the workings of PD and explore ways to optimize its effectiveness. By shifting the approach districts take to PD, I aim to elevate staff learning and, consequently, student learning outcomes. My goal is to ensure that myself and my peers do not settle for mediocre professional development but instead strive for excellence in supporting student learning.

Focal Questions

The three focal questions that guide this study are:

- According to research what professional development practices have shown clear achievement outcomes in the classroom?
- According to the research how do structural and district policy factors impact professional development delivery?
- According to research what is an optimal amount of time professional development should be conducted to show student achievement?

Literature Review

The objective of this project is to critically examine research on professional development (PD) within the field of education. By thoroughly analyzing the literature, I aim to gain insights into the various facets of PD and its impact on teaching practices and student outcomes. When referring to *professional development* (PD), I am addressing the broad spectrum

of activities and initiatives designed to enhance educators' skills, knowledge, and effectiveness in their roles. These encompass workshops, seminars, conferences, mentorship programs, collaborative learning communities, and other forms of structured learning experiences tailored to educators' needs. The decision to categorize the review into four subsections stemmed from an extensive review of the literature, where recurring themes and key ideas emerged across various studies and discussions. Each subsection was formulated to address specific dimensions of PD that have been identified as crucial in the literature and in educational practice.

The subsections are as follows; professional development and connections to classroom outcomes, growth mindset and identity, external delivery systems of PD, and professional development across the lifespan of a career. These subsections were derived from a review of research findings within the academic community. These categories show the diverse aspects of PD, ranging from its immediate impact on classroom instruction to its long-term effects on educators' professional growth and identity.

Through this literature review, I aim to provide an overview of the current state of research on PD, key insights, and areas for further investigation. By highlighting the significance of PD in educational contexts and speaking to its implications for practice, this review aims to contribute to ongoing conversations and efforts aimed at improving the quality and effectiveness of professional development initiatives within the field of education.

Professional Development and Its Impact on Classroom Outcomes

The research surrounding professional development (PD) and its relationship to classroom outcomes produces a narrative that revolves around the diversity of PD practices used by educators and their influences on student achievement. Key strategies such as scripted

interventions, neural education, comprehensive training, and universal design for learning (UDL) form the building blocks of this narrative. Many educators participate in trainings, receive coaching, or reflect on their practices, each contributing to an understanding of effective teaching strategies. This narrative encompasses a holistic approach that integrates various strategies to enhance teaching practices and promote student learning.

One recurring theme is the integration of targeted interventions into the curriculum. For instance, Cardamone et al. (2023) conducted an educational intervention study, involving three clinical case studies with first-year veterinary curriculum at Tufts University by studying the effects of two interventions in an effort to determine which would show greater student involvement. The quantitative and qualitative results were determined through pre and post course surveys in which out of 105 students, 98 completed both surveys. It was found that the use of instructional videos made via collaborations between students and teachers as a targeted intervention significantly increased student engagement and improved learning outcomes. To echo the importance of scripted interventions Ellingson et al. (2021) conducted a quasi-experimental design of a mixed-methods study involving 1,572 high school students out of which 1,122 responded to a pre and post survey which explored the benefits of neural education using circular application strategies. Findings highlighted that brain-based teaching techniques incorporated into lesson plans as a tier 1 intervention resulted in an improvement in student performance on standardized tests in programs that had 30-100 hours of professional development compared to programs with 15 hours or less.

Research conducted in diverse educational settings further underscores the importance of comprehensive PD programs that enhance teacher practices. Piper (2018) conducted a

longitudinal study involving 847 government schools and 3,309 grade 1-2 students across rural Africa as a baseline through reading, writing, and math testing. Later that year 4,566 students were studied through the same lens of testing. The data revealed that students with educators well equipped with a diverse repertoire of instructional strategies and resources, like 1:1 textbook to student ratio, achieved significantly higher student learning outcomes compared to those students whose teachers only received training or are only using a teaching guide. Similarly, Saliba's (2019) dissertation on UDL focuses on laying a solid foundation for student learning. While UDL is research based, implementation of teacher training is not widespread. Saliba's dissertation involved a sequential and mixed methods analysis of UDL, which emphasized the significance of accommodating diverse student needs and fostering inclusive learning environments. The study used semi-structured interviews from 9 teachers to determine classroom outcomes based on student success. It was found that teachers who received more training had "students with dis/abilities... experience significant gains" (Saliba et al., 2019).

As these studies intertwine, the narrative becomes more defined. Effective PD practices encompass a range of strategies tailored to the needs of both educators and students. From scripted interventions to comprehensive training and UDL frameworks, each component plays a vital role in shaping the educational landscape. By weaving together these diverse strands of research, educators gain valuable insights into the intricacies of PD and its profound impact on classroom outcomes. This narrative serves as a statement regarding the power of PD in education. By embracing a holistic approach to professional development and integrating evidence-based practices into their teaching repertoire, educators can foster environments conducive to student success and academic achievement.

Growth Mindset and Identity in Professional Development

The research surrounding growth mindset and identity in professional development (PD) highlights several themes; expert opinions, feedback and reflection, fostering growth mindset and identity. This theme speaks to the notion that educators' attitudes and perceptions toward PD can significantly impact their professional growth and classroom practices. Research suggests that fostering positive mindsets among educators can yield favorable outcomes in PD programs.

As these studies intertwine, a narrative emerges that the interplay between growth mindset, educator identity, and PD practices significantly influences professional growth and classroom outcomes. They emphasize the importance of fostering a growth mindset among educators, providing opportunities for reflection and dialogue, and addressing pre-existing beliefs and experiences within teacher training programs.

Expert Opinions

Experts emphasize the importance of fostering a growth-oriented approach in professional development for educators. Dweck's (2016) book provides a foundation on growth mindset and highlights the significance of this approach, detailing how teachers' beliefs about their abilities impact their professional growth and student outcomes. Dweck underscores the value of PD programs that encourage educators to view challenges as opportunities for learning and development, thereby enhancing teacher effectiveness and fostering a positive, dynamic learning culture. Supporting this perspective, Steinert, O'Sullivan, and Irby (2019) conducted a literature review on the professional identities of faculty members as teachers. They emphasize the importance of reflection and administrative support in strengthening these identities. Their review calls for faculty development programs that go beyond mere knowledge and skill

acquisition, focusing instead on fostering a sense of identity and intentionality in teaching. These insights suggest that integrating growth mindset principles with identity-focused faculty development can create a robust framework for effective PD, ultimately benefiting both educators and students.

However, in practice results may vary from what literature would suggest, Lambright's (2022) dissertation investigates the predictors of teacher support for interventions targeting underachieving gifted students. The data was compiled through surveys of 69 K-12 schools where the teachers had gifted students. The findings emphasize the role of teacher mindset, professional development type, and years of teaching experience. No significant results were found as to mindset and identity predicting intervention supports for these underachieving gifted students.

Admin Feedback and Teacher Reflection

Admin feedback is critical for fostering a growth mindset for teachers engaging in professional development (PD). It creates an open dialogue between teachers and administrators, allowing for constructive feedback in a safe environment, which encourages professional growth. Teacher reflection on this feedback is equally important, as it helps educators learn from past mistakes and continuously improve their skills. Together, admin feedback and teacher reflection create a supportive environment that promotes continuous development and better teaching outcomes.

Jeffs (2023) conducted a mixed-methods pre-post-test design involving 39 educators with an average of 12 years teaching experience, 20 of whom completed the study. Jeff's goal was to discuss the emotional impact of feedback in teaching development and the transition from a fixed

to a growth mindset. This study emphasizes the importance of providing opportunities for educators to engage in discussions about feedback and its role in informing teaching growth and development. Jeffs demonstrates the potential for feedback literacy dialogues to positively influence educators' mindsets and perceptions of feedback.

Looking at this through a wider lens, Hooker's (2022) dissertation highlights the transformative potential of principals in fostering growth mindsets among teachers through targeted PD initiatives. This dissertation reports both qualitative and quantitative data through a census and maximum variation sampling method of 70 school districts located in Louisiana, ultimately focusing on one district containing 4 schools with 61 teachers. By providing authentic feedback and support, principals can nurture a growth-oriented culture conducive to professional development and student achievement. Further supporting this theme is Tualualelei's (2021) ethnographic study of 14 Anglo-Australian monolingual teachers of Samoan students located in the Pacific Islands. Qualitative data was analyzed through thematic analysis of documents, observations, field notes and journals. This study highlights the importance of PD programs that not only teach the "how" but also the "why" behind intercultural education. By addressing challenges such as culture shock and fostering ongoing reflection, districts can better prepare teachers to navigate diverse classrooms and foster inclusive learning environments.

Fostering Growth Mindset and Identity

Fostering a growth mindset and strong professional identity is crucial for teacher development. By building on prior and existing knowledge, administrators can leverage teachers' skills to enhance their effectiveness rather than starting from scratch. Tailored professional development (PD) ensures relevant training, avoiding excessive or generic PD. This approach

empowers the educators to not only be good teachers but also to believe in their own effectiveness and potential for growth.

González-Calvo et al. (2021), conducted a qualitative study where a questionnaire was given to 23 second year university students from a Spanish university majoring in physical education. Data was analyzed through narrative analysis and explored the connection between previous experiences, beliefs about physical education (PE), and the development of professional teacher identities. The results of this analysis stress the significance of considering prior experiences and beliefs in shaping the pedagogical practices and intentions of future PE educators.

Byman (2021) conducted a large-scale survey of 354 educators out of a potential 1400 responses, with 39% of the respondents being from a single program known as the *Finnish Study*. This survey assessed their perspectives on PD needs, barriers, and preferences. Findings indicated that while excessive PD may overwhelm educators, tailored PD initiatives addressing specific needs can be beneficial. Similarly, Kostoulas (2019) conducted a quantitative survey involving 257 Austrian teachers to investigate educators' views on PD engagement and its correlation with educational research (ER). Their findings, analyzed through descriptive statistics, highlighted a positive association between engaging with ER and the success of PD programs. Despite potential biases in sampling, both studies underscore the importance of a positive PD climate guided by evidence-based research and tailored to meet specific needs. Both emphasize that effective PD should be responsive to educators' needs and informed by research to avoid overwhelming teachers while maximizing the benefits of professional development initiatives.

Additionally, Mora (2014) conducted a qualitative case study that explores the relationship between PD and educator identity, collecting data from six English teachers in a Mexican language center. Mora focused on two educators with vastly different identities. The findings revealed that active engagement with PD correlates with heightened professional identity and efficacy. However, variations in identity formation and PD participation among educators underscore the complexity of this relationship. The study emphasizes the importance of organizing PD programs that prioritize identity and agency to maximize their effectiveness. Stemming off of Mora's findings, Heslin (2020) proposed a model to cultivate a growth mindset, termed "learning mode," among educators to facilitate sustainable career development. This model emphasizes the importance of maintaining a meta-growth mindset and leveraging it to enhance learning outcomes. While the theory suggests a positive correlation between growth mindset and learning, challenges related to career readiness and adaptation to change remain important.

External Delivery Systems of Professional Development

Educators often inquire about the organization and delivery methods of professional development (PD) programs, seeking insights into which structural and external factors yield the greatest impact on staff learning. Navigating the landscape of PD can be complex, with varying policies and practices across districts. Research reveals that engagement with PD campaigns significantly enhances teacher learning. Across studies, it becomes evident that participating in PD, particularly within collaborative groups, is more beneficial than not engaging at all. Ongoing and focused PD emerges as a critical component for facilitating staff learning and retention.

As these studies converge, a compelling narrative unfolds which showcases expert opinions and the benefits for working in small groups. The mode of PD delivery and the composition of the PD community play pivotal roles in shaping its effectiveness. Collaborative engagement, ongoing reflection, and a supportive community emerge as key drivers of successful PD initiatives. While the quest to identify the optimal PD program persists, research suggests that the makeup of the PD community is equally important. By fostering collaborative communities of educators committed to continuous learning and growth, districts can create environments conducive to meaningful professional development and enhanced student outcomes.

Expert Opinions

Subject matter expert insights are crucial in designing effective professional development (PD) programs for educators. They emphasize the importance of components like duration, focus, active learning, coherence, and collective participation. They stress that sustained, intensive, and focused PD is necessary to support teacher growth and improve student outcomes. They highlight the challenges in assessing the impact of PD programs and propose improvements in conceptual frameworks and measurement methods. By considering these expert recommendations, schools can develop PD initiatives that better support teacher growth and enhance student learning.

Experts at the Learning Policy Institute focus on the importance of effective teacher professional development (Darling-Hammond, Hyler, & Gardner, 2017). They outline key components of high-quality professional development programs, such as duration, focus, active learning, coherence, and collective participation. The report emphasizes the need for sustained,

intensive, and focused professional development to support teacher growth and improve student outcomes. This idea is further discussed in Desimone's (2009) literature review that addresses the challenges in assessing the impact of teachers' professional development programs. Desimone discusses the complexities involved in measuring the effectiveness of professional development interventions and proposes improvements in conceptual frameworks and measurement methods to enhance impact studies. The review highlights the importance of considering various contextual factors and outcomes beyond student achievement when evaluating professional development initiatives.

Teamwork Within a Small Group Setting

Collaboration within small group settings is a cornerstone of effective professional development (PD) for educators. Working together in Professional Learning Communities (PLCs) and Communities of Practice (CoPs) allows teachers to share experiences, discuss best practices, and support each other's growth. This cooperative approach not only enhances individual teacher effectiveness but also fosters a positive and inclusive culture within the educational community. Through teamwork, teachers can reflect on their practices, integrate new strategies, and continually improve their professional skills, leading to better outcomes for students and a more dynamic learning environment.

Gallagher (2011) conducted qualitative research amongst pre-tenure teachers at Brock University to explore sustainment in self-study PD communities. Their findings underscore the importance of fostering a positive culture within PD communities through open discussions, sharing best practices, and embracing social contexts. This study emphasizes the value of diverse and collaborative PD communities, commonly referred to as Professional Learning Communities

(PLCs), and the positive impact they have on PD. Similarly, Romero and Vasilopoulos (2020) explore the impact of communities of practice (CoPs) on teacher professional development experiences across the globe. This study was completed through analyzing a studying abroad program in 2016 of 35 visiting teachers who traveled from rural China to a professional development workshop in Canada, of which 17 reported data. The study uses a qualitative approach to reveal how sharing best practices have the transformative potential of CoPs in facilitating collaborative learning and professional growth, particularly among teachers from diverse backgrounds through international teamwork.

This notion is also enhanced by Hagin (2020) whose dissertation included a multiple-case study to shed light on the professional learning needs of singleton secondary science teachers in the Georgia public school system. Both quantitative and qualitative data for this study was collected through a series of interviews and observations. The findings emphasize the importance of integrating singleton teachers into job-embedded professional communities to enhance their learning and, subsequently, their students' learning outcomes. Weinberg (2021) went a step further and reviewed the relationship between teacher identity and professional development within a long-term peer discussion group. Qualitative data was collected by interviews observations. Through interpretive phenomenological analysis, the findings underscore the importance of nurturing educators' identity, adopting best practices, and fostering reflection to promote long-term professional growth. Three criteria were identified as invaluable to CoPs, intersecting points, nurturing identities and sustained commitment to the group.

Healy (2020) investigated the impact of online PD on educators' content knowledge and application of student collaboration through randomized experimental design. 44 physical

education teachers, of which 23 completed, were asked to listen to podcasts regarding peer tutoring followed by a test. Their findings highlight the significance of ongoing PD in enhancing staff learning and retention, particularly in the context of online learning environments. The curve of remembrance plays a role in online learning environments, and the effectiveness of PD. It shows that this is effective in short term scenarios, but the lack of due process has a negative effect in the long term. Collectively, these studies suggest that fostering collaborative and supportive environments, whether in person or online, is crucial for the success of PD initiatives. Engaging educators in small, supportive groups, encouraging the sharing of best practices, and providing opportunities for reflection and identity development are essential strategies for promoting sustained professional growth.

Coaching

Coaching is crucial for effective professional development, providing personalized support and guidance to teachers. It helps teachers implement new strategies and boosts their confidence. Studies show that teachers who receive coaching demonstrate significant improvement in their teaching practices. This leads to better student outcomes and fosters a culture of continuous improvement.

Tschannen-Moran (2009) discusses how follow-up coaching significantly affects teachers' self-efficacy beliefs toward a new strategy. In this quasi-experimental study, 93 educators from 9 primary schools were provided differing levels of support and engagement. The group that received more support, particularly coaching, had significantly higher self-efficacy scores. To further elaborate on the importance of coaching, Lane (2015) conducted a year-long professional development program involving 48 educators in the Midwest to assess the outcomes

of a systematic, team-based PD approach in addition to continuous coaching. The educators took a pre-knowledge test about the PD campaign, engaged with practice-based PD series which highlighted several coaching supports, and participated in a post-survey about the 15 learning areas from the PD campaign, which showed significant improvement.

Professional Development Across an Educator's Career

The journey of an educator's career is marked by various professional development (PD) opportunities, with a recurring concern about the perceived lack of time for engaging meaningfully with these initiatives. Delving into the landscape of PD throughout an educator's career reveals valuable insights into the nuances of effective professional growth strategies. There is a consensus on the need for targeted and differentiated PD programs tailored to educators' career stages and needs. However, a discrepancy exists between the idealized approach and current practices in many educational settings. Despite recognizing the benefits of personalized PD initiatives, many districts continue to rely on a one-size-fits-all approach, often resulting in suboptimal outcomes. Addressing this misalignment calls for strategic planning and objective-driven PD initiatives that cater to the diverse needs and contexts of educators.

Adopting a more nuanced approach to PD program design and implementation can help educational institutions maximize the effectiveness of professional learning opportunities and better support the growth and development of their staff. The journey of professional development across an educator's career is characterized by a quest for meaningful engagement, tailored support, and ongoing reflection. By aligning PD initiatives with educators' evolving needs and contexts, educational institutions can cultivate a culture of continuous learning and

professional growth. This, in turn, enhances the quality of teaching and learning experiences for all stakeholders involved.

Expert Opinions

For professional development (PD) to truly make an impact, it must align with teachers' real-world needs and classroom experiences, ensuring sustainable improvements in teaching and learning across the entirety of a career. Promoting an inquiry-driven approach encourages ongoing reflection and growth. By integrating these elements, schools can create PD programs that effectively support teachers at all career stages.

Guskey (2002) explores the relationship between professional development and teacher change. The article describes a model that discusses the factors influencing teachers' willingness and ability to change their instructional practices. The model places emphasis on the role of ongoing support, feedback, and collaboration in facilitating meaningful change. Guskey underscores the need for professional development programs to align with teachers' needs, interests, and classroom realities to promote sustainable change and improve student learning. Additionally, Cochran-Smith's (2003) literature review examines the variety of education curriculums for teacher educators. One finding underscores the importance of fostering an inquiry-driven approach to learning across the span of a teacher educator's career.

Novice vs. Tenure

Professional development (PD) needs to cater to both novice and tenured teachers to ensure continuous improvement in teaching practices. Novice teachers often need support with classroom management, parent communication, and adapting to diverse student needs. Tenured teachers benefit from specialized training that builds on their experience. Effective PD programs

should offer reflective practices for early career teachers and advanced, targeted learning for seasoned educators.

Harris and Sass (2011) examine the link between teacher training, teacher quality, and student achievement. Their literature review focuses on a data panel from the State of Florida. The findings synthesize existing empirical evidence on the effectiveness of various teacher preparation pathways, including traditional certification programs, alternative routes, and graduate degrees, in predicting teacher effectiveness and student outcomes regardless of previous productivity. The review discusses implications for policy and practice in recruiting, training, and retaining high-quality teachers to improve student achievement. Similarly, Rowan and Townend (2016) conducted a large-scale mixed-methods research project that included surveying 971 newly graduated Australian teachers. This encompassed the preparedness of novice teachers, particularly those working with "gifted" students. Their findings underscore the need for targeted and strategically tailored PD programs to address specific areas of teacher preparedness, such as classroom management, communicating with parents, and teaching culturally and linguistically diverse students.

Diving deeper into the needs of novice teachers, Scott, Clarkson, and McDonough's (2012) study highlights the transformative impact of action research projects on three early career math teachers' perceptions and practices. Through sustained engagement with reflective practices, teachers experienced notable shifts in their approach to planning and implementing mathematics lessons, emphasizing the importance of ongoing professional learning and self-reflection. To reflect the needs of not only novice teachers but tenured teachers too, Richter (2011) conducted a study of 1,939 secondary teachers across 98 schools in Germany. Findings

revealed insights into seasoned teachers' preferences for professional development modalities and highlighted the perceived diminishing returns of collaborative PD initiatives as educators progress in their careers. Mid-career teachers receive the majority of their training from in-service training days, whereas end career teachers benefit less from the in-service training days.

Summary

After synthesizing the literature and examining various studies, several key factors emerge regarding professional development. It is evident that targeted interventions by teachers correlate with positive classroom outcomes. Consistent use of these interventions is crucial, as ongoing development ensures that educators' skills remain sharp and impactful. Continuous engagement in professional development activities is therefore paramount for educators aiming to enhance student learning experiences. The literature emphasizes the importance of embracing multiple modalities of professional development. Rather than relying solely on one approach, educators benefit from a diverse range of strategies and collaborative opportunities with like-minded peers. Research indicates that participation in professional development, regardless of the level of involvement, yields positive outcomes. This underscores the value of maintaining a growth mindset, where educators view professional development as an opportunity for continuous improvement and learning.

The role of identity and growth mindsets in professional development is significant. Educators who possess a positive growth mindset tend to derive greater benefits from professional development initiatives. Cultivating a positive growth mindset among educators fosters an environment conducive to learning and growth within the professional development program as a whole. Leaders play a crucial role in nurturing this mindset, as it directly influences

the effectiveness of professional development efforts. The literature also highlights the dynamic nature of educators' time dedication to professional development across their career lifespan.

While beginning and mid-year teachers actively engage in small group professional development sessions, tenured educators exhibit lower participation rates and decreased growth mindset towards such initiatives as they progress in their careers. This presents a unique challenge for designing effective professional development programs that cater to the diverse needs and perspectives of educators at different career stages.

In conclusion, the findings suggest the importance of tailored professional development programs that acknowledge the evolving needs and attitudes of educators over time. While incorporating the wisdom and expertise of experienced educators is essential, a one-size-fits-all approach may not yield optimal results. Instead, districts should strive to create inclusive and flexible professional development initiatives that empower educators at all career stages to thrive and contribute meaningfully to student success.

Action Plan

The three research questions driving this inquiry into professional development (PD) have highlighted several critical themes. Through thorough research and analysis, it has become clear that tailored professional development is more effective than a one-size-fits-all approach. These questions serve as a foundation for understanding the intricacies of PD, and from them, four key themes emerged. To visualize this, imagine a table of professional development, with four legs representing the essential pillars: professional development and connections to classroom outcomes, growth mindset and identity, external delivery systems of PD, and professional development across the lifespan of a career. These four legs support the table of

professional development, ensuring stability and comprehensive support for educators. On the table, I place the three research questions like plates, each serving as a guide to tailor PD effectively. On one plate, diverse and revolving PD, which emphasizes the need for varied and continually updated professional development opportunities. Plate two has, nurturing a positive growth mindset with active feedback and coaching, which highlights the importance of fostering a growth mindset through ongoing support and feedback. Finally, plate three has evolving PD programs with staff evolution, which stresses that PD programs must adapt as educators progress in their careers.

For this project, I conducted an analysis of a school district located in a rural area of a large county in the Pacific Northwest. This medium-sized district comprises two secondary schools and seven primary schools. Notably, this district boasts a unique professional development program known as a professional learning community (PLC). Professional development opportunities are offered through various avenues, including online and in-person classes, staff meetings, tier 1 and tier 2 coaching, PLC conventions, and hosting PLC site visits.

An action plan has been developed to guide this school districts, informed by these themes and research findings. Each leg of the table, or subsection, is organized to provide actionable suggestions and potential improvements for PD programs, ensuring they are effective and responsive to educators' needs throughout their careers.

Professional Development and Its Impact on Classroom Outcomes

In the dynamic world of education, professional development (PD) serves as a crucial mechanism for teachers to refine their skills and improve classroom practices. Teachers participate in trainings and workshops not merely to fulfill requirements, but to enhance their

professional capabilities and ultimately benefit their students. The significance of varied and ongoing PD opportunities is widely supported in educational research. Piper (2018), Cardamone (2023), and Saliba (2019) emphasize the importance of continuously evolving PD programs that address the diverse needs of educators. This approach enables teachers to engage in lifelong learning and adapt to the ever-changing landscape of education.

The effectiveness of PD is further highlighted by the connection between professional growth and classroom outcomes. Research underscores that when teachers are provided with meaningful PD opportunities, their instructional practices improve, leading to better student performance. It is clear that a one-size-fits-all model is less effective compared to tailored PD that evolves with the educators' needs and career stages. By nurturing a positive growth mindset through active feedback and coaching, districts can foster an environment where continuous improvement is the norm.

An analysis of a school district in the Pacific Northwest illustrates how a well-structured PD program can make a significant difference. This medium-sized district, with two secondary schools and seven primary schools, has implemented a professional learning community (PLC) model. The PLC framework offers diverse PD opportunities, including online and in-person classes, staff meetings, tier 1 and tier 2 coaching, PLC conventions, and site visits. These varied approaches ensure that PD is accessible, relevant, and impactful.

The action plan derived from this analysis aims to provide actionable insights on crafting effective PD programs. By integrating research findings, the plan outlines how districts can support teacher growth and enhance classroom outcomes. Table 1 presents the recommendations

for the school district based on the research, highlighting the importance of a dynamic and responsive PD strategy.

Table 1

Professional Development and Its Impact on Classroom Outcomes

What the research says	What my district does	What I recommend
Provide multiple types of professional development opportunities. (Piper, 2018; Cardamone, 2023; Saliba, 2019; Richter et al., 2011).	Building leaders direct whole staff training. Some training gets over emphasizes more than others. Different buildings progress at different rates. There is a missed opportunities to diversify professional development with equity in mind.	Provide multiple training opportunities throughout the year, regardless of an educator's tenure within the district, and to offer tier 1 and tier 2 supports for these trainings.
Provide ongoing, multi-faceted, and revolving professional development opportunities (Piper, 2018; Cardamone, 2023; Saliba, 2019; Richter et al., 2011).	Professional development is conducted in August (3-5 training days), several "in session" training days throughout the year, monthly building meetings and weekly department meetings.	Align district, building, and department training programs to follow a revolving model. Schedule regular training sessions throughout the year to revisit and reflect on different teaching strategies.

Nurturing Growth Mindset and Professional Identity in Educators

In professional development (PD), nurturing a growth mindset and fostering a strong professional identity among educators is like building a sturdy foundation for a house. It's about creating an environment where teachers believe they can continuously improve and grow, both personally and professionally. My research highlights the importance of this focus within districts and schools. Jeffs (2023) and Lambright (2022) emphasize the need for environments that actively promote growth and development, stressing that while PD is crucial, it should support rather than overwhelm educators.

Tailored PD initiatives are essential in this context. Byman (2021) advocates for PD that addresses specific needs, rather than inundating teachers with a flood of generic workshops. This ensures that PD is relevant and manageable, allowing educators to integrate new knowledge and skills effectively. Additionally, the role of administrators and supervisors is crucial in shaping teachers' mindsets and professional identities. Hooker (2022) underscores the importance of genuine feedback and support from leadership in fostering a growth mindset from the top down.

Overall, creating a supportive environment where teachers can thrive involves a balanced approach to PD. By focusing on tailored initiatives and strong leadership support, districts can cultivate a culture of continuous growth and professional development, ultimately benefiting both educators and their students.

Table 2

Growth Mindset and Identity in Professional Development

What the research says	What my district does	What I recommend
Buildings and districts should have procedures to try to foster a growth mindset / identity amongst its staff. (Jeffs, 2023; Lambright's, 2022; Steinert, O'Sullivan, and Irby, 2019).	Focuses more on skills training rather than mindset development. There's a gap in fostering a growth mindset among the staff.	Introduce procedures and initiatives specifically aimed at nurturing a growth mindset and professional identity.
Excessive professional development may overwhelm educators, tailored professional development initiatives addressing specific needs can be beneficial. (Byman, 2021; Mora, 2014).	PD offerings cover a wide range of topics, but it often feels like too much for the educators to handle.	Tailor your PD program to meet the specific needs of educators, ensuring it's reflective of the diverse subgroups within the staff. Recognize that novice teachers and veteran educators have distinct requirements when it comes to the type and intensity of training they need.

Administrators and supervisors should provide authentic feedback and support, nurturing a growth mindset (Hooker, 2022; Heslin, 2020).	Supervisors occasionally check in with teachers (yearly teacher evaluations). By invite only go on teaching rounds, where a coach will take teachers to watch veteran teachers. And reflect on the experience. Consistent constructive feedback is lacking.	Establish regular feedback cycles and coaching sessions between supervisors and teachers to offer ongoing support and encouragement. Foster a culture of collaboration and learning where feedback is seen as an opportunity for growth rather than criticism.
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Collaborative Group Learning in Professional Development

In the landscape of professional development (PD), the ongoing debate often centers around the effectiveness of collaborative group learning versus individual efforts. Research consistently highlights the superiority of group-based approaches, such as communities of practice, which foster camaraderie, shared learning, and diverse perspectives (Lane, 2015; Romero & Vasilopoulos, 2020). Embracing group dynamics not only enhances the effectiveness of PD initiatives but also cultivates a supportive environment conducive to collective problem-solving and continuous improvement.

The significance of engaging in PD activities cannot be overstated. Despite occasional skepticism, studies consistently demonstrate the positive impact of PD on teacher efficacy and student outcomes (Piper, 2018; Cardamone, 2023). To this end, districts play a pivotal role in facilitating meaningful PD experiences for their staff, offering diverse opportunities tailored to individual needs and preferences. Through a multifaceted approach encompassing workshops, online courses, peer mentoring, and integrated PD within regular staff meetings, districts foster a culture of continuous learning and growth.

By prioritizing collaboration, providing diverse PD options, and embedding PD into daily practices, districts empower educators to thrive personally and professionally. This comprehensive approach to PD ultimately benefits both educators and students, enhancing the overall educational experience.

Table 3

External Delivery Systems of Professional Development

What the research says	What my district does	What I recommend
Online professional development does not work as well as face to face. (Healy et al. 2020; González-Calvo et al., 2021).	Provides multiple professional development opportunities; online, small / large group, lecture, workshops, conventions... Rarely multiple PD sessions on the same subject matter.	While online training is a great way to get trainings out to ALL staff. The authenticity is not as pure. Online trainings should be followed up in person. Provide a tier system to online trainings so educators can request coaching.
Singletons should be a part of a community of practice. (Lane, 2015; Romero and Vasilopoulos, 2020).	Singletons work in subject like / department like groups within buildings. Some teachers collaborate with peers across other districts.	Ensure ALL singletons have a community of practice. Ensure that they meet regularly to reflect on best practices for the specific subject area.

Adapting Professional Development Programs to Career Stages

Creating professional development (PD) programs that evolve alongside educators' careers is crucial for nurturing their ongoing growth and effectiveness in the classroom. Research emphasizes the importance of tailoring specialized opportunities for novice teachers, focusing on essential skills such as parent communication and classroom management (Rowan et al., 2016). As teachers advance in their careers, it becomes essential for them to reflect on their practices

and attitudes toward training to ensure that PD remains relevant and impactful (Scott, Clarkson, & McDonough, 2012).

However, it is important to recognize that the benefits of collaborative PD initiatives may decline as teachers gain more experience (Richter, 2011). Therefore, districts must design PD pathways that align with educators' evolving needs and experiences throughout their careers. This approach involves offering specialized training for early-career teachers, while providing opportunities for experienced educators to engage in advanced and reflective PD activities that cater to their seasoned perspectives.

By crafting PD programs that adapt to the various stages of an educator's career, districts can support continuous professional growth, ensuring that PD remains meaningful and effective for teachers at every level of experience.

Table 4

Professional Development Across an Educator's Career

What the research says	What my district does	What I recommend
Beginning / novice teachers should have specialized professional development opportunities to focus on specialized strategies ... such as communicating with parents and classroom management. (Rowan et al., 2016; Richter, 2011).	Send most new staff to a teachers' conference. Where they learn about "Professional Learning Communities".	Have a teaching coach be incorporated in to the on-boarding for novice teachers. This way they can have one on one development of these strategies.
Teachers should be reflective on their practices and perceptions toward training. (Scott, Clarkson, and McDonough's, 2012; Cochran-Smith, 2003).	Require end of training survey. Reflection writing times during monthly staff meetings.	These may seem weak but this is about all the district can provide. It comes down to the mindset of the individual to be authentic about reflecting on one's practices.

As teachers mature the return from a collaborative professional development initiative is diminished. (Rowan et al., 2016; Richter, 2011).	Require ALL staff to go to “monthly meetings”.	Provide a “Universal Design for Learning” approach to professional development. Allow teacher to decide how and in what area they should develop.
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Summary

I have navigated the landscape of professional development (PD) in education, analyzing its impact on classroom outcomes, growth mindset and identity, external delivery systems, and educators' career trajectories. After review of the research and an in-depth analysis of a specific school district, I have identified critical areas for enhancement and missed opportunities in my district. My action plan advocates for diversity of PD offerings and the implementation of ongoing, multifaceted experiences tailored to the unique needs of educators.

By providing multiple types of PD opportunities and fostering a culture of continuous learning, school districts can empower their teachers to refine their skills and strengthen their classroom practices. Another key finding was the importance of cultivating a growth mindset and professional identity among educators. To address this situation, my action plan puts forth a path of gathering authentic feedback from administrators. By fostering an environment where educators feel supported and valued, school districts can cultivate a culture of growth and development.

My action plan proposes offering diverse PD options and integrating PD into daily practices to foster continuous learning and growth. By tailoring PD programs to educators' career stages and providing personalized pathways for professional development, school districts can

support the ongoing growth and development of educators, ultimately enhancing the quality of education for students.

Discussion

The purpose of this study was to explore the research on of professional development in education, focusing on what influences educator engagement and how to improve practice. The literature review emphasized the importance of tailored professional development programs and a growth mindset in enhancing educator effectiveness. This section will discuss the key findings and their implications for future research and practice.

This study highlights the importance of well-designed professional development programs. By encouraging ongoing engagement, fostering growth mindsets, and customizing programs to meet educators' unique needs, schools can create a more effective and supportive environment for professional growth. These efforts will lead to better teaching practices and improved student outcomes, emphasizing the shared responsibility of educators and school leaders in shaping the future of education.

In this section, I will first discuss professional development (PD) practices that have shown impact in the classroom and take a look at long-term teaching practices and student learning outcomes as this theme develops, I discuss mindset and identity. Then, after analyzing how the literature answers my initial 3 questions, I will analyze the future of the teacher's professional development. Through these discussions, I aim to offer insights into the implications for future teachers, students, and schools, as well as suggest directions for future research. I end this section with the limitations of this study and wrap it up with a conclusion.

Discussion of Findings

In this section, I will explore the findings derived from the investigation into professional development (PD). I will discuss practices and see how the research can direct the development of PD. I will also compare a site visit to the research. This discussion will be focusing on PD and the impact on classroom achievement outcomes (According to Research What Professional Development Practices Have Shown Clear Achievement Outcomes in the Classroom?), the influence of structural and district policy factors on PD delivery (According to the Research How Do Structural and District Policy Factors Impact Professional Development Delivery), the optimal duration for PD to enhance student achievement (According to Research What Is an Optimal Amount of Time Professional Development Should Be Conducted to Show Student Achievement), and an additional analysis discussing future trends and conflicts in professional development. Through these discussions, I aim to address the initial questions and provide additional insights into the evolving landscape of PD in education.

According to Research What Professional Development Practices Have Shown Clear Achievement Outcomes in the Classroom

Research underscores the pivotal role of professional development (PD) practices in driving clear achievement outcomes within the classroom. Effective PD encompasses a spectrum of strategies, ranging from scripted interventions to comprehensive training and Universal Design for Learning (UDL) frameworks, each contributing uniquely to educational success. Through a synthesis of diverse research strands, educators gain valuable insights into the multifaceted nature of PD and its profound influence on classroom dynamics.

Cardamone et al. (2023) emphasized the efficacy of written tier 1 supports in providing foundational assistance to students, while Saliba's (2019) dissertation on UDL highlights the importance of laying a robust groundwork for student learning. Ongoing, collaborative, and job-embedded learning opportunities have emerged as particularly impactful PD practices. Desimone (2009) suggests that PD achieves maximum effectiveness when it involves active learning, maintains a content-focused approach, and encourages collective participation. These strategies enable teachers to seamlessly integrate new methodologies into their teaching repertoire, thereby enhancing student outcomes significantly.

The delivery of professional development is intricately influenced by structural and district policy factors. These factors play a critical role in shaping the effectiveness and accessibility of PD initiatives. Darling-Hammond, Hyler, and Gardner (2017) emphasize the importance of supportive policies and coherent visions at the district level, which can enhance the quality and consistency of PD programs. Fragmented policies and inadequate support structures pose significant challenges to the effectiveness of PD initiatives, impeding the achievement of desired outcomes.

Research indicates that effective PD practices are characterized by ongoing, collaborative, and job-embedded learning opportunities. These practices, coupled with supportive structural and district policies, facilitate the seamless integration of new strategies into classroom practices, ultimately leading to improved student outcomes. As educators navigate the complexities of PD implementation, it becomes imperative to leverage evidence-based approaches and policy frameworks to optimize the impact of professional development initiatives within educational settings.

My research site offers a range of PD opportunities, including online PD, monthly staff meetings, weekly professional learning community (PLC) meetings, and conferences during onboarding for new staff members. However, one notable gap is the lack of revolving PDs, meaning topics are only discussed annually without any further check-ins or discussions. Additionally, there is room for improvement with designated professional development days throughout the school year.

The practices at my research site align with several effective PD strategies identified in the literature. For example, the weekly PLC meetings reflect the importance of collaborative and job-embedded learning opportunities, which Desimone (2009) identifies as crucial for effective PD. The site's onboarding conferences for new staff members can be seen as an attempt to integrate new teachers into the school's culture and provide them with the necessary skills and knowledge from the start of their date of hire, echoing the structured approaches advocated by Guskey (2002).

The absence of ongoing discussions and revolving PD topics is a significant departure from best practices. Research suggests that continuous learning and regular follow-ups are essential for sustaining the impact of PD (Darling-Hammond et al., 2017). The lack of designated PD days (4 days) throughout the school year further limits the opportunities for teachers to engage deeply with new content and reflect on their practice, which are critical components of effective PD as noted by Cochran-Smith (2003).

Despite these gaps, the research site is a state leader in graduation rates, indicating that some aspects of its PD practices are effective. This success could be attributed to the strong emphasis on collaboration and the structured support provided during the onboarding process.

However, to fully align with the research on effective PD, the site could benefit from implementing more frequent and ongoing PD sessions, ensuring that professional learning is a continuous and iterative process rather than a monthly event.

While my research site exhibits several effective PD practices, there is significant room for improvement. By incorporating more frequent and revolving PD sessions, and designating specific PD days throughout the school year, the site could further enhance its PD program. Aligning more closely with research-based strategies would likely lead to even greater improvements in teaching practices and student outcomes, reinforcing the importance of ongoing, collaborative, and job-embedded professional development.

According to the Research How Do Structural and District Policy Factors Impact Professional Development Delivery

Research underscores the critical role of structural and district policy factors in shaping the delivery and effectiveness of professional development (PD). These factors determine not only the accessibility but also the quality of PD initiatives, directly impacting educational outcomes. The literature reveals that PD is most effective when it is collaborative, ongoing, and embedded within the job context, supported by coherent policies at both the school and district levels.

Research indicates that participation in PD, particularly within collaborative groups, yields significant benefits. Gallagher et al. (2011) highlights the value of collaboration among colleagues, emphasizing that group dynamics play a crucial role in enhancing PD effectiveness. Tschannen-Moran and McMaster (2009) discuss the positive impact of follow-up coaching on

teachers' self-efficacy beliefs toward new strategies, underlining the importance of ongoing support in PD delivery.

Tailored PD programs that adapt to the evolving needs of educators over time are crucial for effective PD delivery. Dweck's (2016) concept of growth mindset is particularly relevant here; educators who embrace a growth mindset are more likely to benefit from PD programs, which emphasizes the need for personalized learning experiences over a one-size-fits-all approach. This personalized approach fosters a culture of continuous growth and improvement among educators.

The role of district policies in PD delivery cannot be overstated. Darling-Hammond, Hyler, and Gardner (2017) stress that supportive policies and a coherent vision for PD at the district level can significantly enhance the quality and consistency of PD programs. In contrast, fragmented policies and inadequate support structures can hinder the effectiveness of PD initiatives, posing significant challenges to achieving desired outcomes.

At my research site, the delivery of PD reflects both strengths and areas for improvement when compared to research findings. The site offers a range of PD opportunities, including online learning, monthly staff meetings, and contractual PD that adheres to a high standard of delivery. The site's previous administration secured a designation as a model Professional Learning Community (PLC) through Solution Tree, a private education consulting company. This partnership has fostered a culture of PD that attracts educators worldwide to visit and learn from the site's practices.

The district mandates small Communities of Practice (CoPs) with dedicated team leaders who meet monthly aligns well with research advocating for collaborative and ongoing PD. These

CoPs enable educators to engage in meaningful, job-embedded learning, mirroring the collaborative benefits highlighted by Gallagher et al. (2011). The district-level dedicated Social Emotional Learning (SEL) and Positive Behavioral Interventions and Supports (PBIS) teams meet monthly for specialized training. These teams exemplify the kind of structured support that research identifies as critical for effective PD (Darling-Hammond et al., 2017).

There are areas where the site can improve to better align with research-based best practices. For instance, while the site's PD opportunities are diverse and collaborative, there is a need for more frequent and continuous PD sessions. Regular follow-ups and ongoing discussions throughout the year, rather than annual check-ins, would better support the sustained professional growth of educators. This aligns with Tschannen-Moran and McMaster's (2009) findings on the importance of follow-up coaching for maintaining teacher self-efficacy.

The growth mindset highlighted by Dweck (2016) is a critical area for the site to nurture further. Encouraging educators to adopt a growth mindset can enhance their engagement with PD initiatives and promote a culture of continuous improvement. Tailoring PD programs to meet individual educator needs and providing personalized learning experiences would be beneficial in fostering this mindset.

The research site demonstrates several effective PD practices that align with established research, particularly in its emphasis on collaboration and high-quality PD delivery. There is room for improvement, particularly in ensuring continuous and personalized PD opportunities that foster a growth mindset among educators. By aligning more closely with research-backed strategies, the site can further enhance its PD program, ultimately leading to improved teaching practices and student outcomes. This reinforces the importance of supportive district policies and

a coherent vision for PD, which are essential for optimizing the impact of professional development initiatives within educational settings.

According to Research What Is an Optimal Amount of Time Professional Development Should Be Conducted to Show Student Achievement

Research consistently emphasizes the significance of the duration and frequency of professional development (PD) in achieving substantial improvements in student outcomes. Studies suggest that the optimal amount of time for PD to be effective is sustained engagement over a minimum of 20 hours per subject matter. This extended duration allows teachers to deeply immerse themselves in new content, experiment with and refine their teaching strategies, and receive ongoing feedback, all of which are essential for translating learning into improved student outcomes.

According to Yoon et al. (2007), professional development initiatives need to be sustained over a minimum of 20 hours to show positive impacts on student achievement. This extended period enables teachers to internalize and apply new instructional strategies effectively. Desimone (2009) supports this by highlighting that PD is most effective when it involves active learning and provides opportunities for teachers to engage in collective participation and reflection over time. Darling-Hammond, Hyler, and Gardner (2017) argue that ongoing, collaborative, and job-embedded learning opportunities are crucial for PD success, aligning with the need for sustained and repeated engagement.

At my research site, PD opportunities include a mandated 7.5 hours of tech time annually, monthly staff learning meetings, several days of training before the beginning of the school year, and specialized cohort training for new educators. The site's monthly staff learning

meetings align with the research suggesting the importance of ongoing and collaborative learning opportunities (Desimone, 2009). The specialized training and cohort system for new educators' echo Townend's (2016) emphasis on equipping novice teachers with the necessary skills and knowledge to navigate their roles effectively. The site mandates only 7.5 hours of tech-related PD annually, which is significantly below the 20-hour threshold recommended by research (Yoon et al., 2007). All staff members follow a common PD pathway regardless of their experience level, which does not cater to the diverse needs of teachers at different career stages.

This one-size-fits-all approach can be less effective, as more experienced educators may have different learning needs compared to novice teachers (Richter et al., 2011).

To align more closely with research-based best practices, my research site could implement several improvements. First, extending the duration of PD opportunities to meet or exceed the 20-hour minimum recommended by Yoon et al. (2007) is essential. This could involve adding more training days throughout the school year or increasing the length of monthly sessions. Developing tailored PD pathways that address the specific needs and career stages of educators would ensure that novice teachers receive the foundational support they need, while experienced teachers can engage in advanced and specialized training relevant to their roles (Rowan & Townend, 2016). Incorporating follow-up sessions and continuous learning opportunities that allow teachers to revisit and refine new strategies is crucial for maintaining the effectiveness of PD initiatives and ensuring long-term improvements in teaching practices (Tschannen-Moran & McMaster, 2009).

The research site exhibits a strong commitment to professional development, particularly through its onboarding programs and regular monthly meetings. However, to maximize the

impact on student achievement, it is essential to increase the total hours dedicated to PD and introduce more individualized learning pathways. By aligning its practices more closely with research-based recommendations, the site can enhance the effectiveness of its PD programs, ultimately leading to improved educational outcomes for students.

Extra analysis: Future Trends and Conflicts in Professional Development

Analyzing future trends in professional development reveals a shift towards more personalized and adaptive learning experiences for educators. The growing emphasis on a growth mindset and the need for continuous professional growth will likely drive the development of PD programs that are flexible and responsive to the changing needs of educators over their careers (Heslin, Keating, & Ashford, 2020). Conflicts in the field of professional development often arise from the disparity between theoretical ideals and practical implementations. While the literature clearly emphasizes tailored PD programs and growth mindsets (Steinert, O’Sullivan, & Irby, 2019), many districts still adhere to a one-size-fits-all approach. Observations at the example district revealed such clashes; despite an awareness of best practices, resource constraints and policy fragmentation hinder effective implementation. To resolve these clashes, it is essential to align district policies with research-backed PD strategies, ensure adequate resource allocation, and foster a supportive culture that prioritizes continuous professional growth for educators. Addressing these areas can enhance the effectiveness of professional development initiatives, leading to better teaching practices and improved student outcomes.

Implications for Future Teachers, Students, Schools

The findings of this study have significant implications for shaping the professional development landscape, the learning environment, and overall school culture. To enhance educator effectiveness and positively impact student learning, it is crucial to implement tailored professional development programs. Administrators must prioritize the customization of PD initiatives to meet the specific needs and preferences of educators. This approach will foster an environment conducive to continuous learning and improvement. Teachers must actively advocate for their professional development needs and collaborate closely with administrators to influence the direction of PD programs. Adopting a growth mindset is essential, promoting resilience, adaptability, and a commitment to continual improvement. Educators should regularly reflect on their professional roles, understanding how their attitudes and actions influence their effectiveness in the classroom.

Schools and districts must proactively assess the effectiveness and relevance of existing PD initiatives. This evaluation should be thorough, focusing on alignment with educational objectives, responsiveness to teacher needs, and the integration of diverse teaching methodologies. Regular assessments ensure that PD offerings remain flexible, multifaceted, and adaptable to the evolving needs of educators and learners. Districts should invest in coaching and mentoring as critical strategies to support teacher growth and development. Providing ongoing coaching can offer personalized assistance, facilitate the implementation of best practices, and ultimately enhance classroom effectiveness. Administrators should prioritize these investments to ensure that teachers receive the support they need to thrive.

Fostering a positive growth mindset among educators is paramount. School leaders and administration must provide the necessary support and guidance to cultivate a culture of growth and development. Collaborative learning opportunities and leadership support are instrumental in nurturing this mindset, promoting continuous improvement within schools. To implement these findings, educators and school leaders should design targeted interventions and continuous engagement strategies aimed at enhancing classroom outcomes. This includes providing ongoing support and resources tailored to educators' specific needs. Flexible professional development programs that accommodate the varying needs of educators at different career stages are essential for meaningful engagement and professional growth.

In summary, this study emphasizes the importance of thoughtful and well-designed professional development programs. By encouraging continuous engagement, fostering growth mindsets, and customizing initiatives to meet educators' unique needs, schools can create a more effective and supportive environment for professional growth. These efforts will lead to improved teaching practices and better student outcomes. Administrators and state officials must embrace these recommendations to create a dynamic and effective professional development landscape, ensuring that educators are well-equipped to meet the evolving challenges of the educational environment.

Implications for Future Research

Based on the findings, there are several avenues for future research in the field of professional development in education. Comparative analyses hold the promise of uncovering best practices for enhancing educator growth and student learning, which can inform the design of future professional development programs. Investigating the influence of leadership on

educators' attitudes towards professional development and its broader impact on organizational culture and student achievement is essential for fostering effective leadership practices in education. By considering these implications and offering practical suggestions for practice and future research, this study contributes to the conversation surrounding professional development in education.

Researchers need to conduct longitudinal studies that can track the impact of professional development interventions on educator practices and student outcomes over time. By examining changes in educator practices and student performance longitudinally, researchers can gain valuable insights into the long-term effectiveness of various professional development initiatives. Comparative analyses present an opportunity to identify best practices for enhancing educator growth and student learning. By comparing the outcomes of different professional development approaches, researchers can determine which strategies are most effective in improving educator effectiveness and student outcomes. This comparative approach can inform the design and implementation of future professional development programs, ensuring they are grounded in evidence-based practices.

Research on the role of leadership in promoting a culture of learning within schools is also warranted. Understanding how leadership practices influence educator engagement and effectiveness in professional development is crucial for informing effective strategies. By exploring the role of leadership in fostering a culture of continuous learning and growth within educational institutions, researchers can identify strategies that support the ongoing development of educators and contribute to positive outcomes for students.

To guide future research endeavors, researchers might consider investigating effective strategies for sustaining educators' engagement in professional development throughout their career trajectory. Exploring the impact of specific interventions and modalities on student learning outcomes can also provide valuable insights into the most effective approaches for improving student achievement. Examining the role of leadership in promoting a culture of continuous learning and growth within educational institutions can inform the development of leadership practices that support effective professional development strategies. By addressing these research priorities, researchers can advance the understanding of professional development in education and contribute to the ongoing improvement of educator effectiveness and student outcomes.

Limitations of the Project

My research journey for this project underwent a significant evolution. Initially, my aim was to research professional development (PD) practices within the education sector. Which morphed into a look at some of the dynamics of PD. I broadened my focus and looked at concepts such as mindset, teacher identity, and the role of administrative support in fostering positive learning environments. Over several months, of extensive visits to the online university library and writing center, I uncovered literature between 2002 and 2023, to help me piece together my project.

The research highlighted the pivotal role of administrative support in facilitating effective professional development. This broader perspective enabled me to gain insights from multiple angles and uncover nuanced approaches to supporting teacher growth and improving student outcomes. Throughout this process, I remained mindful of maintaining relevance and focus.

While exploring a wide array of ideas and perspectives, I ensured that my research remained centered on the education sector. I deliberately excluded practices from other fields to align with the project's objectives and target audience, look at education specific publications with in academia.

I made a conscious effort to minimize personal distractions, such as extracurricular activities and volunteer work, to dedicate ample time and attention to my research. This commitment allowed me to thoroughly explore the literature and develop a comprehensive understanding of the complexities surrounding professional development in education.

Conclusion

Professional development (PD) is essential for teachers because it promotes continuous learning, supports personal and career growth, and empowers them to positively impact student success. By actively engaging in professional development opportunities, teachers demonstrate their commitment to excellence in teaching and their dedication to the continuous improvement of education. This study underscores the significance of tailored PD programs and the cultivation of growth mindsets among educators. It highlights the joint responsibility of teachers and school leaders in crafting inclusive and impactful PD initiatives.

In summary, this study emphasizes the importance of thoughtful and well-designed professional development programs. By encouraging continuous engagement, fostering growth mindsets, and customizing initiatives to meet educators' unique needs, I can create a more effective and supportive environment for professional growth. Ultimately, these efforts will lead to improved teaching practices and better student outcomes, highlighting the shared responsibility of educators and school leaders in shaping the future of education.

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