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BEST PRACTICES IN TEACHER PROFESSIONAL DEVELOPMENT

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Executive Summary

Powhatan County Public Schools aims to enhance its professional development (PD) model to strengthen teacher learning, engagement, and instructional effectiveness. Research consistently shows that high-quality PD strengthens teaching practices which in turn improve student outcomes. This report examines Powhatan County Public Schools' current PD structure and explores strategies to implement a more effective and sustainable PD model that aligns with Powhatan's goals, fosters professional learning, and improves student success.

Currently, Powhatan's PD framework is fragmented, relying on isolated training days with minimal structured follow-up, which limits its long-term impact. Research highlights that effective PD must be ongoing, relevant, and embedded in instructional practice to facilitate classroom application. Without a more cohesive approach, the division may face continued teacher disengagement, weakened instructional impact, and hindered student achievement.

To enhance PD while maintaining cost efficiency, Powhatan County Public Schools can consider four policy alternatives:

1. Periodic Professional Development Days (Current Practice, Enhanced)
2. Job-Embedded Coaching Model
3. Teacher-Led Professional Learning Communities (PLCs)
4. Micro-Credentialing for Professional Development

It is recommended that Powhatan adopt a two-pronged approach to address this issue: 1) enhance current periodic professional development and 2) implement targeted job-embedded coaching. The Division Innovative Learning Team, in conjunction with the Chief Academic Officer, will oversee implementation to ensure fidelity.

Ultimately, a cohesive, sustained PD model will increase teacher engagement, strengthen instructional quality, and improve student achievement. By prioritizing structured, job-embedded learning in the division's PD framework, Powhatan County Public Schools can foster a culture of continuous learning while ensuring high-quality instruction for all students.

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Introduction

Teachers play a critical role in shaping student success, with research consistently demonstrating that effective teachers are a key driver of student achievement. Given the significant impact teachers have on learning outcomes, it is vital to ensure that teachers are supported and continually improving. High-quality professional development (PD) has been shown to positively influence teaching practices, ultimately improving student achievement. For instance, one hour of PD can increase student test scores by an average of 0.43 percentile points (Yoon et al., 2007). Given that states like Virginia use academic success as a measure of both workforce potential and economic growth (VDOE, 2022), investing in teacher learning is a key policy priority. Therefore, high-quality PD is essential for fostering teacher growth, enhancing student development, and strengthening instructional effectiveness.

Professional development is essential for continuous learning across professions, allowing employees to refine skills and stay current with industry advancements. In education, PD is often implemented to meet state and federal standards that emphasize teacher quality and student outcomes (Kennedy, 2016). However, research indicates that for PD to be effective, it must be sustained, job-embedded, and structured to ensure the transfer of training into daily classroom practice.

Powhatan County Public Schools, like many school divisions (districts) across the United States, invests in PD. However, its current PD model consists of three isolated training days per year with minimal structured follow-up support. This makes it difficult for teachers to apply new instructional strategies effectively. As a result, teacher participation in PD has been inconsistent, and its impact on instructional quality remains limited.

This project aims to provide an evidence-based framework for strengthening Powhatan's PD model, ensuring that professional learning is engaging, relevant, and embedded within teachers' daily work. By leveraging existing instructional support staff and implementing research-based PD structures, Powhatan can increase teacher participation, improve instructional quality, and ultimately enhance student outcomes.

Problem statement

Powhatan County Public Schools' current professional development (PD) model is ineffective due to its fragmented structure, lack of sustained learning opportunities, and limited relevance to teachers' daily instructional needs. As a result, teacher engagement in PD remains low, limiting its impact on instructional quality and student outcomes. Research indicates that effective PD must be relevant, ongoing, and structured to facilitate the transfer of training into classroom practice. To address these challenges, Powhatan must adopt a more cohesive PD framework that incorporates on-the-job practice, iterative feedback, and collaborative professional development models to improve instructional effectiveness and drive better student outcomes.

Client overview

Powhatan County Public Schools is a rural county in Virginia serving approximately 4,300 students taught by approximately 350 teachers across five schools (three elementary schools, one middle school, and one high school). The division is committed to fostering high-quality teaching and continuous professional growth to drive student success.

This analysis is being conducted for Powhatan County Public Schools' new Chief Academic Officer (CAO), Dr. Angela Stewart, who began her role in the 2024-2025 academic year. One of Dr. Stewart's strategic priorities is to enhance PD opportunities for teachers in her division. To do this, Dr. Stewart's goal is to not simply increase participation in PD. She seeks to improve PD's overall impact by boosting teacher excitement toward it. Ultimately, ensuring that PD is structured in a way that supports application in the classroom and creates a culture of continuous learning in the division.

By examining how Powhatan can better structure and sustain PD over time, this analysis will provide recommendations that align with Dr. Stewart's vision for a stronger, more effective professional development system in her division.

Background

Historically, professional development in Powhatan was delivered through multi-day, in-house conferences at the start of the school year. However, since the COVID-19 pandemic, Powhatan has faced structural challenges. Funding constraints forced this annual PD conference to consolidate into a one-day summer event called "Empower." Additionally, state-mandated PD requirements strain teachers' ability to participate in division-led PD initiatives. This year, for example, the Virginia Literacy Act (VLA) required K-8 teachers to complete 18-26 hours of reading modules. Due to these conflicting priorities, only high school teachers were able to attend the summer "Empower" event.

Powhatan County Public Schools currently structures its PD around three full-day training sessions per year—one before the school year, one in the Fall, and one in the Spring. These sessions introduce teachers to new division initiatives and instructional strategies but are not supported by sustained learning, interconnected coaching, or collaborative follow-up. As a result, teachers struggle to consistently apply and refine these strategies in their classrooms. Division leaders describe the current PD model as fragmented and misaligned with teachers' ongoing needs. Research has shown that high-quality PD is a key factor in improving teacher effectiveness, and that when PD is sustained and aligned with teachers' needs, it leads to lasting improvements in teaching practices (Darling-Hammond, Hyler, & Gardner, 2017; Sims et al., 2021). Given that teacher quality is one of the most significant drivers of student achievement, Powhatan's PD system must be reevaluated to ensure it fosters meaningful and lasting instructional improvements.

Originally framed as an issue of teacher motivation, division leaders and research findings now suggest that the core challenge lies in the structure and coherence of Powhatan's PD framework. While teachers receive training on new instructional strategies, the current PD system lacks reinforcement through ongoing learning opportunities, limiting long-term impact in the classroom.

Despite these challenges, Powhatan has substantial instructional resources that could be leveraged to enhance PD effectiveness. As shown in Figure 1, the division employs math and literacy coaches, STEM coaches, instructional technology resource teachers (ITRTs), and innovative learning coaches across its schools. These embedded supports offer opportunities for ongoing feedback, coaching, and peer collaboration which are critical elements of effective PD. At the same time, these resources are not currently integrated into a cohesive, continuous professional learning framework.

Research indicates that effective PD must be structured, job-embedded, and sustained to ensure the transfer of training. In Powhatan, instead of working as a cohesive whole, PD has often been implemented in fragments that are not tied to an overarching PD framework. This results in incongruent training which then reduces teacher engagement and limits long-term instructional improvements. By aligning existing instructional supports with best practices in PD, Powhatan has the opportunity to develop a more relevant, sustained, and impactful system of professional learning that better serves both teachers and students.
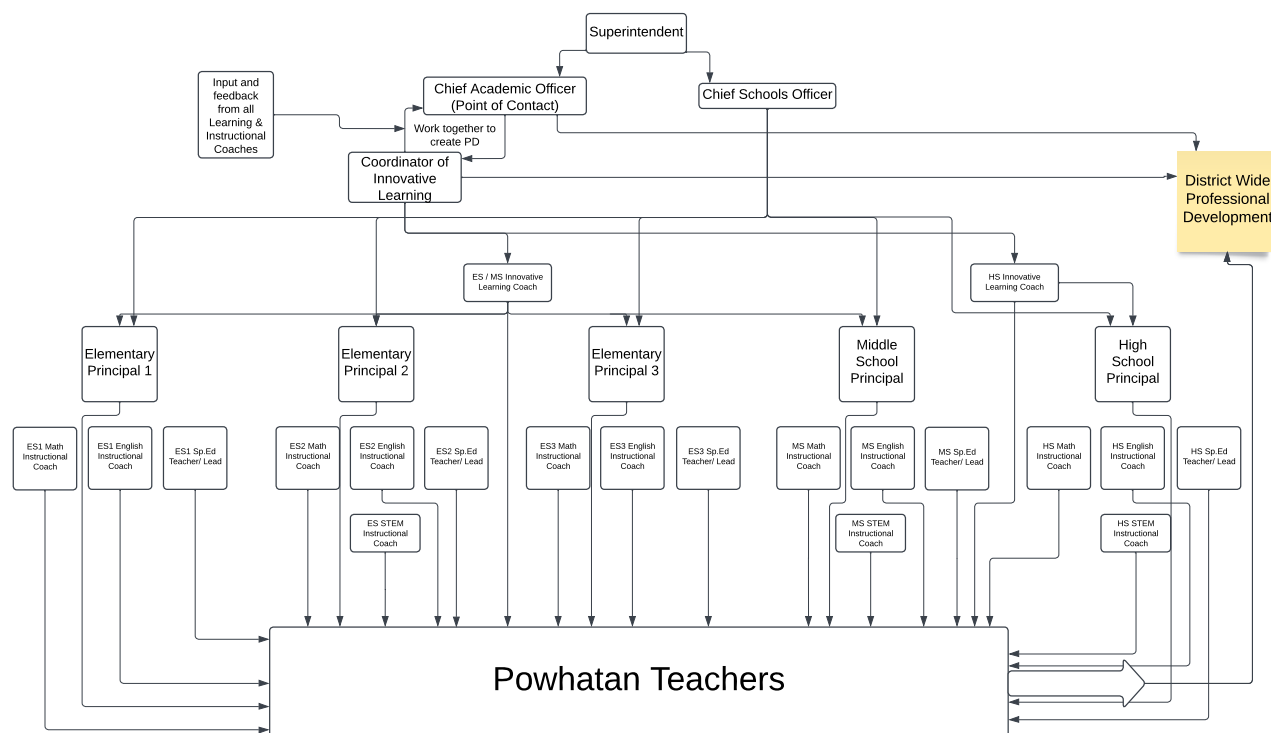

Figure 1. Governance map of Powhatan's teachers' instructional supports.

Evidence on Potential Solutions

Fortunately, the factors that increase teacher motivation towards professional development often overlap with those that enhance its effectiveness, such as a teacher's beliefs about the benefits of participation (Osman & Warner, 2020). This alignment suggests that strategies aimed at improving PD effectiveness can also strengthen teacher engagement in division PD.

Motivation and positive outcomes are closely tied to a teacher's broader reasons for participating in PD, including career growth, student impact, and personal improvement. Research indicates that the most critical factor in successful PD for K-12 teachers is content relevance (Blank, Smith, & Alas, 2008; Darling-Hammond, Hyler, & Gardner, 2017; Gore et al., 2021; Sims et al., 2021). In this context, success is defined as PD that leads to measurable increases in student achievement. Content relevance refers to how well PD aligns with teachers' instructional needs, division priorities, and classroom challenges to ensure practical application and meaningful impact. By addressing real-world instructional challenges, relevant PD increases the likelihood that knowledge gained outside the classroom will be effectively applied inside the classroom, ultimately improving student outcomes (Sims et al., 2021).

While the specifics of PD content should be tailored to each division's unique context - and may vary significantly from division to division - the core principles of effective PD remain consistent. Therefore, I will focus on the implementation, structure, and transfer of training of teacher PD models, all of which are grounded in evidence-supported best practices. Research consistently demonstrates that effective PD programs share key characteristics, regardless of content. These include well-timed and spaced sessions, active learning methods, and robust support systems for transferring new skills into the classroom. By adhering to these best practices, divisions can ensure that their PD initiatives are both relevant and impactful.

Implementation

Program implementation refers to the timing, frequency, and duration of professional development sessions, all of which play a crucial role in program effectiveness. Scheduling PD during convenient times—such as during school hours or on designated PD days—can maximize teacher participation and engagement (Darling-Hammond, Hyler, & Gardner, 2017).

Research suggests that PD programs spread over time, rather than condensed into a short period, are more effective (Hennessy et al., 2022). This spaced approach allows teachers to gradually implement, revisit, and refine new strategies in their classrooms. A meta-analysis conducted by REL Southwest (2007) found that PD programs averaging 49 hours in length led to a 21-percentile point increase in student achievement. While this finding highlights the potential benefits of extended training, there is limited empirical evidence specifying an optimal duration for PD programs. Beyond broad recommendations, research does not definitively support a specific number of hours or days as ideal.

While increasing the duration of PD can enhance opportunities for teachers to engage with content and practice new skills, it also raises program costs. Given the variability in PD program goals and contexts, decisions regarding duration should be made with careful consideration of the intended outcomes and available resources.

Structure

The structure of professional development programs is a critical factor in their effectiveness. Different formats (external vs. in-house), delivery methods (face-to-face vs online), and learning methods (experiential vs. lecture based) can significantly impact how well teachers engage with and apply new knowledge and skills. While not studied extensively, it is possible to form general positives and negatives of potential format implementation but is not generalizable beyond that.

External PD often involves bringing in an outside speaker or organization to lead training sessions, typically held off-site. This approach exposes teachers to broader educational trends and fresh perspectives. However, because it is removed from the classroom context and not directly led by the division, its immediate relevance to daily teaching practices may be limited (Pearson, 2021). In contrast, in-house PD is designed to address the specific needs of a school, fostering a sense of community and shared purpose among staff. While this tailored approach ensures alignment with school priorities, it may also limit exposure to diverse ideas and innovative solutions beyond the school's immediate context (Pearson, 2021).

Another important consideration is whether the PD is delivered face-to-face, online, or in a blended format. Ultimately, delivery methods come down to the goals set for PD. In-person PD sessions allow for direct interaction, hands-on activities, and immediate feedback, which can strengthen learning and engagement (Lichtenstein & Phillips, 2021). Online PD, while potentially less interactive since it is not face to face, provides flexibility and accessibility. This allows for accommodating individualized pacing and allows teachers to fit training into their schedules more easily (Lichtenstein & Phillips, 2021). Blended PD combines the advantages of both, offering a balance between interactive, face-to-face learning and the convenience of virtual access to resources, activities, and collaboration opportunities that teachers can engage with on their own schedules (Hernandez, Archambault, & McArthur Harris, 2024). By selecting the delivery method that best aligns with the intended outcomes, divisions can maximize the impact of PD on teacher learning and classroom practices.

Effective PD programs often incorporate experiential learning methods and opportunities to choose desired learning activities. These approaches engage teachers in hands-on activities, simulations, and real-world problem-solving, making the learning experience more relevant and impactful. Experiential learning strategies ensure that teachers are not passive recipients of information but are actively involved in the learning process. Incorporating choice through breakout sessions increases engagement and relevance to each individual teachers' needs. This

engagement helps in better retention and application of new skills and knowledge (Darling-Hammond, Hyler, & Gardner, 2017).

By carefully considering the structure of PD programs, Powhatan can create more effective and engaging PD experiences that meet the diverse needs of their teachers. Tailoring the format and delivery method to the specific context and challenges of the division can enhance the overall impact of PD.

Each of these choices—PD format, delivery method, and learning approach—offers distinct trade-offs. The division should determine which combination best aligns with their specific goals, resources, and teacher needs to maximize the effectiveness of their PD initiatives. By clearly defining these alternatives, Powhatan can make more intentional decisions that enhance teacher engagement and student outcomes.

Transfer of Training

Transfer of Training (ToT) refers to the extent to which skills and knowledge acquired in professional development trainings are applied and utilized in the workplace (McDonald, 2014). While ToT is a key goal of professional development, it does not occur automatically. Research indicates that, on average, 40% of employees fail to apply what they learn in PD to their jobs. One year after training, this number rises to 66%, meaning that a majority of employees are not implementing the new skills in their work (Saks & Belcourt, 2006). This loss of ToT carries significant financial and resource costs, as organizations invest substantial assets in PD with limited return on investment.

To bridge this gap and improve ToT, research highlights three particularly effective strategies:

1. **Transfer design** – Creating a learning environment that mirrors real-world conditions.
2. **Ongoing feedback and coaching** – Reinforcing learning through structured guidance.
3. **Structured peer support** – Encouraging continuous collaboration through Professional Learning Communities (PLCs).

When financially feasible, these strategies should be implemented together to maximize the return on investment in PD.

Training Design

First, addressing transfer of training through the structure of training design is crucial. This mechanism, often referred to as transfer design in PD literature, involves creating a learning environment that closely mirrors the actual work environment. Simulations and role-playing are particularly effective for achieving this goal (Chernakova et al., 2020).

For example, in a classroom management PD session, teachers could participate in a live simulation where they practice de-escalating student conflicts. Using scripted scenarios and real-time feedback from instructional coaches, teachers refine their approach before implementing these strategies in their own classrooms. This low-risk, hands-on experience, similar to methods used in medical training, bridges the gap between theory and practice by allowing participants to apply new skills in a controlled setting.

By integrating simulations and role-playing into PD events, teachers gain hands-on experience in responding to realistic, work-related situations. This approach not only builds confidence but also improves retention and the transfer of learning into actual teaching practice. Role-playing, in particular, fosters critical thinking and adaptability, encouraging teachers to navigate challenges as they arise. Creating an immersive learning environment ensures that training translates into effective classroom implementation, making PD more impactful and sustainable.

Feedback Mechanism

In addition to learning new skills and experiencing how to use them, ongoing feedback, setting clear goals, and offering coaching create a safe environment for teachers to not only experiment but also learn from their experiences. This approach reinforces learning and supports the application of new skills in the workplace, further increasing the likelihood of ToT occurring (Darling-Hammond, Hyler, & Gardner, 2017; Kraft, Blazar, and Hogan, 2018; Sims et al., 2021).

Regular, constructive feedback helps teachers track their progress, reflect on their performance, and make targeted adjustments. Clear, achievable goals provide direction and motivation, ensuring that professional development translates into meaningful instructional improvements.

For example, instructional coaching - whether provided by mentors or division peers - offers tailored support as teachers navigate new instructional methods or classroom challenges. This continuous loop of feedback, goal setting, and coaching creates a dynamic learning environment where teachers feel empowered to experiment and refine their practice.

Workplace Support

Lastly, sustaining teacher growth requires structured peer support beyond individual feedback. Professional Learning Communities (PLCs) serve as a collaborative framework where teachers can share experiences, address challenges, and develop solutions collectively, extending the impact of professional development (Darling-Hammond, Hyler, & Gardner, 2017; Admiraal et al., 2019).

In PLCs, teachers meet regularly to discuss instructional strategies, analyze student outcomes, and reflect on research-based best practices. These structured discussions encourage peer-to-

peer feedback and collective problem-solving, fostering a culture of shared learning and professional growth.

For example, in a PLC focused on differentiated instruction, teachers might review classroom strategies, analyze student work samples, and collaboratively adjust lesson plans to better meet diverse learning needs. By embedding PD into a continuous cycle of collaboration, PLCs ensure that new instructional strategies become part of everyday teaching practice rather than isolated training events.

Application to Powhatan

Powhatan is uniquely positioned to ensure effective transfer of training without significant cost increases. As shown in Figure 1, the division already has numerous instructional and academic supports in place. One of the most expensive aspects of PD is staffing for on-the-job learning, a key driver of training transfer (Baron et al., 1984). However, rather than requiring substantial additional financial investment, Powhatan can strategically leverage existing resources to facilitate PD through ongoing feedback and peer collaboration.

Research indicates that a focus on transfer of training yields a higher return on investment in PD spending (Reid et al., 2003). By utilizing established instructional supports—such as enhancing experiential learning during PD days, optimizing instructional coaching, or creating PLCs—Powhatan can improve PD effectiveness while maximizing existing resources.

Policy Alternatives

Given the need to enhance professional development while maintaining cost efficiency, Powhatan County Public Schools can consider four practical policy alternatives. These alternatives include leveraging existing structures through Enhancing Periodic Professional Development Days, an Embedded Coaching Model, and Teacher-Led Professional Learning Communities (PLCs), as well as exploring an external approach: Micro-Credentialing for Professional Development. Each of these approaches is designed for immediate feasibility and aligns with division resources.

Alternative 1: Periodic Professional Development Days (Current Practice, Enhanced)

Overview: The current structure for professional development in Powhatan County Public Schools consists of three full-day, in-person PD sessions each year: one before the school year begins, one in the Fall, and one in the Spring. To improve teacher participation and PD effectiveness, the enhanced model restructures these PD days to incorporate interactive workshops, provide differentiated learning opportunities, and strengthen the connection between PD and classroom application. This enhanced approach ensures that PD remains a division-wide priority while offering teachers greater autonomy in selecting sessions relevant to their instructional needs.

Implementation Details: The Chief Academic Officer, Dr. Angela Stewart, in collaboration with the Innovative Learning Team, will oversee the planning of enhanced PD days. Principals will work with teachers to identify school-specific PD priorities to ensure sessions align with immediate instructional needs. Teachers will pre-register for specialized PD tracks, such as technology integration, classroom management, or differentiated instruction, allowing for a more targeted approach. Each breakout session will incorporate experiential learning techniques, including classroom simulations, peer discussions, and model lessons.

The next scheduled PD Day, Empower 2025, will serve as a pilot, integrating these enhancements before full implementation in the 2025–2026 school year. Sessions will be held in school facilities and facilitated by existing instructional and innovative learning coaches. A teacher survey conducted in the summer will inform session topics to ensure relevance.

Alternative 2: Embedded Coaching Model

Overview: While Powhatan employs instructional coaches, their support lacks a tie to a structured overarching framework. The embedded coaching model introduces a systematic, job-embedded approach where instructional coaches provide ongoing, classroom-based PD directly linked to a division wide PD framework. Rather than isolating PD into standalone workshops, teachers will receive personalized feedback and continuous support through structured coaching cycles. This approach ensures that PD is contextualized, practical, and immediately applicable to classroom instruction.

Implementation Detail: Each school will implement a structured coaching cycle in which Math, English, and STEM instructional coaches, division-level Innovative Learning Coaches, and principals coordinate efforts. Beginning in Fall 2025, 20 teachers (four per school) will participate in a pilot coaching cohort, expanding to full faculty by Spring 2026. Coaches will work with those four teachers at each school every two weeks, providing pre-lesson consultations, in-class observations, and post-observation feedback meetings. These cycles will focus on lesson design, instructional strategies, and student engagement techniques, ensuring that coaching is tailored to teacher needs.

Instructional coaches and innovative learning coaches will dedicate 50% of their time to structured coaching cycles, integrating this support into existing instructional frameworks. To measure effectiveness, observation tools and teacher self-reflection rubrics will be used to track progress. Coaching sessions will be held during planning periods and scheduled check-ins to minimize disruption to classroom instruction. This model leverages existing personnel and resources, requiring no additional hires while significantly increasing the quality and consistency of instructional coaching.

Alternative 3: Teacher-Led Professional Learning Communities (PLCs)

Overview: Teacher-led professional learning communities (PLCs) are collaborative groups of educators who work together to improve teaching practices and student outcomes. Currently, PLCs in Powhatan exist only for special education teachers. Expanding PLCs division-wide will provide all educators with structured, teacher-led collaborative learning opportunities. PLCs will foster peer-driven professional development, allowing teachers to share best practices, analyze student data, and refine instructional strategies in a supportive, collegial environment. Unlike traditional PD models, PLCs are ongoing, embedded in daily practice, and driven by teachers' real-time instructional challenges.

Implementation Details: Each school will establish a PLC Leadership Team, composed of principals, Innovative Learning Coaches, and Special Education (SPED) Lead teachers, with oversight from the Coordinator of Innovative Learning, Michelle Martin. These leadership teams will guide PLC formation, ensure alignment with school goals, and support facilitators. PLCs will meet biweekly during planning periods, with discussions centered on student work analysis, formative assessments, and instructional best practices.

PLCs will meet biweekly during planning periods, focusing on student work analysis, formative assessments, and instructional best practices. SPED Lead Teachers will serve as PLC facilitators, receiving summer training in August 2025 to develop facilitation strategies. The pilot phase will launch in Fall 2025, with PLCs forming in elementary, middle, and high schools on a volunteer basis. By Spring 2026, PLCs will be integrated into instructional planning across all schools. Meetings will take place in designated school spaces or virtually via Google Meet to accommodate scheduling needs.

Alternative 4: Micro-Credentialing for Professional Development

Overview: Micro-credentialing is a competency-based, self-paced approach to professional development model that allows teachers to earn digital badges by demonstrating mastery of instructional strategies. This model provides flexibility and empowers educators to take charge of their learning, selecting PD opportunities that directly align with their classroom needs. Unlike traditional workshops, micro-credentialing is evidence-based and requires teachers to apply new skills, demonstrating their effectiveness through real-world implementation.

Implementation Details: The Innovative Learning Team will oversee the micro-credentialing program, ensuring alignment with division instructional priorities. Teachers will engage in self-paced learning modules covering topics such as blended learning, differentiated instruction, and student engagement strategies. Each module will include research-based readings, video demonstrations, and practical application tasks. To earn a credential, teachers must submit evidence of mastery, such as a lesson plan incorporating the strategy, a recorded classroom demonstration, or a student impact reflection. Submissions will be evaluated using a standardized rubric by designated instructional coaches or innovative learning specialists, ensuring consistency and rigor.

A pilot program will launch in Spring 2026, with 30 teachers testing two micro-credential pathways—one selected by the division and one chosen by the teacher. This dual approach ensures alignment with instructional priorities while allowing for professional autonomy. The pilot will evaluate completion rates, teacher feedback, and classroom impact, guiding refinements before full implementation.

By Fall 2026, the program will expand to all teachers, integrating lessons from the pilot to optimize both pathway structures. Teachers will continue to have access to both division-directed and self-selected learning opportunities, ensuring flexibility and personalization at scale. Modules will be hosted on the division's chosen online PD platform for accessibility at any time. To encourage participation, teachers who complete multiple micro-credentials will receive recognition at PD events. Additionally, the division can seek state approval for these credentials to count toward recertification requirements, allowing teachers to earn continuing education credits necessary for maintaining certification.

This model fosters competency-based professional growth, ensuring that PD remains flexible, relevant, and impactful while supporting long-term instructional improvement.

Criteria for Evaluation

To assess these alternatives, the following criteria will be used based on Powhatan's over-arching goals:

1. Content Relevance

Professional development must address teachers' instructional needs and align with the division's educational goals. Relevant PD ensures teachers see its value and feel motivated to apply what they learn in their classrooms. This criterion evaluates whether PD content directly addresses classroom challenges and supports teacher growth. Effectiveness will be assessed through teacher feedback surveys, curriculum alignment reviews, and classroom observations. An effective PD program should be responsive to educators' evolving needs, allow them to practice learned skills in a real or simulated work environment, and remain adaptable across different teaching contexts—such as various grade levels, subject areas, and classroom settings—to maximize its impact.

2. Sustained Duration

Effective PD must be ongoing, allowing teachers to practice, refine, and integrate new instructional strategies over time. This criterion examines whether PD opportunities include follow-up sessions, coaching, or job-embedded learning that reinforces concepts beyond initial training. Research suggests that long-term engagement with PD leads to deeper teacher learning and greater instructional impact. Evaluating the frequency and structure of PD offerings will help determine whether they provide the necessary support for sustained improvement.

3. Teacher Engagement

Given that the PD model includes relevant content and sustained duration, its effectiveness ultimately depends on active teacher engagement. This criterion assesses the extent to which teachers participate, interact with, and apply PD content in their daily practice. Engaged teachers are more likely to integrate new techniques, leading to meaningful classroom changes. Teacher participation rates, post-training surveys, and classroom observations will be used to measure enthusiasm, application of learning, and overall engagement with PD initiatives. A strong PD model should foster motivation, professional growth, and a culture of continuous learning.

4. Impact on Student Achievement

The ultimate goal of PD is to enhance student learning outcomes, but this impact depends on teachers actively engaging with and applying what they learn. This criterion evaluates whether PD initiatives lead to measurable improvements in student performance, using standardized test scores and classroom assessments as key indicators. Since instructional changes stem from teacher engagement, student outcomes will be analyzed alongside teacher engagement metrics to determine the effectiveness of PD. A strong PD model should demonstrate a clear link between teacher development and student success while ensuring that engagement strategies support this connection.

5. Cost

The financial feasibility of PD programs is a critical factor in determining their implementation and long-term viability. Managing costs effectively ensures that innovative PD models can be tested, scaled, and maintained. This criterion considers both direct costs (such as training materials and facilitator fees) and indirect costs (such as teacher time and substitute coverage). Cost analyses and comparisons with existing expenditures will help determine the most economically efficient approach. An effective PD model should maximize instructional impact while remaining financially sustainable within division resources.

6. Sustainability

This criterion assesses the likelihood of sustained teacher engagement, successful transfer of training, and adaptability to evolving educational priorities. Sustainable programs ensure continuous improvement by embedding professional development into daily teaching practices and fostering innovative instructional methods. A key aspect of sustainability is alignment with long-term instructional goals while allowing for ongoing evaluation and refinement. Classroom observations and teacher feedback will help determine whether PD is regularly applied, revisited, and adapted based on emerging best practices. An effective PD model should provide lasting benefits while remaining responsive to teacher development needs and advancing division-wide educational objectives year after year.

Findings

Analysis of Policy Alternatives by Criteria

Each policy alternative will be rated from Low-High based on their ability to achieve the intended division goals and impact category.

Score	Explanation
Low (1)	Indicates a minimal ability to achieve the intended impact category and division goals. (Score of 1: High Cost - $100,000+)
Moderate (2)	Indicates a decent ability to achieve the intended impact category and division goals. (Score of 2: Moderate Cost - $50,000-$99,999)
High (3)	Indicates a great ability to achieve the intended impact category and division goals. (Score of 3: Low Cost - $0 to $49,999)

1. Periodic Professional Development Days (Current Practice)

- *Impact on Student Achievement:* **Low**; Research suggests that one-off PD days have little long-term effect on student learning outcomes without consistent follow-up. Research indicates that standalone PD sessions result in an implementation rate of only about 10%, meaning most of what is taught during these workshops is not effectively transferred to the classroom. In contrast, ongoing professional learning with consistent follow-up can significantly improve implementation rates, reaching up to 95% (Hepburn, 2024).
- *Content Relevance:* **Moderate**; Periodic PD day's success, depend on the training topics selected by the division rather than specific teacher needs. However, in the current model of 'Empower', teachers could be given some agency in which breakout sections they attend. Utilizing the responses to the teacher survey created will increase the content relevance of this alternative.
- *Teacher Engagement:* **Low**; With periodic PD days, teachers often struggle to integrate training into daily practice due to lack of follow-up or motivation to do so (Hepburn, 2024).
- *Sustained Duration:* **Low**; While periodic PD days occur throughout the year, they lack ongoing engagement between sessions. These standalone events can introduce relevant content and skills but fail to reinforce lessons without additional support structures (Darling-Hammond, Hyler, & Gardner, 2017).
- *Cost:* **Low to Moderate**; Expenses remain predictable, as "one-off" training days follow a consistent annual model and align with existing teacher contracts. However, this approach may deliver limited returns on investment since lessons from isolated sessions often do not translate into workplace practice (Lacerenza et al., 2017).
  - Facilitator Fees: $2,000–$5,000 per day (external speakers/trainers).
  - Materials & Supplies: $500–$2,000 per session.
    - Includes printed materials, books, software, and other resources.

- Food & Refreshments: $10–$20 per teacher per session.
  - Powhatan has about 350 teachers, food cost per PD Day ~$3,500-$7,000
- Substitute Teachers (if needed): $100–$150 per teacher per day.
- **Total Annual Cost Estimate:**
  - **Low Estimate** (internal facilitators, minimal extras): ~$10,000 per PD Day.
  - **High Estimate** (external speakers, full-day PD, food, subs): ~$50,000 per PD Day.
  - Annual Cost for 3–4 PD days per year: $30,000–$200,000.
- *Sustainability:* **High**; Periodic PD days are already embedded in the current system demonstrating this model's durability.

2. Job-Embedded Coaching Model

- *Impact on Student Achievement:* **High**; There is strong evidence that ongoing job-embedded coaching significantly improves student outcomes over time. This approach provides teachers with opportunities to actively practice effective strategies for supporting student learning while on the job. For instance, one study found an effect size (ES) of 0.22-0.29 after two years of training and follow-up (Darling-Hammond, Hyler, & Gardner, 2017). This indicates a small to moderate positive impact on student performance gains. While this effect size suggests that the improvement is noticeable but not substantial, even small effect sizes can be meaningful in educational settings, especially when considering the cumulative impact over time and across multiple students.
- *Content Relevance:* **High**; Job-embedded coaching is directly tied to classroom challenges and personalized to teachers' instructional needs. This approach ensures that PD is highly relevant and immediately applicable, addressing specific issues that teachers face in their daily practice. Innovative learning coaches and instructional coaches focus exclusively on training and coaching, allowing them to dedicate their full attention to teacher development and instructional improvement.
- *Teacher Engagement:* **Moderate to High**; Job-embedded coaching provides sustained, real-time, context-specific feedback and support which helps teachers feel more competent and confident in their abilities. Increased competence and confidence, in turn, increases teacher motivation (Darling-Hammond, Hyler, & Gardner, 2017). However, it is not sufficient to just designate coaches to the schools, it will be necessary to consider structure to the coaching, the depth of feedback provided, and coach's expertise in order to maximize outcomes.
- *Sustained Duration:* **High**; Job-embedded coaching provides ongoing learning rather than isolated training. Therefore, coaching would be distributed by Instructional Coaches during teacher planning periods weekly or biweekly, and biweekly or monthly by innovative learning coaches.
- *Cost:* **Low**; Job-embedded coaching utilizes current innovative learning specialists and instructional coaches, with the potential of additional responsibilities added to each coach's role.

- **Cost per School:**
  - Existing innovative learning specialists and instructional coaches taking on extra duties → No additional salary costs.
  - Hiring new full-time instructional specialists/ coaches → $50,000–$100,000 per coach in Virginia (ZipRecruiter, 2025).
- **Implementation Options:**
  - If no additional hires, cost is **low** (~$0–$10,000 for training materials).
  - If one new coach per 1-5 schools, cost is **moderate** (~$50,000–$500,000 division-wide.
- Since the division will likely use existing innovative learning specialists and instructional coaches for the first year and then reevaluate need, the cost will remain **low,** as no new hires will be made initially.

- *Sustainability:* **Moderate to high**; Job-embedded coaching's long-term feasibility depends on resource allocation and continued administrative support.

3. Teacher-Led Professional Learning Communities (PLCs)

- *Impact on Student Achievement:* **Moderate**; The impact of PLCs depends on how well PLCs translate tracking student data and discussions into classroom changes (Darling-Hammond, Hyler, & Gardner, 2017).
  - **Indicating High-Performing:** Clear focus or goals, action-oriented and reflective practice, data-driven instruction, strong facilitation and accountability, and collaboration with administration.
  - **Indicating Low-Performing:** Lack of clear focus or goals, minimal follow-through, decisions not based on student data, unstructured meetings and no accountability measures, and little to no collaboration with administration.
- *Content Relevance:* **High**; Within PLCs, teachers have the agency to select topics based on immediate classroom challenges. Collaboration ensures the selected topics are relevant and address the most pressing needs in the classroom. This approach provides ongoing, day-to-day support while sharing expertise about content and teaching practices. This results in a more tailored and impactful professional development experience, fostering a dynamic and responsive learning environment.
- *Teacher Engagement:* **High**; PLCs foster collaboration, self-reflection, increase job satisfaction, shared responsibility for student success, and peer accountability, leading to sustained changes in practice (Christensen & Jerrim, 2025). However, there are some drawbacks, such as the additional time required for meetings, potential peer tensions, and the challenge of balancing these activities with other responsibilities.
- *Sustained Duration*: **High**; PLCs occur regularly throughout the school year. PLCs would meet weekly or biweekly and be led by a designated teacher facilitator.
  - For Powhatan, this will likely be the Special Education (SPED) Lead Teachers who currently lead PLCs for SPED teachers but whose role could be expanded to encapsulate all PD at their respective school.

- *Cost:* **Low to Moderate**; PLCs require little additional funding beyond structuring meeting times and facilitator training. To increase potential buy-in, facilitators could be given a small bonus for the year.
  - **Facilitator Stipends:** $1,500–$3,000 per lead SPED teacher per year.
  - **Meeting Time (Opportunity Cost):**
    - If during planning periods → No direct cost.
    - If outside contract hours → Potential teacher stipends (~$500–$1,000 per teacher annually).
  - **Administrative Support & Tracking:** ~$5,000–$20,000 per year (data collection, scheduling).
  - **Total Annual Cost Estimate:**
    - **Low Estimate:** $7,500-$15,000(stipends for facilitators only).
    - **High Estimate:** $100,000+ (stipends for all PLC participants, admin support).
- *Sustainability:* **High;** The teacher-driven approach of PLCs is adaptable and cost-effective in the long run. It increases teachers' self-efficacy and motivation, fostering a sense of accountability to each other and the learning process.

4. Micro-Credentialing for Professional Development

- *Impact on Student Achievement:* **Low to Moderate**; The impact of micro-credentialing on student outcomes depends on the quality and rigor of credentialing programs (Horn & Arnett, 2017). Poor quality programs have little to no effect, while high-quality programs can significantly improve student outcomes by enhancing teacher skills and instructional methods.
- *Content Relevance –* **Moderate to High**; Micro-credentialing allows for individualized learning paths aligned with teachers' needs (Hunt, et al. 2019). However, the degree to which the skills learned apply to division goals depends on the specific modules required. More stringent requirements may reduce the freedom teachers experience from having choice. By developing a PD framework that includes both mandatory and elective components, there is a balance between allowing teachers to meet essential division goals while also pursuing areas of personal interest and growth.
- *Teacher Engagement:* **Moderate**; Micro-credentialing supports self-directed learning but may lack direct classroom application without structured implementation (Horn & Arnett, 2017). Teachers might find the content engaging and relevant to their personal development, but without a clear plan for integrating these new skills into their daily teaching practices, the impact on classroom instruction can be limited.
- *Sustained Duration:* **Moderate**; Micro-credentialing encourages ongoing learning, but engagement varies by individual teacher motivation and enforcement of required modules.
- *Cost:* **Moderate-High**; The digital platforms and certification providers that provide micro-credentialing can add significant costs.
  - **Cost per Teacher for Credentialing Platform:** $100–$500 per teacher per year

- Platforms like BloomBoard and Digital Promise charge in this range for micro-credential access.
  - **Certification Fees:** $50–$300 per credential.
    - Each micro-credential often carries an associated cost, similar to professional certifications in other fields. These fees can vary depending on the credential's complexity and the issuing organization's pricing structure (Tooley, 2022).
  - **Incentives for Completion (Bonuses, Salary Bumps):** $500–$3,000 per teacher (Shah, 2023).
    - In this specific example it would be $500 per credential earned with a $3,000 cap on the additional bonus a teacher can get per year.
  - **Total Annual Cost Estimate**
    - **Low Estimate** (optional program, no incentives): ~$50,000–$105,000
      - This is for a program for 350 teachers, where each teacher's participation costs approximately $150-$300 annually (considering platform access and certification fees)
    - **High Estimate** (mandatory participation, incentives for completion): $260,00-$500,000+.
      - Creating the same program for 350 teachers but with $500 incentives bringing total annual cost to $750-$1500+ per teacher.
- *Sustainability:* **Moderate;** While micro-credentialing programs benefit from the scalability and accessibility of digital platforms, their long-term sustainability depends on ongoing financial support and institutional commitment. The moderate-to-high costs associated with platform fees, certification, and teacher incentives, as well as the need for continuous content updates, make sustainability a critical factor. Additionally, ensuring sustained teacher engagement requires a balanced PD framework that combines mandatory elements with opportunities for personalized growth. Without regular evaluation and adjustments to meet evolving teacher needs and division priorities, the program's effectiveness may wane, resulting in a moderate sustainability rating.

Summary of Findings

Division Goal	Impact Categories	1: Periodic PD Days	2: Job-Embedded Coaching	3: Teacher-Led PLCs	4: Micro-Credentialing
Innovate	Content Relevance	2	3	3	2.5
Empower	Sustained Duration	1	3	3	2
Empower	Teacher Engagement	1	2.5	3	2
Inspire	Impact on Student Achievement	1	3	2	1.5
Innovate	Cost	2 ($7,000-$100,000)	3 ($0-$10,000)	2.5 ($7,000-$100,000)	1.5 ($50,000-$500,00)
Inspire	Sustainability	3	2.5	3	2
	TOTAL:	10	17	16.5	11.5

Table 1. Summary of findings for each policy alternative by criteria. Scores range from 1 (Low Feasibility) to 3 (High Feasibility). Each policy alternative is rated on a scale from Low-High based on their ability to achieve the intended division goals and impact category.

Recommendations

I recommend that Powhatan take a two-pronged approach: 1) enhance current periodic professional development, 2) implement targeted job-embedded coaching.

First, continuing periodic PD days through an enhanced model is an effective way to disseminate new division initiatives while also introducing hands-on learning experiences. The current model allows division leaders and practitioners (teachers and school staff) to maintain a direct relationship. These relationships ensure that everyone is on the same page, fostering better communication, trust, and alignment of goals, which in turn helps ensure that new initiatives are understood across the division.

Second, utilize job-embedded coaching as a way to continuously reiterate PD training. Job-embedded coaching provides ongoing opportunities for teachers to transfer skills learned during PD, into the classroom. This distinct continuation of PD initiatives is imperative to get the best return on investment for training, which increases learning of desired skills, knowledge, and their use outside of the training. This ensures that new initiatives are implemented effectively across the division.

While PLCs share similar outcomes with job-embedded coaching, Powhatan's instructional coaches and innovative learning coaches—who are already embedded in each of the five schools—are well-positioned to reinforce PD efforts. Currently, these roles exist with the intent to support PD, but there is no formalized structure guiding their ongoing, job-embedded coaching. Rather than simply introducing new PD sessions, this approach shifts instructional coaching from an informal, intent-driven model to a structured practice integrated within a cohesive PD framework. While PLCs can enhance teacher self-efficacy and autonomy, leveraging existing instructional coach roles in a more deliberate and structured way can streamline implementation at no additional cost. This strategy also promotes consistency in practice across the division, ensuring that all teachers receive uniform support and guidance—a level of coherence that PLCs alone may not consistently provide.

Through this combined method, Powhatan can disseminate desired goals and reiterate them over time. This will allow the division to create a coherent year-over-year PD framework for professional development. The increased continuity of the framework will foster a culture of continuous learning/ improvement and professional growth among teachers. These changes are expected to lead to sustained improvements in teacher motivation towards continued learning, teaching practices, and student outcomes. All of which align with Powhatan's overall goals to inspire, empower, and innovate.

Implementation

A well-structured PD model must not only incorporate research-based principles but also be feasible within the division's existing resources and constraints. The following section explores how these recommendations can be effectively implemented in Powhatan County through a three-phased approach—**Innovate, Empower, and Inspire.** This structured rollout is designed to align stakeholders, provide ongoing job-embedded coaching, and create a more cohesive and impactful PD model for teachers. However, successful execution will depend on careful planning, stakeholder engagement, and ongoing adaptation. Key implementation challenges include ensuring teacher buy-in, managing time constraints, and maintaining consistency across schools.

Timeline:

- **Phase 1: INNOVATE (Pre-Implementation - 1–2 months):** Goal setting, creating PD framework, planning PD Day content, training coaches, and communicating the plan to stakeholders.
- **Phase 2: EMPOWER (New Framework Roll-Out - 3–6 months):** Conduct initial Empower PD Day event, begin job-embedded coaching sessions, and gather feedback.
- **Phase 3: INSPIRE (Full Implementation - 6–12 months):** Full implementation of job-embedded coaching, continue periodic PD days, and assess progress.
- **Ongoing:** Continuous feedback collection and adjustments to ensure long-term sustainability.

Phase 1: INNOVATE (Pre-Implementation – 1-2 Months)

Goal: Establish the foundation for the professional development framework, align stakeholders, and ensure readiness for implementation.

Key Actions:

1. **Define Overarching Goals:**
   - Dr. Stewart and Division Innovative Learning Team identify key learning objectives for PD days and instructional specialist sessions.
   - Dr. Stewart and Division Innovative Learning Team determine the principles to be introduced and reinforced throughout the year.
2. **Develop Tiered Structure for Implementation:**
   - Dr. Stewart and Coordinator of Innovative Learning (Michelle Martin) ensure that PD days introduce new concepts and initiatives.
   - Innovative learning specialists and instructional coaches ensure that job-embedded coaching sessions provide hands-on, practical application and reinforcement with oversight from Michelle Martin.
3. **Stakeholder Engagement:**
   - **Chief Academic Officer & Superintendent:** Confer to ensure that new PD framework aligns with division's long-term goals.
   - **Division Instructional Team:** Align PD goals with division priorities and coordinate PD days.
   - **Instructional Specialists:** Prepare them for their expanded role in job-embedded coaching and support.
   - **Teachers:** Conduct needs assessments through division-wide teacher survey and engage teachers in informal discussions or focus groups to gather input on PD needs and preferences.
4. **Data Collection & Planning:**
   - Division distributes teacher surveys via email to gather input on PD needs and preferences.

o   Division Innovative Learning Team develop training materials and session outlines for both PD days and coaching sessions.

Phase 2: EMPOWER (New Framework Roll-Out – 3-5 Months, Over Summer)

Goal: Implement the new PD framework through structured PD days and job-embedded coaching.

Key Actions:

1. **Launch PD Days at summer EMPOWER event:**
    o   **Focus:** Dr. Angela Stewart introduces new instructional strategies, initiatives, or division-wide updates.
    o   **Structure:** Innovative learning team conducts interactive sessions incorporating active learning, collaboration, and discussion.
    o   **Communication:** Division leaders clearly outline how each PD session connects to ongoing coaching and classroom implementation.
2. **Initiate Instructional Specialist Coaching:**
    o   **Focus:** Pilot Cohort (Fall 2025) - 20 teachers (four per school) begin participating in structured coaching cycles.
    o   **Structure:** Math, English, and STEM instructional coaches, division-level Innovative Learning Coaches, and principals work collaboratively.
    o   **Frequency:** Every two weeks, participating teachers receive pre-lesson consultations, in-class observations, and post-observation feedback.
    o   **Content:** Lesson design, instructional strategies, and student engagement techniques, and how to address challenges in implementation.
3. **Feedback and Adaptation:**
    o   The Division Innovative Learning Team collects qualitative and quantitative feedback from teachers, instructional coaches, and innovative learning specialists.
    o   Principals, teachers, and instructional coaches track student achievement, behavioral data, and teacher engagement in PD sessions.
    o   Based on feedback and data, the Division Innovative Learning Team will adjust PD content and coaching strategies to better meet the division's goals and the needs of teachers.

Phase 3: INSPIRE (Full Implementation – 6-12 Months)

Goal: Sustain and refine the framework based on feedback and outcomes.

Key Actions:

1. **Full Integration of PD and Coaching:**

- o Coaching Expansion (Spring 2026): Structured coaching cycles expand to full faculty.
- o Coaches dedicate 50% of their time to structured coaching cycles, leveraging existing personnel and resources without additional hires.
- o Division Innovative Learning Team and instructional coaches ensure all schools are consistently implementing PD and coaching strategies by holding monthly meetings to conduct progress reports.
- o Address variations in adoption with targeted support where needed.

2. **Assessment and Continuous Improvement:**
   - o Principals, teachers, and instructional coaches gather data on instructional changes, teacher engagement, and student outcomes.
     1. Observation tools and teacher self-reflection rubrics help track progress.
   - o Division innovative learning team and instructional coaches work together to modify content and support strategies based on evidence and feedback.
   - o Sessions held during planning periods and scheduled check-ins to minimize classroom disruption.
3. **Institutionalize PD as an Ongoing Process:**
   - o Division innovative learning team in conjunction with instructional coaches establishes mechanisms for continuous learning and instructional support.
   - o Create a long-term plan for sustainability plan, including a "train the trainer" model to empower teachers to lead PD sessions.

Additional Considerations

Challenges and Mitigating Resistance:

- **Teacher Buy-In:** Some teachers may feel overwhelmed by additional training, particularly if it is perceived as another top-down initiative. To mitigate resistance, it is essential to clearly communicate the benefits of the PD framework, emphasizing its alignment with teachers' in-class needs. Personalizing coaching sessions and ensuring that teachers see direct, tangible improvements in their instruction will foster engagement.
- **Time Constraints:** Given the already demanding schedules of teachers, the timing of PD days and coaching sessions must be carefully planned. Scheduling PD on days that align with natural breaks in the school calendar (e.g., before or after holidays) can reduce disruptions. Additionally, structuring coaching sessions during planning periods or collaborative team meetings can minimize the burden on teachers' instructional time.
- **Consistency Across Schools:** With multiple schools in Powhatan, ensuring uniform implementation of the PD framework presents a challenge. Schools may have different needs, and without proper alignment, disparities in implementation quality could emerge. Regular check-ins with instructional specialists and the use of standardized PD expectations across the division can help maintain consistency while allowing for localized adaptations.

Worst Case Scenarios and Mitigation Strategies:

- **Teacher Turnover:** High turnover among teachers or instructional specialists could disrupt the continuity of the PD framework. To mitigate this risk, the division should develop a well-documented implementation plan, including training materials, coaching guidelines, and onboarding resources for new hires. Embedding PD principles into the broader professional culture of the division will also help sustain the initiative despite staffing changes.

- **Lack of Resources or Support:** If the PD framework lacks adequate funding or administrative backing, its long-term sustainability may be at risk. To address this, ensuring early buy-in from division leadership and school administrators is crucial. Additionally, exploring external funding sources (e.g., state grants, Title II or IV funding under Every Student Succeeds Act, partnerships with education nonprofits) can help maintain momentum.

Moving Forward:

By fostering a culture of continuous learning, Powhatan can empower educators to take ownership of their professional growth, collaborate more effectively, and refine their instructional practice in meaningful ways. A sustained and job-embedded PD framework will transform professional learning from a series of isolated events into an ongoing process that directly supports teachers in implementing effective instructional strategies and division-wide initiatives.

Over time, this shift will lead to improved instructional quality, increased teacher engagement, and a more collaborative and supportive professional environment. Most importantly, by committing to a cohesive and continuous PD model, Powhatan County Public Schools can drive lasting improvements in student outcomes—ensuring that every student benefits from high-quality teaching that evolves to meet their needs.

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