TEACHER SELF-DIRECTED PROFESSIONAL LEARNING

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Abstract

This white paper investigates the implementation and impact of a self-directed professional development (PD) model within a school district in Southern California, focusing on experienced teachers' engagement and growth to meet the evolving educational demands of the 21st century. Utilizing a mixed-methods approach, including surveys, focus groups, and administrator interviews, the study highlights the challenges of aligning traditional PD with veteran teachers' needs and aspirations. Findings reveal a significant preference among teachers for a more flexible, self-directed approach to PD, underscoring the limitations of a one-size-fits-all strategy. The paper discusses the integration of National Board Certification as a framework for self-directed PD, offering insights into its potential to enhance teacher efficacy, motivation, and student readiness for the future. Key recommendations include allocating dedicated time for PD activities, reevaluating compensation structures to better incentivize participation, and providing targeted training for administrators to support this innovative model. The study contributes to the discourse on teacher professional growth, suggesting that tailored, self-directed PD models can significantly impact instructional quality and outcomes in public education settings.

Organization Context

As a K-12 public education Assistant Superintendent and Superintendent, we have selected a school district in Southern California as our partner organization. The school district serves 3,300 students within a five-square-mile radius, comprising two elementary schools, one middle school, and one high school. The school district supports the professional development of its staff, including 219 classroom teachers. The challenge faced by the school district is the

need for continuous professional growth among its veteran teachers to increase teacher efficacy and ultimately prepare students for the demands of the 21st century.

Problem of Practice

The school district experiences minimal turnover among its experienced staff. Experienced staff are defined as having over 15 years of teaching experience. With 78% of the teachers described as experienced, the district struggles to provide meaningful professional development (PD) that engages these experienced educators. Additionally, some teachers work in isolation within their subject area teaching departments, limiting opportunities for collaboration and growth. The district has limited resources and growth opportunities to provide a teacher who needs to engage with colleagues in the field regularly. As such, how does the school district meet its teaching staff's unique professional growth needs? If teachers are not engaged in professional learning that is meaningful to them, it can lead to a lack of motivation, a lack of student readiness for 21st-century demands, and a lack of all students continuously achieving their fullest potential.

The self-determination theory discusses how important it is for people of all ages to engage in learning that they are interested in, which in turn increases their motivation and willingness to produce (Gagne & Deci, 2005). Additionally, the school district seeks to optimize its funding to maximize teacher efficacy and development. This belief aligns with the Human Capital Theory, showcasing that when organizations invest in their employees, it can lead to a positive return on investment (Ehrenberg and Smith, 2011).

The school district has conducted professional development sessions on topics such as 1:1 technology initiatives, grading practices, classroom management, and common assessments.

However, staff feedback through a survey indicates that the current one-size-fits-all approach does not meet their individual needs. In fact, 58% of teachers felt that the professional development opportunities did not meet their individual needs. Additionally, 87.7% of teachers surveyed indicated a desire for a more flexible, self-directed professional development option. Through interviews with the administrators, they also expressed frustration at not effectively meeting the professional learning needs of their experienced teaching staff and are eager to implement more self-directed learning opportunities for their teachers.

In order to meet the specific needs of each teacher, the school district is focused on implementing a self-directed professional development model. The self-directed professional development model would provide teachers with opportunities for professional growth that are tailored to their individual needs. Specifically, the school district is looking into utilizing National Board Certification (NBC) as the self-directed professional learning framework to advance their teachers' professional development. By engaging in self-directed professional learning experiences through NBC that are both meaningful and relevant to creating innovative and engaging classrooms for diverse learners, we believe that teachers can enhance their expertise in their respective fields. We also believe this approach will contribute to the preparation of students for colleges and careers, ensuring that they are well equipped for long-term success.

Addressing the problem of teachers not engaging in meaningful professional learning is crucial as lagging engagement in professional learning can lead to decreased motivation among teachers, hindering student readiness for the demands of the 21st-century (Sims & Fletcher-Wood, 2021). Furthermore, teacher efficacy and morale is impacted when professional learning is not meaningful. Failure to address this issue may result in students not reaching their fullest

potential and being ready for colleges and careers. For the school district to allow teachers to grow and develop continuously, district administrators must understand that factors such as limited resources and growth opportunities, isolation within subject area departments, and the lack of tailored professional development options must be reviewed and addressed.

Evidence Gathering

We gathered evidence through a survey that documents 67.7% of teachers expressing a preference for a more self-directed professional development model, with an additional 20% contemplating such a model. While the school district actively recruited teachers to participate in self-directed professional development, they seek guidance on the benefits of expanding it to all teachers. As part of their recruitment efforts, the district initiated a pilot program for self-directed professional development, yielding insights into potential modifications to better suit teachers' needs. Currently, ten teachers are participating in this pilot, utilizing the National Board Certification framework.

In our preliminary data collection, these ten pilot teachers shared their perspectives on the model, highlighting its benefits and concerns. A key advantage they noted was increased engagement in learning and enhanced self-reflection in their teaching practices. However, they also expressed concerns about their limited access to learning from a broader teacher community, as they represent only 5% of the teaching population. The Board of Education and district administration aim to assess the pilot model objectively to make necessary adjustments that align with the needs of all staff. If successful, this approach can be extended to other districts.

Feedback from staff, gathered through surveys following previous professional development sessions, indicates dissatisfaction with the current one-size-fits-all approach.

Approximately 58% of surveyed teachers felt that the district's professional development offerings did not cater to their individual needs. However, it is crucial to acknowledge the potential existence of assumptions and biases the district may have in the scope of this inquiry. These assumptions may encompass the belief that a self-directed professional development model will engage veteran teachers without a clear understanding of the precise strategies required for its successful implementation and motivation. Furthermore, there may be assumptions regarding the contentment of experienced teachers with their current professional learning experiences, whereas surveys conducted by the school district administrators consistently indicate teachers' desire for more meaningful and growth-oriented learning opportunities.

Therefore, in order to ensure meaningful and effective teacher development, the school district must adopt a deliberate and well-informed approach to teacher professional development including the possibility of self-directed professional learning. To achieve this, there must be further data gathering through various means, including surveys targeting teachers, empathy interviews involving diverse stakeholders, and a thorough review of teacher evaluation data. This holistic approach will allow the school district to make informed decisions about the structure and implementation of professional development that aligns with its goals and addresses the evolving needs of its teaching staff.

Stakeholders and Decision-Making

Stakeholders for this project include the Board of Education, districtwide administration, the district's instructional coach, pilot teachers, and the full certificated teaching staff. The project will inform decisions related to both implementing a professional development

model that best meets the needs of the school district's teachers as well as allocating resources accordingly. Understanding each stakeholder's positionality in Human Capital Theory and developing and implementing a successful professional development model will help the school district use its budgetary funds in a data-driven way that will meet the needs of its staff. Currently, professional development is led by in-house administrators on topics that they find relevant to the field. This is a cost effective model in that no additional funding is required to provide such training; but teachers and administrators alike are expressing their concern with this offering in that most teachers are veteran teachers who have already engaged in most of the professional development topics being offered.

The Board of Education and administration aspire to see all teachers engage in a self-directed professional development model with the hopes that they achieve National Board Certification (NBC). This model aims to facilitate the teachers growth and alignment with the current teacher evaluation expectations of the district in their strategic plan, providing opportunities for reflection on their learning. It is crucial to assess teacher satisfaction with these professional learning offerings. Failing to enable meaningful growth in accordance with district evaluation expectations may lead teachers to express ongoing frustrations with the existing professional development model. Furthermore, the Board of Education is concerned about the potential for teachers to become stagnant in their positions, impacting the perceived level of support for all students.

Review of Literature

One pivotal work in the area of effective teacher professional development is Darling-Hammond et al.'s (2017) work titled, "Effective Teacher Professional Development," which

outlines key areas of professional learning that impacts teacher efficacy. Through their research, they find the importance of aligning professional development efforts with broader educational goals, ultimately enhancing teacher practice and, subsequently, student outcomes. They also share the importance of allowing teachers to collaborate with one another during professional learning and ensuring that professional learning has a sustained duration. They discuss the importance of content-focused professional development that enhances teacher practice, while also incorporating active adult learning strategies which includes self-directed learning. Offering self-directed learning to teachers while ensuring that the professional learning opportunities that are offered are content-driven and aligned to the district's goals, can ultimately help teachers engage in the learning process and also continuously improve their practice.

Enhancing teacher quality and improving student learning outcomes

Research on self-directed professional development showcases its potential to enhance teaching practices and contribute to improved student learning outcomes. Engaging in self-directed learning empowers teachers to take ownership of their professional growth, explore areas of interest, and acquire the knowledge and skills that directly benefit their instructional methods, particularly beneficial for mid-career educators (Louws et al., 2017). Moreover, self-directed professional development often thrives within collaborative contexts like Professional Learning Communities (PLCs), enabling teachers to work collectively, leverage diverse perspectives, and foster professional growth (Kelly, 2017). These forms of job-embedded, content-focused, and self-directed professional development have consistently demonstrated their capacity to yield improved teacher efficacy and positive student outcomes (Darling-Hammond et al., 2017).

Self-directed PD allows teachers to identify and pursue their learning goals autonomously, enhancing their engagement and motivation in professional growth. As demonstrated in a study focusing on Dutch secondary school teachers, this approach empowers educators to select learning domains and activities based on their personal and professional needs, fostering a deeper commitment to teaching excellence (Louws et al., 2017)

Another aspect of self-directed professional development is its potential to improve instruction. A study exploring how teachers use student data to customize a web-based science unit on plate tectonics reveals that such autonomy in curriculum customization not only enhances teacher learning but also supports student self-directed learning. Teachers who engaged in this form of professional development demonstrated a shift in their understanding of self-directed learning, from a teacher-centric to a more student-centric approach, ultimately leading to more effective teaching and learning that is student-centered (Gerard et al., 2022).

Furthermore, Kyndt et al.'s (2016) research delves into the motivations driving self-directed professional development and the significance of informal learning activities within a teacher's professional growth. This study emphasizes the intrinsic nature of adult learning, shedding light on how teachers seek out autonomous opportunities to enhance their expertise. Additionally, Desimone et al.'s (2003) study investigates the dynamics of meeting the diverse needs of teachers in self-directed professional development, especially those already proficient in their roles. Their findings stress the importance of tailoring professional development to individual needs and maximizing its impact on both teacher practice and student outcomes.

Lastly, the study by Raemdonck et al. (2022) highlights the role of self-directed learning orientation in sustaining employability among teachers across different age groups. This research showcases the importance of fostering a culture of continuous learning which is crucial for

navigating the evolving educational landscape in the 21st Century and meeting diverse student needs effectively.

Conditions needed for effective self-directed learning.

Lopes & Cunha (2017) identified three essential conditions that contribute to the effectiveness of self-directed learning: consistent will over several years, implementation of action-research cycles, and explicit didactic intentionality. These conditions provide a framework for teachers to engage in meaningful and impactful self-directed professional development.

Consistent Will Over Several Years

Self-directed learning requires a sustained commitment and motivation from teachers. It is not a one-time event but a continuous process of growth and development. Teachers need to have a consistent will to engage in self-directed learning over an extended period of time. This consistent determination ensures that teachers remain dedicated to their own professional growth, seek out relevant learning opportunities, and persist in their efforts to improve their teaching practices (Lopes & Cunha, 2017). The absence of sustained commitment to self-directed learning may limit collaboration and knowledge sharing among educators. Teachers who are less motivated to participate in ongoing professional development activities may be less likely to contribute to professional learning communities or engage in collaborative initiatives, which can hinder the overall growth and effectiveness of a school district.

Implementation of Action-Research Cycles

Action research is a systematic approach to self-directed learning that involves teachers actively investigating and reflecting on their own teaching practices. By engaging in action-research cycles, teachers can identify areas for improvement, implement changes, collect data to evaluate the effectiveness of their strategies, and reflect on the outcomes. This process allows teachers to continuously refine their teaching practices and make evidence-based decisions (Lopes & Cunha, 2017).

Explicit Didactic Intentionality

Didactic intentionality is the intentional planning and design of self-directed learning experiences. Teachers need to have a clear understanding of their learning goals, identify the specific knowledge and skills they want to develop, and design teaching strategies that align with their goals. Having explicit didactic intentionality ensures that self-directed learning experiences are focused, relevant, and targeted to meet teachers' individual needs and goals (Lopes & Cunha, 2017).

Additionally, Darling-Hammond et al. (2009) emphasize the significance of job-embedded professional development and collaborative structures within organizations. By embedding professional development opportunities within the context of teachers' daily work, districts can create supportive systems that allow for self-directed learning. Collaborative structures, such as Professional Learning Communities (PLCs), provide teachers with opportunities to engage in shared inquiry, reflection, and collaboration, fostering a culture of continuous improvement and self-directed professional development.

Lastly, Van Eekelen et al. (2006) studied self-directed learning in vocational education. Their findings highlight the importance of organizational support in facilitating self-directed

learning experiences. Organizations can provide access to resources, mentorship, and opportunities for collaboration within existing schedules and professional development cycles, creating an environment that supports self-directed professional development.

Development of inclusive teaching practices

Self-directed professional development is a powerful tool for enhancing pedagogical practices among teachers. Froiland and Davison's (2014) study showcased the positive impact of self-directed learning on teachers' beliefs and practices related to inclusive education, revealing increased awareness of diverse student needs. Similarly, Kennedy's (2016) research demonstrated the positive effects of self-directed professional development, fostering more inclusive pedagogy and a favorable attitude toward inclusive education. By engaging in self-directed learning, teachers can explore tailored areas within inclusive practices, including differentiated instruction and culturally responsive teaching, aligning their professional growth with individual needs and contributing to a more inclusive educational environment. These insights collectively emphasize the value of self-directed professional development, reinforced by the consistent will and didactic intentionality of educators, in elevating both teaching practices and student outcomes.

<p style="text-align:center">Project Questions and Framing</p>

Ehrenberg and Smith (2011) describe human capital as elements of accumulated experiences and knowledge that, combined with nonhuman capital such as natural resources, comprise the wealth of any given community. Human capital theory acknowledges that the

investments in human capital, such as teacher professional development, also have an associated cost ranging from out-of-pocket training or tuition costs to time that could have been spent earning more money.

Understanding that investment into educational levels in employees can increase productivity and efficiency, the school district has set up structures to cover training costs and incentivize future increased earnings to support employees in their development. As such, human capital theory serves as the basis to better understand whether the self-directed professional development model created by the school district will increase teachers' perceptions of their instruction in the classroom.

In addition, we utilized self-determination theory which focuses on understanding the factors and interest that drives motivation to continue in professional learning (Gagne & Deci, 2005). Please refer to the following conceptual map that guided our research.
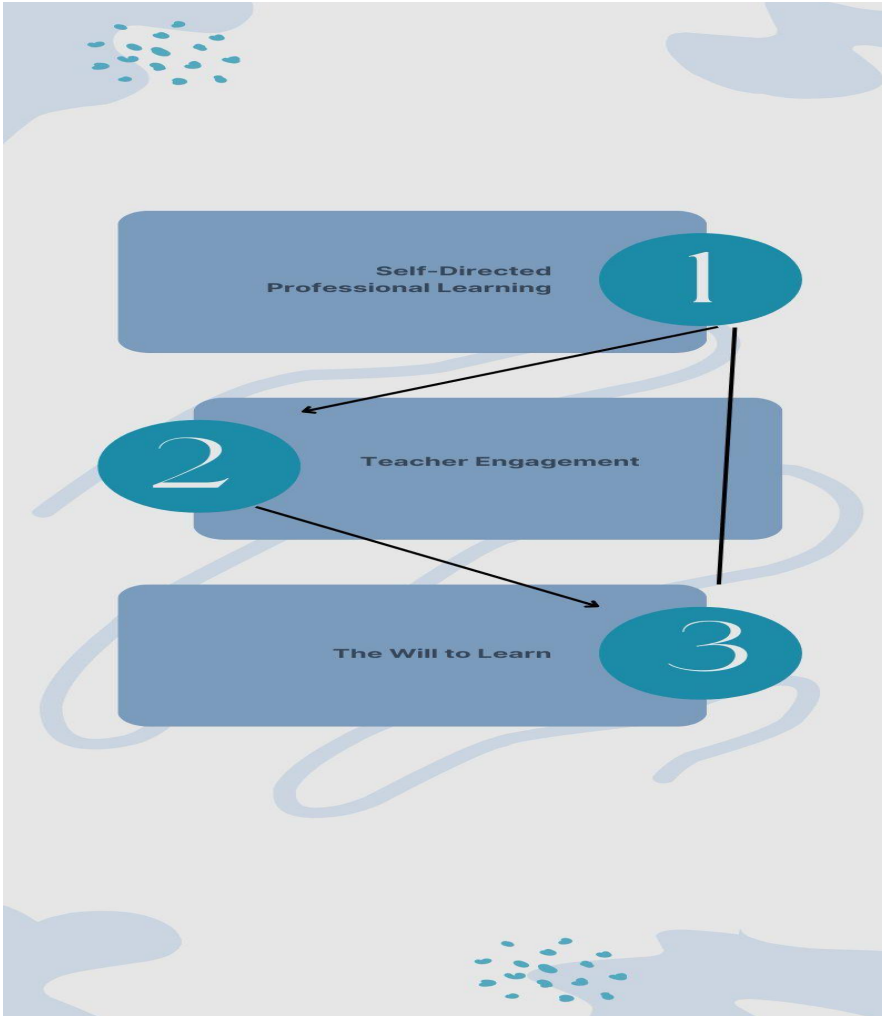
Key Conceptualizations

Our conceptual framework revolves around three key variables:

1. The first variable is **self-directed professional learning**. This variable represents the autonomous learning process in which teachers take ownership of their professional growth and development. Self-directed learning empowers educators to take ownership of their professional growth, explore their areas of interest, and acquire the knowledge and skills that directly benefit their instructional methods (Louws et al., 2017).

2. The second variable is **teacher engagement**. Teacher engagement refers to the level of enthusiasm and commitment that educators exhibit. It includes their active participation

in professional development, collaborative efforts, and a proactive approach to continuous improvement in teaching practices. Research suggests that engaged teachers are more likely to invest in their own professional growth and actively seek opportunities for self-directed learning (Louws et al., 2017).

3. The third variable is the **will to learn**. The will to learn refers to a psychological state in which individuals have a genuine intrinsic desire and motivation to be a part of learning activities. It is characterized by a proactive approach to exploring new knowledge and practices, actively seeking opportunities for self-improvement, and demonstrating a curiosity to discover and apply new ideas. This concept is crucial for understanding individuals' readiness and openness to engage in self-directed learning experiences (Van Eekelen et al., 2006).

Our conceptual framework has direct relationships between these three variables. With our research, we saw that self-directed professional learning positively influences teacher engagement, and that the will to learn plays a role in shaping teacher engagement in self-directed learning. Additionally, we saw that a will to learn mediates the relationship between self-directed professional learning and teacher engagement (Van Eekelen et al., 2006).

Project Questions

The conceptual framework serves as the foundation for our project questions:

1. What are teacher, principal, and central office administrator perspectives of the strengths and weaknesses of the existing PD model at the school district? This question explores

the existing professional development model in relation to our variables, providing

insight on how it impacts teacher engagement and the will to learn within the district.

2. What opportunities and challenges might a self-directed PD model offer for enhancing

    teacher growth and development? This question revolved around how self-directed

    professional learning can positively influence teacher engagement and inclusion while

    identifying the associated opportunities and challenges.

3. How might a self-directed PD model align with district initiatives outlined in the strategic

    plan? This question assesses the relationship between a self-directed professional

    development model and the school district's strategic initiatives, helping to bridge the gap

    between the district's goals and teacher engagement.

Project Design

A pilot program involving ten teachers has provided initial insights into the benefits and

concerns of the self-directed professional development offering. Teachers reported increased

engagement in learning and self-reflection but expressed concerns about limited access to

learning opportunities.

This study will evaluate the school district's professional development model and its

piloted self-directed offering using a holistic approach, encompassing teacher and administrator

surveys, empathy interviews, and a thorough analysis of teacher evaluation data. Key

stakeholders include the Board of Education, administrators, instructional coaches, pilot teachers,

and all teaching staff. The study will inform decisions pertaining to the professional

development model and the possible extension of the self-directed offering. The desired

outcome is to offer teachers a professional development model that supports their growth and development while ensuring alignment with district evaluation criteria.

Below is a Matrix Table that outlines the project questions, data collection methods, and additional information relevant to our research.

Project Questions	Data source	Data Collection Method(s)
Question 1: What are teacher, principal, and central office administrator perspectives of the strengths and weaknesses of the existing PD model at the school district?	-Teachers, Principals, and Central Office Administrators -Existing PD program documents and reports	-Surveys/questionnaires -Focus Groups -Analysis of existing PD program documents
Question 2: What opportunities and challenges might a self-directed PD model offer for enhancing teacher growth and development?	-Teachers and Administrators -Case study schools/districts -Research literature on self-directed PD	-Surveys/questionnaires for teachers and administrators. -Interviews with teachers and administrators -Analyze at least 3 case studies of schools/districts with self-directed PD models -Conduct a literature review on self-directed PD best practices.
Question 3: How might a self-directed PD model align with district initiatives outlined in the strategic plan?	-The school district's strategic plan documents -District leaders and stakeholders	Analysis the school district's strategic plan by thoroughly analyzing the strategic plan documents. -Interviews with district leaders.

Data Collection

Our rationale for selection of site and participants was based on an identified need for professional development in the school district. The need for the school district was to create a self-directed professional development model to meet their teachers where they are in their learning process. Research shows that on average, National Board Certified (NBC) teachers outperform other teachers with the same levels of experience by 0.07 and 0.03 standard deviations in elementary math and ELA respectively, which is roughly equivalent to one to two months of additional instruction (Bloom, Serwer, & Wagner 2015). The school district's administration committed to using the National Board Certification process as the structure for the self-directed professional development. Based on the research done by Lopes and Cunha (2017) on what components an effective self-directed professional development model must have, the administration created a two-year self-directed professional development model for their teachers to earn the National Board Certification. Now that the first cohort of teachers have completed the self-directed professional development model, the Board of Education is seeking data to support them funding the model and if the model was effective.

Since the model is unique to this school district and the Board of Education is seeking data to support this model, the participants comprised two distinct populations: current completers of the professional development model and the teachers that have not enrolled. The presence of the researchers was not a burden on the school district, as the school district has not been a participant in a study in the past six years, the Board of Education has requested the information, and one of the researchers is its Assistant Superintendent of the Educational Services department. The location for the study is a public school district in one of the

wealthiest communities in Southern California, with ample resources set aside for teacher professional development. Within this setting, there are four schools ranging from transitional kindergarten to senior students. The teachers that are being surveyed as participants range from 2 years in the field of education to 37 years. The researchers of this study found it important to survey all teachers in the district, first, to determine why the early adopters stayed with the model and completed it plus any suggested changes to the model to benefit those enrolled after them. Secondly, we sought to understand why the currently enrolled participants are staying with the program and any suggested changes to ensure the model is effective. Lastly, we surveyed all the other teachers in the district that are not enrolled or have not completed to determine why they have not signed up, and what roadblocks are preventing them from participating. We aimed to explore the perceptions of all three of these groups to either change the model or celebrate the success of the model.

In our study, we conducted a survey (Exhibit A) distributed to 219 teachers via Google Form by the District Instructional Coach. Out of these, 65 teachers responded to the initial survey, which focused on their perspectives towards self-directed professional learning and the current district professional development practices. Among the respondents, 57 expressed interest in a self-directed professional development model, and 10 of these teachers agreed to participate in a pilot program. A follow-up survey (Exhibit D) was sent to the remaining 47 teachers who did not join the pilot, with 44 (94%) of them responding.

Additionally, we involved all 4 district principals through interviews but did not extend this to the assistant principals. Our study also included interviews with three members of the eight-person district cabinet administration which included the Superintendent of Schools, the Assistant Superintendent of Personnel Services, and the Assistant Superintendent of Business

Services. These interviews (Exhibit E) were designed to understand their roles in the district's strategic planning, instructional practices, teacher evaluation, union support, professional development, and budget management.

For our analysis, we obtained quantitative data from the surveys. We utilized frequencies and percentages to summarize the strengths and weaknesses of the district's professional development as perceived by the respondents. Furthermore, we conducted an analysis comparing responses between teachers with more than 15 years of experience and those with less.

Data Instruments

We reviewed three types of documents: general PD plans and records and strategic plan documents. For general PD plans, we reviewed a minimum of 5 relevant documents, including reports, agendas, PD plans, evaluations, and feedback records. Documents were subjected to content analysis. Common themes and issues related to the existing PD model's strengths and weaknesses were identified. We analyzed PD documents in case studies of schools/districts with self-directed PD models.

For the strategic plan, we analyzed the school district's strategic plan by thoroughly analyzing the strategic plan documents, focusing on the sections related to professional development for teachers. We analyzed this document to (1) compare how PD is described and positioned with respect to other district initiatives, and (2) how the written plan triangulates with insights from key district leaders that were interviewed. The focus will be on identifying key ways in which the self-directed PD model aligns with the goals and priorities outlined in the strategic plan. A content analysis approach will be used to identify specific references to

professional development and district initiatives within the strategic plan documents. Themes and will be summarized.

Data Collection Protocols

Our data collection goal was to gather insights from various teacher groups, including early adopters of the professional development model, current program participants, and those who had not yet signed up for the program. We aimed to understand why teachers joined the program, what aspects of it were effective for them, whether their instructional practices changed as a result, and identify potential improvements to enhance program effectiveness for all participants. The purpose behind surveying the currently enrolled teachers is the same as the completers since both groups could be considered early adopters of the self-directed professional development model.

We achieved a final sample of 10 pilot teachers that we surveyed (Exhibit B) for the model out of the 57 teachers that expressed interest in a self-directed professional development model. Of the remaining 47 teachers that expressed interest and were surveyed, excluding those for the pilot, 44 teachers responded. Plus all 4 principals, and 3 district cabinet administrators were interviewed. The data collection protocol first entailed the distribution of a different survey to all members of each participant group.

Due to time constraints, participants were given one week to complete the survey, with a reminder sent midweek to all teachers. Once the survey window closed, the data was reviewed to invite participants from the completers group to attend a focus group (Exhibit C). Participants were selected based on a range of teaching experience and different subject areas and grade levels taught. While plans are in place to interview teachers who are not participating in the

program to gather their perceptions, this portion of the research study was not completed due to scheduling constraints.

Below is the breakdown of who participated in the pilot program:

Level of Experience:	Teaching Staff: 219 teachers	Pilot Teachers: 10 teachers	Percentage of representation of pilot teachers from each experience level
Experienced (15+ years)	172 (78%)	7 (70%)	4%
Mid-Career (5-14 years)	35 (16%)	2 (20%)	6%
New (1-4 years)	12 (6%)	1 (10%)	8%

Demographics:	Teaching Staff: 219 teachers	Pilot Teachers: 10 teachers	Percentage of representation of pilot teachers from each demographic
White	189 (86%)	5 (50%)	3%
Asian	20 (9%)	4 (40%)	20%
Black	7 (4%)	0 (0%)	0%
Hispanic	3 (1%)	1 (10%)	33%
Male	41 (19%)	1 (10%)	2%
Female	178 (81%)	9 (90%)	5%

Here is the data on the teachers that have not participated in the model:

Level of Experience:	Teaching Staff: 219 teachers	Surveyed Teachers: 44 teachers	Percentage of representation of teachers that completed the survey from each experience

			level
Experienced (15+ years)	172 (78%)	30 (68%)	17%
Mid-Career (5-14 years)	35 (16%)	11 (25%)	31%
New (1-4 years)	12 (6%)	3 (7%)	25%

Demographics:	Teaching Staff: 219 teachers	Surveyed Teachers: 44 teachers	Percentage of representation of teachers that completed the survey from each demographic
White	189 (86%)	37 (84%)	20%
Asian	20 (9%)	4 (9%)	20%
Black	7 (4%)	1 (2%)	14%
Hispanic	3 (1%)	2 (5%)	67%
Male	41 (19%)	12 (27%)	30%
Female	178 (81%)	32 (73%)	18%

In our demographics comparisons, we were able to interview or survey a close representation of the district's overall demographics. Our male participants were higher than the overall representation of the male population in the district and there were more mid-career participants, however overall the surveyed group is a close representation of all teachers.

Interview Protocol

For our interview protocol, a common script was used to ensure transparency with participants and build trust and rapport:

"Thank you for agreeing to speak with us a bit more about your experience in/thoughts about the program. As you may recall from the survey, we are

interested in gathering your perceptions about the process so that we might

improve the model for future cohorts. We want to encourage you to speak as

freely as you feel comfortable and assure you that your confidentiality is

important to us. The information that you provide here will be used to look for

patterns across the participants, and any identifying details will be removed or

generalized so that it is anonymized. Anything you share with us will be shared

only with the research team. Any data shared beyond that will be in aggregate,

without personally-identifiable information. Finally, please feel free to ask any

questions of us if you would like to know more about this project. Do you give

your permission for us to record this conversation?"

Plan For Research Validity

Our research study is specifically designed to examine how teacher training in self-directed professional development impacts teachers' perceived effectiveness, their perspective on the professional development provided to them, and how the process has changed the way in which teachers have altered their daily teaching practices within the existing curriculum. Our goals were to find out if the early adopters of self-directed learning through NBC find the training effective in improving their practice, understand what motivated them to volunteer to join, and get feedback on what would motivate others to want to join as well. We wanted to find out if other teachers would be willing to go through the same process so that the Board of Education at the school district can further fund such professional training.

We incorporated several data validation procedures to make sure our qualitative research design is rigorous. These include triangulation, participant validation, strategic sequencing, dialogic engagement strategies, multiple coding, structured reflexivity practices, and mixed-

methods research. Triangulation is one method in which we will make sure that our data is triangulated to validate the study when we obtain and assess survey results and focus group responses. We analyzed this data and cross-reference it with one another to make sure the data sources are accurate, leading to credibility and dependability. We also ensured that through participant validation strategies, during our focus groups, that we ask participants about how they feel about the research process. We repeated what we have heard and asked participants to clarify if we understood them correctly. We also asked if there is any information that is missing from the questions we ask, and furthermore, asked for their suggestions as well. It was important that we find out all the information possible so that we do not allow our interpretation to skew the data.

For strategic sequencing, we started by asking survey questions to get data and then pull a focus group based on the results of the survey. Furthermore, the flow of questions that we have prepared allowed us to sequentially understand a teacher's thinking around self-directed learning through NBCT. Dialogic engagement strategies took place through having two researchers, one of whom is not an insider into the organization, interpret the data without the bias of understanding the organization. Since the one insider is an Assistant Superintendent in the district, we understand that the way the questions were asked had to be framed in a non-evaluative and non-judgmental way so that we elicit the most accurate data possible. We made this very clear during the process. Having two researchers was also part of multiple coding, allowing both of us to code and then interpret the coding and see how interpretations are similar, which provided interrater reliability.

Our research team also engaged in structured reflexivity practices, which are intended to allow us to understand our biases and how they can impact our interpretation of the work. Both

researchers are Central Office Administrators in two different districts across the country. We are very cognizant of biases and understand that as leaders, we may come with both similar and varied biases on what we expect from our teachers. Our diverse geographic locations and backgrounds allowed us to cross check our biases when trying to understand how our teachers' perceive self-directed learning. We continued to be conscious of our biases when conducting our research.

We also engaged in mixed-methods research by collecting our survey data and quantifying the results of the questions that were on a 1-4 scale. This was combined with the questions that are open-ended, as well as the focus group interview questions. Engaging in mixed-methods research allowed us to not only interpret a ranking that teachers will give to some questions but truly dig deeper into understanding what motivates our teachers in their growth and development process. With our validity research design process, we still question how one researcher, who is the Assistant Superintendent of the school district, might impact participants' honesty due to their potential fear of repercussions to the job. We addressed this issue by making the process clear, supportive, and low risk, and ensuring that participants understood that the results will not be held against them. Our goal is to represent the stories and experiences of all participants in an accurate and meaningful way. However we understand as researchers that one of us holds a position of power in the school district and thus it may affect survey and interview results. The area of self-directed professional development, however, was not under that researcher's direct supervision. As such, we were conscious of this potential conflict and made careful efforts to mitigate its impact throughout the research process.

DATA ANALYSIS PLAN

We employed a data analysis protocol that had us first separately look at the layers of data available to the team. Using the research questions as a guide to highlight key data points that might provide insight, we also looked for connections that would either support or contrast with our theoretical frame, which is based on Human Capital Theory. We then brought our initial observations together as a team and compared each other's notes and findings. Through this collaborative process, we developed common key terms that would be used to code the data during a second round of analysis. We again looked at the data separately and came together to compare what we had found in the following areas:

- Demographics: gender, race/ethnicity, years of experience, highest level of education

- Survey Responses: Number of responses; Coded terms from transcripts; Identify focus group participants.

- Focus Groups: Number of participants; Coded terms from transcripts; determine key quotes that support/contrast with our Conceptual Framework; Identify individual interviews if further exploration of data is needed.

- Interviews: Number of participants; Coded terms from transcripts; determine key quotes that support/contrast with our Conceptual Framework.

Our aim in looking at the data separately and then coming together to synthesize our findings had two purposes: first, the process allowed for cross-validation of the findings and ensured that each data source was being examined at least three times by different researchers, thus minimizing missed insights. Second, it ensured that the research team could engage in reflective practices as we made sense of what we were seeing, and in doing so in a collaborative

way, we could question our interpretations and keep any biases in check as we generated further questions and conclusions.

FINDINGS

As researchers we set out to answer three project questions. The first was what are teacher, principal, and central office administrator perspectives of the strengths and weaknesses of the existing PD model at the school district? The second question was what opportunities and challenges might a self-directed PD model offer for enhancing teacher growth and development? The third question was how might a self-directed PD model align with district initiatives outlined in the strategic plan? To begin to answer these questions, there was a survey of all the teachers in the district.

Finding 1: Current teacher professional development is not well aligned to individual teacher needs.

In the survey, 80% of the teachers indicated that they did not have much say in their professional development meaning they did not get to select their PD which is outlined in Figure 1. In Figure 2, nearly 60% stated that the PD offered did not meet their individual needs. While in Figure 3, close to 70% stated they did not engage regularly in content or grade-level specific training.

Figure 1:

How often have you engaged in professional development sessions or trainings that I selected (e.g., elective professional development, online trainings, conferences, graduate or continuing coursework)?
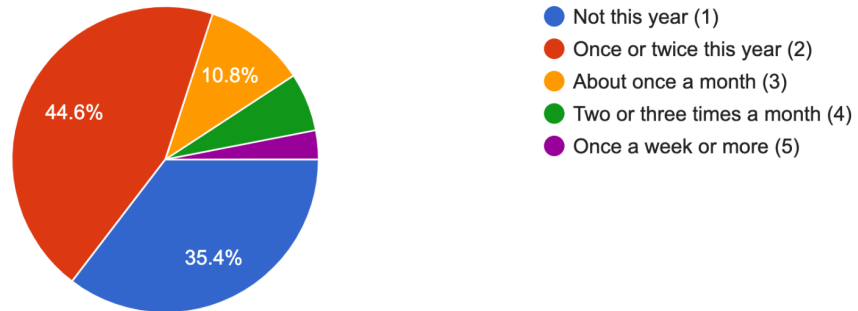
65 responses

- Not this year (1)
- Once or twice this year (2)
- About once a month (3)
- Two or three times a month (4)
- Once a week or more (5)

44.6%

10.8%

35.4%

Figure 2:

Do you feel that the professional development opportunities provided adequately address your professional growth needs?
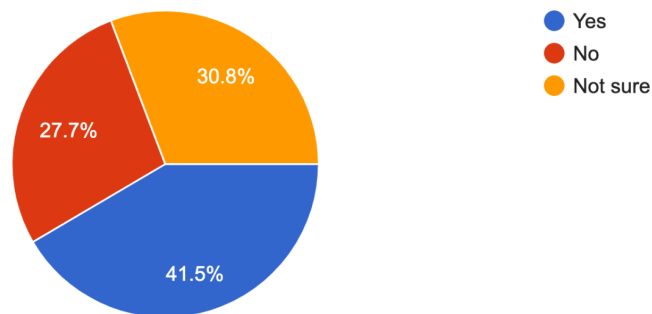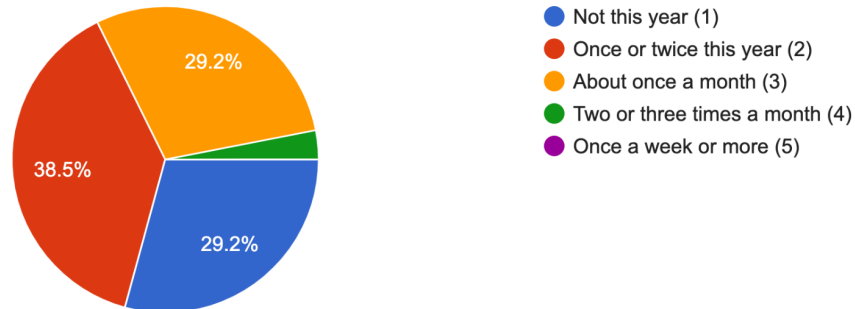
65 responses

- Yes
- No
- Not sure

30.8%

27.7%

41.5%

Figure 3:

How often have you engaged in professional development sessions for my grade-level or subject-area?
65 responses

- Not this year (1)
- Once or twice this year (2)
- About once a month (3)
- Two or three times a month (4)
- Once a week or more (5)

29.2%
38.5%
29.2%

The qualitative data provide additional evidence that current PD is not well aligned to individual teacher needs. Their feedback offers valuable insights into areas for improvement within the existing professional development framework. For instance, one teacher emphasized the importance of tailored discussions between the administration and individual departments to address specific instructional needs, highlighting a perceived gap between current practices and teachers' professional aspirations. She said, "The district or school administration needs to discuss with each department what their needs are. Many times, it feels like we get busywork." Another teacher advocated for targeted professional development sessions tailored to specialist areas and grade levels, reflecting a desire for more personalized learning opportunities. She stated, "We need more PD targeting specific specialist/grade level/subject areas."

Administrators also agreed that current PD is not aligned to individual teacher needs. Furthermore, all four principals expressed sentiments regarding time constraints impeding meaningful engagement with instructional practices during professional development sessions. Our evaluation of previous professional development agendas corroborates this sentiment, revealing a disproportionate focus on administrative requirements and mandated trainings, such

as updates on 504 plans, IEP processes, attendance protocols, CPR and First Aid, Sexual

Harassment, and safety protocols. For instance, the High School principal highlighted the

challenge of catering to diverse departmental needs within limited professional development

time, underscoring the need for more targeted and specialized learning opportunities. He

specifically said, "In general there is not enough time to meet the needs of all of our staff. Being

at the high school, I have so many individual departments that are specialized. My team tries to

include them in our overall professional development plan but there are specific needs for

teaching building techniques in robotics versus teaching socratic seminars in English." These

insights underscore the importance of the school district realigning its professional development

priorities to better support educators in enhancing their instructional practices and meeting the

evolving demands of modern education.

Finding 2: Teachers expressed a desire for more flexible and self-directed professional development.

      Among the respondents in the initial survey outlined in Figure 4, 57 (87.7%) teachers

expressed interest in a self-directed professional development model.

Figure 4:

Would you be interested in more flexible, self-directed or online professional development options to accommodate your schedule?

65 responses

- Yes
- No
- Maybe

12.3%

20%

67.7%
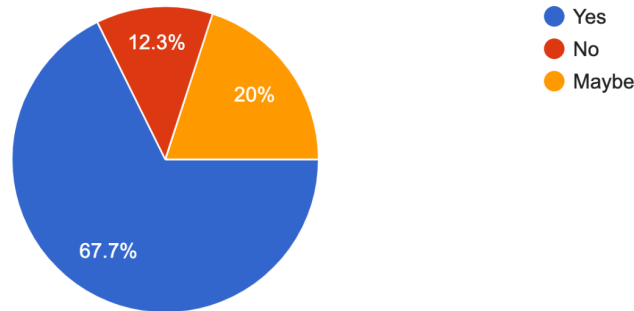
Out of the 57 teachers, 10 teachers agreed to participate in a pilot program. A follow-up survey was sent to the remaining 47 teachers who did not join the pilot, with 44 (94%) of them responding.In analyzing the survey responses of the 44 teachers in the school district who have not yet participated in the self-directed professional development model, we sought to understand their interest in pursuing this approach. The goal was to determine whether the district had the support of its teaching staff in expanding the self-directed model district-wide. Using a rating scale ranging from 1 to 4, where "1" denoted low interest and "4" signified high interest, we surveyed the teachers. Of the respondents, 24 teachers, comprising 55% of the sample, indicated a score of "2" or higher. This indicates a notable level of interest among teachers in exploring the self-directed model in its current iteration. These findings suggest that a substantial portion of the teaching staff is open to embracing a more flexible professional development learning framework, underscoring support for further evaluation and implementation.

The qualitative data also support the desire for more self-direction in PD. A senior teacher articulated the need for autonomy in selecting professional development focus areas,

emphasizing the importance of empowering educators to drive their own learning journeys. She specifically stated, "Let me pick as a professional what I want to focus on." These statements underscore the imperative for the school district to reassess its current approach and tailor professional development offerings to better align with teachers' evolving needs and preferences.

Across these administrator interviews, a prevailing theme emerged. This theme was the frustration with the existing professional development framework. District administrators expressed concerns regarding the lack of a self-directed component within the broader professional learning framework, particularly through avenues such as National Board Certification. We found that district office administrators stated that while professional learning is aligned with the strategic plan, the self-directed component of the plan through National Board Certification was a missing piece of their offering.

Finding 3: The self-directed pilot had a positive impact on teacher professional practice.

Our second question we set out to research was what opportunities and challenges might a self-directed PD model offer for enhancing teacher growth and development? Our inquiry into the opportunities and challenges posed by a self-directed PD model for enhancing teacher growth and development yielded insightful findings that resonate deeply with the experiences and perspectives of educators within the school district.

The first finding we had with this question is that teachers and principals agreed that participation in the self-directed pilot had a positive impact on them. Teachers were provided with a numeric scale ranging from 1 to 4 for their responses, with "1" indicating minimal impact and "4" showing a high impact. Out of the ten teachers surveyed, four, or 40%, indicated that the self-directed professional development had a high impact on improving their professional practice (Figure 5). Interestingly, one teacher assigned a score of "1" to this question,

emphasizing the need for a careful review of the self-directed professional development model to better serve future educators.

Figure 5:

To what degree did participating in the self-directed professional development model process improve your professional practice.

10 responses
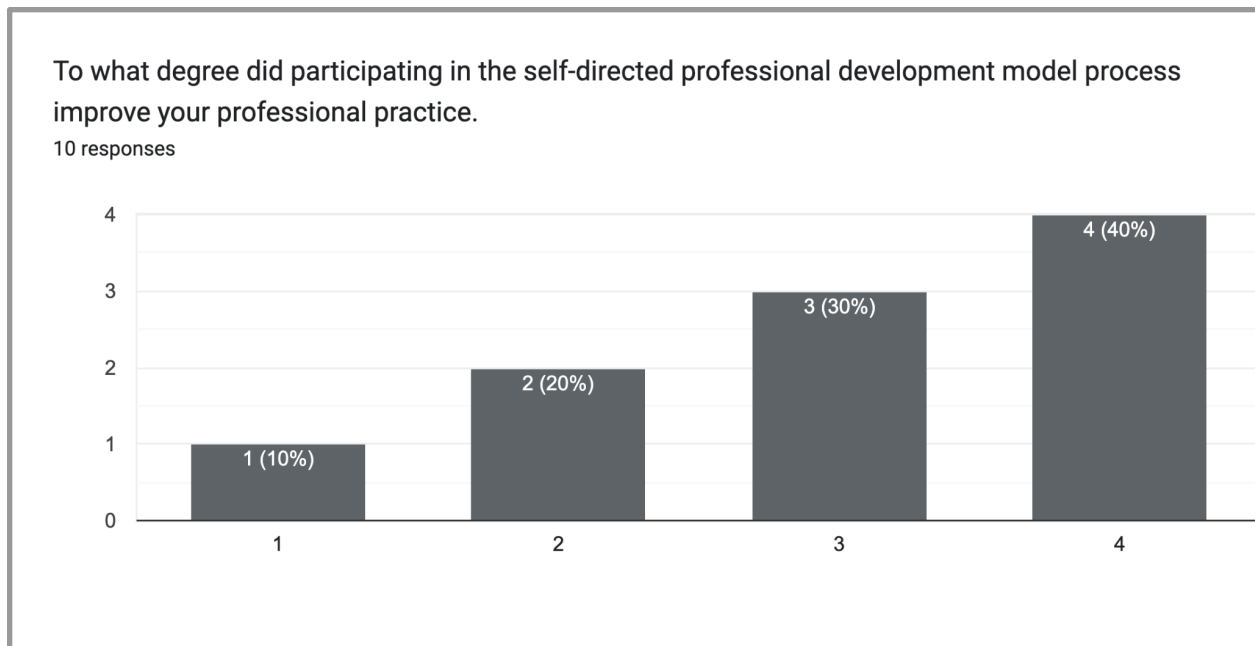
Relatedly, a full 70% of pilot teachers reported that participating in self-directed PD was important to them (see Figure 6). Teachers also provided qualitative evidence on the value of self-directed learning. Reflecting on the impact, one teacher stated, "Learning how to reflect and forced me to revise my lessons, gave me an opportunity to really understand my teaching goals and kept me focused on constantly looking for new ways to teach: collect data that drives my instruction; implement new strategies for various groups and students, and constantly collaborating with my peers and parents." Another pilot teacher stated, "Connecting with other like minded educators. Forcing me to critically think about my practice. Working on being able to articulate the things I do in my class."

Figure 6:

How important is/was participating in Self-Directed PD to you?

10 responses
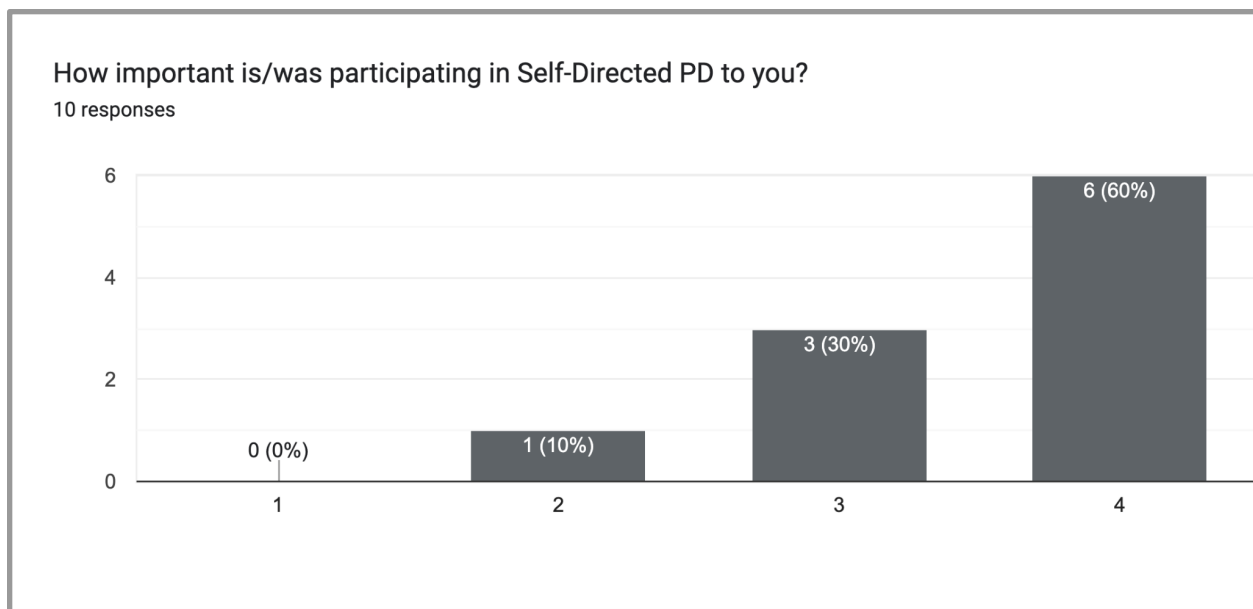
This sentiment was echoed by principals, who emphasized the benefits of tailored instructional support facilitated by the self-directed model. One of the elementary school principals put it, "Having the full days is important for larger group instruction for our teachers but like teaching students, we spend so little time on smaller group or individual instruction for our teachers. We need to flush out the self-directed model to allow for individual teacher growth that is specific to their area of need and not what the majority of the staff need." Even the middle school principal stated, "I feel that by focusing more on individual self-directed professional development, then we can use the larger days for all of the constraints put on us about legal requirements like CPR/ First Aid, implementing new technology systems, or covering logistics that we do not have enough time for in our staff meetings."

The principals unanimously conveyed their contrasting experiences with the teacher evaluation process between those involved in the pilot model and those who were not. Another elementary school principal remarked, "I see the teachers in the pilot growing per my teacher evaluation and observations in the way they are engaging students, asking really great questions

about instructional practices and seem to be more reflective of their teaching strategies. I get more follow-up questions from them after my observations than teachers not participating. They are uncovering areas of growth on their own and want resources and follow-up guidance to better themselves." Similarly, the Assistant Superintendent of Personnel Services noted, "The ten teachers in the pilot have excellent teacher evaluations with more specific feedback from the principals in their forms. I interpreted it as the principals actually are getting to know the pilot teachers' instructional needs more than those not in the current pilot."

While this constitutes a small sample, our research, comprising interviews and a review of teacher evaluations, suggests a tangible influence of the self-directed professional development program on the district's teacher evaluation system. This indicates a discernible trend where teachers in the pilot receive higher evaluative ratings compared to their peers who are not part of the pilot program. The pilot program teachers all scored 4's on the Danielson Rubric (teacher evaluation tool where 4 is the highest performance score) which is 100%, whereas the non-participants averaged 88% of the teachers scored 3's or higher on their evaluation. Furthermore, it underscores how the increased feedback provided to pilot teachers enhances principals' understanding of providing actionable feedback to all teachers in the district.

Finding 4: While teachers value self-directed learning, they also need clear guideposts to ensure they are meeting expectations for their professional learning time.

During our focus group, one teacher that found the model beneficial stated, "Learning how to reflect while forcing me to revise my lessons, gave me an opportunity to really understand my teaching goals and kept me focused on constantly looking for new ways to teach: collect data that drives my instruction; implement new strategies for various groups and students, constantly collaborating with my peers and parents." Additionally, another teacher stated, "Being

forced to reflect on my teaching skills and sparking the creativity of creating more for students-involved lessons and class work! I find myself currently thinking of more activity ideas than I have time to create for my students."

As such, our research uncovered concerns among teachers regarding the clarity of expectations and available resources for understanding what the National Board sought in its candidates' work, encompassing reflective writing to practice exams. These concerns highlight the need for improved transparency and support within the certification process, which can contribute to a more effective professional development experience for educators. For example, one teacher stated, "There were no study guides for the test or exemplars/anchor papers for the written projects. While there was a vague rubric and really vague feedback, there was no real way to know if you were on track until 6 months later. Even then, I wasn't clear on what I did well or what needed improvement. When someone takes the LSAT, they have a giant study guide to use for preparation. The National Board test had no study guide." Another teacher also indicated, "It's super rigorous, but unnecessarily so. There's no reason that there couldn't be more clarity in terms of structure and exemplars for the written projects so that candidates would know if they were on track and adjust accordingly." In an interview, one teacher suggested having previous NBC completers serve as mentors in the process, saying, "If the district were to select the National Board Certification as part of their self-directed professional development, the district should be very clear on expectations of how to earn NBC. The district should also consider adding previous completers as mentors in the process to assist new participants in understanding the work load and provide guidance on studying and submissions." Another teacher agreed with this idea by stating that it would be helpful to have already certified teachers involved to give advice to first timers. In addition, there are training tools for administration to

understand the National Board framework to support their teachers in earning the certification through using the self-directed professional development model. This will also answer the concerns that the principals, Assistant Superintendent of Personnel Services and the Superintendent had on training for the administration to be able to support the work the teachers were doing in the model.

However, there were a few teachers within our research that did not find the existing self-directed model beneficial. One teacher stated, "The way the process was structured was a challenge. I would have done better if it had been more collaborative and hands-on from the beginning, more structured with very specific plans in place from the start that allowed us to really dive into what was to be expected. For example, have a checklist with all items needed by such a date so we could review, discuss, and ask questions at that time, assign a date to have read all directions and standards and bring graphic organizers by a certain date to complete with a small team." This teacher's feedback highlights that in order for a self-directed approach to professional development to be successful, it must allow teachers to know that they are on track and also ask questions about the process. Some teachers require direct supervision, along with clear expectations and instruction provided by external sources.

Finding 5: Time and money were challenges of the self-directed pilot.

Challenges with the self-directed pilot were also identified, notably the desire for additional compensation and dedicated time expressed by teachers. Despite the school district's provision of a stipend for National Board certification, teachers indicated a need for further financial incentives. One teacher suggested, "Maybe add the certification as an additional column on the pay scale to reach as a goal rather than just a stipend because topping out the pay scale table is a big deal to me as a teacher." Additionally, the current provision of two days per

school year for PD was deemed insufficient by teachers, necessitating a reevaluation of time allocation to accommodate the demands of the certification process. This concern was echoed by the principal, who expressed apprehension regarding scheduling and resource allocation for teacher development activities. While this finding aligns with expectations, considering that many teachers used National Board certification as the framework for their self-directed professional development cycles, it still warrants attention. Despite the existing provision by the school district of a stipend amounting to $2,038 annually for every teacher who achieves certification and renews it every five years, teachers expressed a desire for a more tangible form of recognition. Currently, the teacher's pay scale reflects their level of education and years of experience, allowing for horizontal movement with additional education and vertical progression based on years of experience. However, during an interview with the Assistant Superintendent of Business Services, concerns were raised regarding the budgetary implications of such a proposal. He expressed, "It is hard to budget for something like this until we go full scale. I would need more data on what this looks like on a larger scale to project budget concerns for the Board of Education and ensure we can maintain this long term." This highlights the need for careful consideration and data-driven decision-making to address teachers' compensation concerns.

Additionally, another theme that emerged is that teachers expressed they would want time in their schedule to complete the self-directed model to earn National Board Certification. Some teachers indicated that time should be given during their workday to complete certification work. One teacher in particular related time to other outside companies when she said, "When my husband's company asks him to undertake some type of extra training, certification, extension course, there is then time built into his workday to accomplish this." Other teachers indicated that they would benefit from a paid leave of absence to conduct this work. One teacher

offered the idea that a better bell schedule that allows for work/life balance could be a way to add time for NBC through the self-directed model. As researchers, we understand the time commitment that is needed for educators to complete the work asked of them. Currently, the school district offers one day a semester over two years as time in the current model. Most of the certification completion is done after school if they are using that framework for their self-directed model. This impacts if a teacher pursues National Board certification. The financial incentive does not impact if a teacher is doing their own self-directed professional development model without using the NBC framework. However time does impact all teachers that are involved in a self-directed professional development model.

In reviewing time as a common concern raised by teachers, the district will need to look at ways to incorporate additional time for teachers to have them certified and truly implement a self-directed professional development model. It is evident that teachers, including those that have completed NBC, do not feel that the two days over the course of a school year is enough time for becoming board certified or do any true self-reflective work. During an interview, the high school principal expressed his apprehension regarding the issue of time. Specifically, he highlighted concerns related to scheduling teachers to engage in the necessary work, including the allocation of resources such as funds for substitute teachers during pull-out days. In a review of the past three calendar years, the school district has only provided three whole school professional development days per school calendar. In our review there have been two full days at the start of the school year and one in mid-February.

Some educators who did not participate in the self-directed model or tried to earn National Board Certification indicated that they are nearing retirement. This has been outlined as a reason for them to not feel the need to go through the model much less earn the certification.

One teacher indicated that NBC should be an incentive for teachers who are just coming out of college. Another teacher stated that she didn't see board certification as a value-add for her due to how close she is to retiring. As researchers, we do understand that some educators who will be retiring soon may not want the added work of going through the model or certification, but we also examine ways to still motivate them to grow and develop even as they approach retirement age. Our goal is to provide an added boost to productivity by finding motivating factors for those nearing retirement.

Finding 6: Self-directed professional learning better aligns with the school district's commitment to data-driven teaching and learning and helping teachers earn national board certification.

Our third question was how might a self-directed PD model align with district initiatives outlined in the strategic plan? In our exploration of how a self-directed PD model aligns with the school district's strategic plan initiatives, we discovered a robust connection between the two. Notably, the Board of Education has set a clear objective for the administration to implement a self-directed professional development model aimed at assisting all teachers in achieving National Board certification. This directive is intricately built into the district's overarching strategic plan, which explicitly aims to bolster the number of National Board-certified teachers within the school district.

Beyond just alignment, the self-directed PD model serves as a dynamic source for realizing the strategic goals and objectives outlined by the district. By seamlessly integrating the PD initiative with broader educational priorities, educators are not only equipped with the tools and resources for personal and professional growth but also become active contributors to the realization of educational excellence within the district.

One pivotal aspect of the school district's strategic plan revolves around its commitment to data-driven teaching and learning. The self-directed PD model aligns with this commitment by mandating teachers to establish and monitor their own goals utilizing data-driven insights. Through this model, educators harness student performance data, assessment results, and other pertinent metrics to identify areas for improvement and growth. Such a data-centric approach ensures that professional development selections are precisely targeted towards enhancing student outcomes, thereby aligning seamlessly with the district's overarching goal of leveraging data to inform instructional decisions.

Moreover, the self-directed PD model offers a cost-effective solution for the district. Unlike traditional PD approaches characterized by a scarcity of calendared PD days often monopolized by legal mandates, this model empowers teachers to engage in their professional development within existing work hours. This intrinsic flexibility minimizes the need for costly after-school sessions or intensive summer training, presenting a more financially sustainable avenue for fostering teacher growth and development.

Importantly, the inclusive nature of the self-directed PD model resonates strongly with the school district's commitment to catering to the diverse needs of its teaching staff. By affording educators the autonomy to select development activities aligned with their individual needs and interests, the model ensures inclusivity across experience levels and subject areas. This not only fosters a sense of ownership and empowerment among teachers but also underscores the district's dedication to fostering a supportive and inclusive professional learning environment. Furthermore, the promotion of teacher autonomy and professionalism inherent in the self-directed PD model directly aligns with the district's strategic goals. By empowering teachers to take charge of their professional growth journey, the model cultivates a motivated

and empowered teaching workforce, thereby advancing the district's overarching mission of educational excellence.

Through strategic alignment with the school district's broader objectives, the self-directed PD model emerges as a potent tool for driving sustained educational improvement. By fostering a culture of continuous growth and innovation among educators, the model not only meets the immediate needs of teachers but also lays a robust foundation for long-term educational excellence within the district.

DISCUSSION/IMPLICATIONS:

Professional development typically involves two main approaches: structured professional development programs, as highlighted by Desimone et al. in their 2003 research, and self-directed professional development, which derives from a teacher's personal motivation to learn, as outlined by Van Eekelen et al. in 2006. Another case study conducted by Amy Brennan in 2021 revealed that a self-directed professional development (PD) model empowers teachers to take charge of their learning, ultimately boosting motivation and engagement. This approach enables educators to tailor their development to their specific needs and interests, resulting in personalized professional growth. Moreover, it promotes collaboration and teamwork among teachers (Brennan, 2021).

Brennan (2021) also identified several challenges associated with this model. These challenges showcase the need to secure adequate resources to support a wide range of individual goals, addressing varying levels of teacher readiness for self-directed learning, aligning personal learning objectives with the school's overarching educational goals, and accurately measuring the impact of this model on teacher development and student outcomes. Our research underscores the transformative potential of the self-directed PD model to enhance teacher efficacy and

student success within the school district. By addressing the identified challenges and leveraging the model's inherent strengths, the district can propel its educators towards greater professional growth and instructional excellence.

While structured programs offer a formal framework for skill enhancement, self-directed development relies on an individual's intrinsic drive to gain new knowledge and improve their professional abilities. These two areas contribute to the continuous growth and enrichment of educators' skills and expertise. As professionals in education we have found that the majority of professional learning provided to teachers in organizations were directed by programs developed by external organizations or by administration within the organization. Furthermore, in looking at the school district, no professional development delivered was self-directed until the administration set out to offer their first option for earning National Board Certification with provided support through a self-directed professional development model.

Through our research conducted on the school district self-directed professional learning model, we found mixed perceptions that some teachers found the self-directed model reflective while others found it cumbersome with lack of direction. During our focus group, one teacher that found the model beneficial stated, "Learning how to reflect while forcing me to revise my lessons, gave me an opportunity to really understand my teaching goals and kept me focused on constantly looking for new ways to teach: collect data that drives my instruction; implement new strategies for various groups and students, constantly collaborating with my peers and parents." What some teachers outlined as positives in the program aligns with the 2006 research of Lopes and Cunha showing that teachers that participate in self-directed models were more reflective which impacted their instructional practices and the way they leveraged their collaborative work with their communities from colleagues, students, and parents. All in all, the research

demonstrates that a single, uniform model of professional development cannot always meet the diverse needs of all teachers and enhance their perceived effectiveness uniformly. While certain educators may excel in a self-directed learning environment, others may benefit more from supervised, instructor-led professional development. Furthermore, using teacher feedback to craft self-directed learning is most effective.

Within the research we found that the pilot educators believed that their learning experiences had enriched their instructional toolkit through reflective practices, but they were eager to assess whether their students' summative test scores would demonstrate tangible improvements by the end of the school year. Consequently, our research team intends to extend this study by comparing the academic progress of students within these teachers' classrooms to that of teachers who did not participate in the self-directed model. This comparative analysis could provide valuable quantitative insights, potentially paving the way for other school districts to consider adopting a similar approach to professional development.

This research holds significant relevance due to the substantial funding allocated by both state and federal sources for teacher development in public schools. Educational budgets allocate millions of dollars to school districts, which historically have been given to a directed instruction approach for teacher development. In light of human capital theory, this research has the potential to offer critical insights into the effective utilization of these funds for enhancing teacher capacity, ultimately improving educational organizations.

This study has already demonstrated that teachers, like their students, have varying learning preferences. By expanding upon this research, administrators across the United States can consider incorporating more self-directed models for teacher development. This approach would complement rather than replace direct instructional professional development, providing

educators with greater flexibility and motivation that can lead to increased teacher efficacy. Such a dual approach can maximize the impact of available resources and benefit both educators and the education system as a whole.

Before conducting this research, the administration had some assumptions regarding the model they had developed. They believed that the model allowed sufficient time for reflection and included funding for a salary increase for teachers who achieved National Board certification. The administration wanted to ensure that teachers had resources within the model and hoped that the prospect of a pay raise would encourage more teachers to participate. However, our research findings clearly indicated that the model faced two primary challenges: time and financial considerations. Both our focus group discussions and survey results revealed that teachers required more time for reflection and for implementing changes in their instructional practices. Additionally, the proposed pay increase was deemed insufficient by teachers to serve as a compelling incentive for participating in the self-directed learning model offered by the district.

As a recommendation to increase participation in the model, the administration in the school district should provide teachers with more pull-out days to dedicate work time towards completing their professional development. This additional time will allow educators to engage more effectively in the program. Given that the teachers already receive competitive salaries, the district should consider increasing the stipend offered for completing the model and earning National Board certification. Alternatively, the district should incorporate the stipend into a designated pay scale column, making it a visible and attractive incentive for teachers. Teachers during the focus group explained that they could make more money tutoring after-school or

leading a club with less time invested. We believe a change in time and money would increase the participation based on both our focus group and survey data.

The choice of National Board certification as the desired outcome for the self-directed model came in part from Horo and Bhai's 2016 research, which established that achieving National Board certification served as a significant indicator of teacher quality. With the overarching goal of increasing teacher quality and enhancing instructional practices through professional development, selecting National Board certification as the program's outcome was a research-based solution for the school district.

Lastly, future research should review the quantitative impact of NBC and the impact on diverse learners in classrooms. By reviewing the quantitative data and its impact on subgroups of students, not only will we understand how teacher efficacy and motivation increases, but we will understand how student growth varies and is impacted too. Gonzalez et al. (2005) discussed how student funds of knowledge help support student learning, and it would be important to examine how teachers with NBC not only utilize students' funds of knowledge, but also then impact student achievement. This would help support the model of self-directed adult learning through NBC further, and also make any needed changes to the process as well.

Our research stands as an initial step towards further exploration and investigation in this field. We initially drew inspiration from Lopes (2017) and Horo & Bhai's (2017) research, which emphasized the advantages of self-directed professional development and the National Board certification process. It was not until the school district adopted this concept to create its own self-directed model that we built upon existing literature.

Our findings indicate the value of offering such a distinctive model that meets teachers at their individual learning stages and showcases the same commitment to growth that we expect

from them for their students. Through interviews, focus groups, and survey data, we have garnered evidence supporting the continuation of the model, along with recommendations such as providing additional time, offering training for administration, and potentially increasing compensation for program completion.

Future research should take this work a step further by incorporating a quantitative analysis that considers student growth summative assessment scores. This additional layer of investigation will help determine whether the self-directed professional development model has a direct impact on student growth. Such an analysis will either provide further validation for the model or highlight areas that would require additional refinement and adjustment.

RECOMMENDATIONS:

Based on our comprehensive examination of the data collected through literature review, case study analysis, focus group interviews, and survey responses, we offer the following strategic recommendations to the school district aimed at enhancing the effectiveness and uptake of the self-directed professional learning model through National Board Certification.

Recommendation 1: Create time for teachers while also providing support and resources

To bolster the effectiveness of the self-directed professional learning model, the school district should allocate dedicated time within the school day for teachers to immerse themselves in the program. This time should be uninterrupted, allowing educators to collect data, reflect on their teaching practices, and implement new strategies iteratively. By prioritizing this time allocation, the school district can foster deep engagement and meaningful implementation of the program's learnings. Notably, providing teachers with dedicated time aligns seamlessly with the school district's strategic goals, particularly its emphasis on data-driven teaching and learning.

Enabling educators to set and track their own goals using data-driven approaches reinforces the district's commitment to improving student outcomes. Our research, complemented by insights from Amy Brennan's 2021 case study, underscores the empowerment and motivation that arise when teachers have sufficient time to engage in self-directed professional development.

In addition to providing dedicated time within the school day for teachers to engage in the self-directed professional learning model, the school district should consider implementing a structured support system to maximize the effectiveness of this time. This support system could include regular check-ins with teachers, collaborative planning sessions with colleagues, and access to online resources for self-paced learning. By combining dedicated time with targeted support such as providing mentors to teachers, the school district can ensure that teachers have the tools and guidance they need to make the most of their professional development opportunities. Moreover, fostering a culture that values and prioritizes ongoing learning and reflection can further reinforce the importance of dedicating time to professional growth.

Furthermore, the school district should consider implementing time for recognizing and celebrating the achievements and progress made by educators participating in the program. This could involve regular showcases or presentations where teachers have the opportunity to share insights, successes, and challenges with their colleagues during dedicated professional learning time. Celebrating teachers' growth and accomplishments can boost morale and also fosters a sense of community and collaboration within the district. Moreover, incorporating feedback mechanisms where teachers can provide input on the effectiveness of the allocated time and suggest improvements can help tailor the program to better meet their needs and preferences.

Recommendation 2: Restructure compensation

Furthermore, the issue of compensation emerges as a critical factor influencing teacher motivation and participation. Given the positive impact reported on professional practice and the considerable investment of time and effort required, the school district should review and potentially revise its compensation structure. Comparisons with neighboring districts offering stipends for similar certification should inform this review. Negotiating with the teachers' union to incorporate financial incentives into collective bargaining agreements could provide a viable path forward, aligning incentives with the district's strategic goals. Adding an additional pay column on the teacher's pay scale would be one way to attract more teachers to pursue NBC, as indicated in our research. Reflecting on the school district's initial assumptions regarding the self-directed model, it is evident that addressing time and financial considerations is paramount. Our findings highlight the inadequacy of current provisions in these areas and emphasize the need for proactive measures to address these gaps. By providing additional pull-out days and revisiting the stipend structure, the school district can enhance the attractiveness and accessibility of the program, thereby increasing participation and driving positive outcomes for both teachers and students.

In addition to revising the compensation structure, the school district should explore additional avenues for recognizing and rewarding teachers who engage in the self-directed professional learning model. This could include opportunities for career advancement, such as leadership roles within the district or mentorship positions for new teachers. By providing tangible incentives for participation in the program, the school district can demonstrate its commitment to supporting teacher development and retention. Furthermore, transparent communication about the value placed on ongoing learning and professional growth can help cultivate a sense of investment and pride among educators.

Recommendation 3: Provide training for administration

It is also imperative to equip district administrators with the necessary training and support to effectively facilitate and champion the self-directed model. Clear understanding of their roles and responsibilities in supporting teachers' professional growth is essential for creating a conducive environment for success. Administrators should be equipped to provide guidance, resources, and accountability, ensuring alignment between individual teacher goals and broader institutional objectives. District administrators should visit sites that have robust self-directed professional learning models, and also work with consultants to receive training first on how to implement a successful self-directed model. Consultants will be able to provide scheduling, logistics, and instructional leadership support for the team to then provide support to its teachers. In the long run, this will be most productive for the district.

To complement training for district administrators, the school district should also invest in professional development opportunities for school-level leaders, such as principals. These individuals play a crucial role in implementing and sustaining the self-directed professional learning model at the school level. By equipping them with the necessary skills and knowledge, the school district can ensure consistency and coherence in the implementation of the program across all its schools. Additionally, creating opportunities for cross-school collaboration and peer learning can further enrich the professional development experiences of school leaders, enabling them to support their teachers more effectively.

To enhance the effectiveness of such training for all administrators, the school district should consider incorporating ongoing professional learning communities (PLCs) where administrators can collaborate, share best practices, and troubleshoot challenges related to the implementation of the self-directed professional learning model. These PLCs can serve as

valuable forums for continuous improvement and capacity building among the district's leaders. By fostering a culture of continuous learning and improvement, the school district can strengthen its overall capacity to drive positive change and innovation in education.

Recommendation 4: Continue to utilize National Board as a framework until district is comfortable with expanding the self-directed professional development model

The decision to prioritize National Board certification as the desired outcome of the self-directed model aligns with research from Horo and Bhai (2016) indicating its correlation with teacher quality and instructional effectiveness. This alignment provides the school district with a proven framework to enhance teacher excellence and ultimately advance student learning outcomes. By leveraging the National Board certification process within the self-directed professional learning model, the school district can establish a clear pathway for teachers to develop and demonstrate their expertise in pedagogy, content knowledge, and professional reflection.

Additionally, National Board certification provides teachers with a structured framework for self-assessment and reflection. Through the certification process, teachers engage in deep reflection on their practice, analyze student learning data, and develop targeted strategies for improvement. By integrating this reflective practice into the self-directed professional learning model, the school district empowers teachers to take ownership of their professional growth and drive meaningful change in their classrooms.

Expanding the scope of the National Board certification program to include additional pathways for teacher development could further enhance the flexibility and relevance of the self-directed professional learning model. For example, the school district could explore partnerships with local universities or professional organizations to offer specialized certification tracks in

areas such as technology integration, digital literacy, cultural competency, or special education. By aligning the certification process with emerging trends and priorities in education, the school district can ensure that the program remains responsive to the evolving needs of its teachers and students. Furthermore, promoting a culture of lifelong learning and professional growth can have far-reaching benefits beyond individual classrooms, contributing to a more dynamic and adaptive educational ecosystem.

By recognizing and accommodating the diverse learning preferences of teachers, educational institutions across the nation can foster a culture of continuous improvement and innovation by having teachers engage in self-directed learning. This recommendation aligns with current trends in educational research and practice, which emphasize the importance of personalized professional development tailored to individual teacher needs and interests. By empowering teachers to take ownership of their learning and pursue areas of professional interest, schools and districts can tap into the wealth of expertise and creativity within their teaching staff. As such, we recommend that educational leaders at all levels consider implementing self-directed professional learning initiatives as a means of promoting excellence and driving positive change within their organizations.

Addressing these challenges requires a multifaceted approach, encompassing financial incentives, time allocation, and administrative support for the self-directed PD model. By comparing compensation with neighboring districts and negotiating additional incentives with the teachers' union, the school district can enhance the attractiveness of the model. Clear training for administrators is essential to effectively support teachers' professional growth, as underscored by the Assistant Superintendent of Personnel Services, who emphasized the need for proper support structures such as full training for the site administration and teachers to understand the

parameters for an effective self-directed professional development plan. Additionally,

collaboration among teachers and opportunities for peer support are crucial for sustaining

engagement and fostering a culture of continuous improvement.

In conclusion, by implementing these recommendations, the school district can position

itself at the forefront of educational innovation, empowering teachers to take ownership of their

professional growth and ultimately enriching the learning experiences of students across the

district. This proactive approach not only enhances the professional development opportunities

available to educators but also fosters a culture of continuous improvement and excellence

within the district. By prioritizing self-directed professional learning and National Board

certification, the school district demonstrates its commitment to supporting the growth and

success of its teachers, which in turn can directly impact the quality of instruction and student

outcomes. Furthermore, embracing these initiatives aligns with the evolving landscape of

education, where personalized and evidence-based practices are increasingly recognized as

essential components of effective teaching and learning. As the school district leads the way in

implementing these innovative strategies, it sets a positive example for other districts to follow,

inspiring a wave of transformative change throughout the educational community. Ultimately,

the investment in empowering teachers and enriching student learning experiences pays

dividends in the form of engaged, inspired, and successful learners prepared to thrive in an ever-

changing world.

Appendix A: Surveys & Interview Question

Exhibit A: Professional Development Needs Survey Questions

1. How frequently do you feel professional development opportunities are offered by the school district?
   - Very frequently
   - Frequently
   - Occasionally
   - Rarely
   - Never

2. On a scale of 1 to 5, please rate the relevance of the professional development opportunities you have attended:
   - Not relevant at all (1)
   - Somewhat relevant (2)
   - Moderately relevant (3)
   - Very relevant (4)
   - Extremely relevant (5)

3. Do you feel that the professional development opportunities provided adequately address your professional growth needs?
   - Yes
   - No
   - Not sure

4. How often have you engaged in whole-district professional development sessions (i.e., most or all teachers in my district participated) (Select one option)
   - Not this year (1)
   - Once or twice this year (2)
   - About once a month (3)
   - Two or three times a month (4)
   - Once a week or more (5)

5. How often have you engaged in whole-school professional development sessions (i.e., most or all teachers in my school participated) (Select one option)
   - Not this year (1)
   - Once or twice this year (2)
   - About once a month (3)
   - Two or three times a month (4)
   - Once a week or more (5)

6. How often have you engaged in professional development sessions for my grade-level or subject-area (Select one option)
   - Not this year (1)

- Once or twice this year (2)
- About once a month (3)
- Two or three times a month (4)
- Once a week or more (5)

7. How often have you engaged in professional development sessions or trainings that I selected (e.g., elective professional development, online trainings, conferences, graduate or continuing coursework) (Select one option)
- Not this year (1)
- Once or twice this year (2)
- About once a month (3)
- Two or three times a month (4)
- Once a week or more (5)

8. What types of professional development activities have you participated in recently? (Select all that apply)
- Workshops and seminars
- Online courses and webinars
- Peer mentoring or coaching
- Conferences and conventions
- In-house training sessions
- Self-Directed Professional Learning
- Other (please specify)

9. Of the types of professional development activities mentioned, which were you satisfied with?
- Workshops and seminars
- Online courses and webinars
- Peer mentoring or coaching
- Conferences and conventions
- In-house training sessions
- Self-Directed Professional Learning
- Other (please specify)

10. Of the types of professional development activities mentioned, which were you dissatisfied with?
- Workshops and seminars
- Online courses and webinars
- Peer mentoring or coaching
- Conferences and conventions
- In-house training sessions
- Self-Directed Professional Learning
- Other (please specify)

11. What specific topics or areas of professional development would you like to see more of in the future? (Open-ended)

12. How do you typically learn about upcoming professional development opportunities within the school district? (Select all that apply)
- Email notifications
- School district website
- Colleagues or word of mouth
- Staff meetings
- Other (please specify)

13. How would you rate the accessibility of professional development opportunities in terms of time and location?
- Very accessible
- Somewhat accessible
- Neutral
- Somewhat inaccessible
- Very inaccessible

14. What barriers or challenges, if any, have you encountered in participating in professional development activities? (Open-ended)

15. Would you be interested in more flexible, self-directed or online professional development options to accommodate your schedule?
- Yes
- No
- Maybe

16. How do you think the school district can improve its professional development offerings to better support your growth and development as an educator? (Open-ended)

17. Are there any additional comments or suggestions you would like to provide regarding professional development in the school district? (Open-ended)

Exhibit B: Self-Directed Pilot Survey Questions
1. To what degree did participating in the Self-Directed PD process improve your professional practice.
2. To what degree did your participation in the Self-Directed PD process positively impact student learning in your classroom.
3. Participating in the Self-Directed PD process was relevant and impactful professional development.
4. To what degree do you agree with this statement: "I am a more effective teacher after having undergone the Self-Directed PD process."
5. How important is/was participating in Self-Directed PD to you?

Exhibit C: Follow-up Focus Group Questions for the Self-Directed Pilot
1. What were some benefits of being a Self-Directed PD candidate?

2. What were some challenges of being a Self-Directed PD candidate?
3. What would you change about theSelf-Directed PD cohort and process?
4. What support was most beneficial during the Self-Directed PD process?
5. What type of support do you wish you had during the Self-Directed PD process?
6. What were the reasons why you decided to become a Self-Directed PD candidate?
7. If you decided to stop the Self-Directed PD process, what were the reasons why?
8. What would make more teachers interested in pursuing Self-Directed PD?

Exhibit D: Potential Candidates for the Self-Directed PD Survey
1. How interested are you in pursuing Self-Directed Professional Development?
2. What has prevented you from becoming a Self-Directed Professional Development candidate?
3. What would make you more likely to become a Self-Directed Professional Development candidate?

Exhibit E: Administrative Interview Questions
1. What are your current concerns with the current professional development plan?
2. What benefits do you see with providing a self-directed professional development model?
3. What concerns do you have with a self-directed professional development model?

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