

TEACHERS' PERCEPTIONS OF PROFESSIONAL DEVELOPMENT:

A MIXED METHODS STUDY

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Research has identified job context, specific attributes of professional development (PD), and perceived teacher input as factors that contribute to teachers' attitudes. This sequential mixed methods study tested those findings together and further investigated teachers' beliefs and attitudes about their own professional learning. The first phase of data collection included a 5-item attitude survey, demographic information, and two short-answer questions. Multiple regression analysis of the sample ( $N = 328$ ) showed four statistically significant contributors to teacher attitude: (i) socioeconomic status of the school, (ii) teacher years of experience at the campus, (iii) content area taught, and (iv) degree attained by the teacher. During the second phase, six focus groups were conducted which confirmed earlier findings and revealed four themes in teachers' attitudes: (1) a need and desire for collaborative, engaging PD; (2) perceived interference from outside forces that supplant teachers' own PD goals and wishes; (3) a need to establish a context and a cohesive plan for long-term career and campus goals; and (4) a subgroup of teachers who believe that PD has little inherent value. Limitations and implications are included.

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# TEACHERS' ATTITUDES TOWARD PROFESSIONAL DEVELOPMENT: A MIXED METHODS STUDY

A substantial amount of research has been conducted on professional development for teachers (e.g., Cordingly, 2015; Darling-Hammond, 2016; Guskey, 2012; Guskey & Yoon, 2009). Much of the published research thus far has been on its impact as an agent of change for teachers (e.g., Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 2002; Ross & Bruce, 2007) or its effects on student achievement (e.g., Blank & de las Alas, 2009; Koellner & Jacobs, 2015; Richardson, 2008; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). However, little research exists on teachers' attitudes toward professional development. Educators seek new methods to make learning attractive and fun for school-aged students, and administrators expect teachers to know and use the latest research and techniques (e.g., Marzano, 2003; Presseisen, 2008). Despite this, research to understand the motivation and attitudes of teachers regarding their own learning is rare, and the existing studies leave gaps in the field of education.

## Contributors to Teachers' Attitudes

The No Child Left Behind (NCLB) Act of 2001 and its reauthorization as the Every Student Succeeds Act (ESSA) in 2015 focused new attention on teacher professional development (PD) by requiring that it include evidence-based practices. Since 2001, only two dozen studies have investigated teachers' attitudes toward PD. The collective findings of those studies suggest that at least three factors contribute to teachers' attitudes toward PD: The job context in which teachers work, specific



desirable attributes of a PD session, and the extent to which teachers believe their input matters to decision makers (Shurtleff, 2019).

### *Job Context as a Contributor to Teachers' Attitudes*

According to the existing literature, teachers' positions relative to their schools, careers, and teaching assignments affect their attitudes toward PD. For example, a school's rating as high achieving or low achieving within the federal or state accountability system influenced teacher satisfaction with PD. Both Green and Allen (2015) and Wolff, McClelland, and Stewart (2010) reported that the achievement level of the individual campus was positively related to the level of satisfaction that teachers had with PD. Kragler, Martin, and Kroeger (2008) examined two schools designated as low performing by the federal accountability system. They found that over the two-year period of the study, the 30 teachers who participated believed that specific PD sessions they were required to attend were philosophically opposed to one another and therefore overwhelming and unhelpful. The school's rating within the accountability system had prompted multiple PD initiatives on each campus. Teachers believed that the rating of the school caused PD providers to view them as incompetent.

In a study involving eight schools and 271 teachers, Green and Allen (2015) suggested that there was a causal link between schools that used the professional development standards of Learning Forward, a professional organization for PD providers, and both teacher satisfaction and student achievement. The methodology of the study, however, did not account for the differences in socioeconomic status, percentage of minority students, or percentage of students receiving special education,

and only half of the participants in the higher achieving schools indicated that their PD experiences were aligned with Learning Forward PD standards.

The experience levels of teachers also appeared to affect their attitudes toward PD. In a study of 15 teachers who received university-based PD, Anderson and Olsen (2006) identified two distinct PD needs at specific times. They reported that in the first two years of their careers, teachers wanted guidance regarding classroom management, and teachers with three to six years of teaching experience preferred learning related to theory and leadership. In a larger study ( $n = 214$ ), Torff and Sessions (2008) also found differences in level of interest for PD related to years' experience. Teachers had more positive and receptive attitudes about PD during their first two years of teaching, as well as after year 10 of teaching. During years three through nine, their attitudes were less receptive. According to this research, teachers' worldviews and social interactions changed over time and thereby affected their perspectives. Related, Buehl and Fives (2009) examined sources of pedagogical knowledge that informed practicing and preservice teachers. Both practicing ( $n = 57$ ) and preservice ( $n = 53$ ) teachers identified PD as a source of knowledge. The authors of the study reported that practicing teachers differed by level of experience in their attitudes about PD, but they did not report further analysis or discussion of that point. In each of the studies, teachers' level of experience predicted their attitudes toward PD.

Previous studies found also that teachers' specific job roles affected their views of PD. Two studies (Jones, Hope, & Adams, 2018; Torff & Sessions, 2008) found that within the context of their data collection, teachers of elementary students had more receptive attitudes toward PD than their counterparts who taught middle school or high

school. Jones, Hope, and Adams (2018) hypothesized that earning digital badges would motivate teachers to engage in more PD, but their findings did not support this hypothesis. In the process of the study, researchers discovered differences in the way elementary and secondary teachers perceived both digital badges and PD in general, with elementary teachers responding more favorably to both. The study did not report how many of the 99 teachers who participated were elementary teachers, so group size may have affected results. Torff and Sessions (2008) also reported that elementary teachers were more receptive to PD than were secondary teachers, particularly those who had taught for less than 10 years. Findings of this study further suggested that teachers in schools with higher socioeconomic status (SES) valued PD more than did their counterparts in lower SES schools.

Other research has explored the attitudes of teachers based upon their content areas. Conway, Edgar, Hansen, and Palmer (2014) interviewed seven music teachers, each of whom expressed frustration with the difficulty of finding PD opportunities related to their field, as musical achievement was not measured as part of state or federal accountability, and music teachers' needs varied substantially from the needs of teachers in academic content areas. Flory et al. (2014) found that health educators in eight different urban high schools perceived a gap between the cultural awareness of their PD providers and the cultures of their students. Teachers in the study ( $n = 23$ ) stated that the individuals who led their PD workshops did not have a clear understanding of the experiences of the students with whom the teachers worked. The students were diverse adolescents living in an urban food desert with low SES and a high crime rate. Their perceptions of nutrition, attitudes about tobacco use, and

concerns about physical safety did not align with those of the PD providers. As a result, the PD providers offered methods and strategies for encouraging health and well-being among students that teachers believed were inappropriate and culturally irrelevant to their students. Torff and Byrnes (2010) reported that teacher attitudes toward PD varied by content area or academic subject taught, with science teachers being the least receptive group. Findings further suggested that teacher age, experience level, and educational attainment did not contribute to teachers' attitudes. Interestingly, this study used the same measurement scale as an earlier study (Torff & Sessions, 2008) which reported that teachers' experience levels did predict their attitudes toward PD.

Unfortunately, no studies explored the attitudes of teachers of gifted students toward PD. In many states, including the one in which this study was conducted, teachers of gifted students are required to acquire more PD hours than general education teachers, yet none of the studies addressed how gifted educators perceive either the added requirement or the PD in general.

#### *Attributes of PD as a Contributor to Teachers' Attitudes*

Research has shown that teachers place a higher value on and are more likely to seek PD experiences that included a specific desired attribute or attributes that they identified as important to them. Likewise, teachers have articulated specific undesirable characteristics, such as PD that they considered impractical to implement or that contained what they considered too much information. Four features of PD have been reported as distinct desirable attributes across studies: Time to collaborate, activities that could be quickly implemented into classrooms, coaching or other type of follow-up, and elements of choice (Shurtleff, 2019).

## Time to Collaborate

Teachers expressed a desire for collaboration and interaction regardless of experience level, content, or grade level taught. In a study investigating preferences for digital versus face-to-face learning (McConnell, Parker, Eberhardt, Koehler, & Lundeberg, 2013), science teachers reported that they valued being a part of a collaborative community within a PD event, irrespective of the learning platform. The 54 teachers who participated worked in groups of four to five over the course of an entire academic year in a multi-session formal PD on inquiry learning. Group size and duration of PD may have affected teachers' attitudes toward collaboration, but neither was considered in the study. Nasser, Kidd, Burns, and Campbell (2015) used a convenience sample of 27 teachers and found that both certified teachers and assistant teachers of preschool preferred collaborative learning over individual learning. A study of early career teachers in an urban setting (Anderson & Olsen, 2006) yielded similar results. In this small study, all 15 teachers had received their teaching credentials from the same university program. Authors of this article did not report its limitations, and it is difficult to know whether teachers' similar preparation for teaching influenced their attitudes about collaboration. However, other researchers reported similar findings regarding the importance of collaboration: Engstrom and Danielson (2006) reported that when teachers designed their own PD sessions, they chose a collaborative setting. According to Buehl and Fives (2009), even when teachers fundamentally disagreed on other constructs related to professional growth, such as the role of technology, they agreed that collaboration was an important way to build knowledge and skills.

## Quick Implementation

A second attribute that teachers valued was strategies or activities they could quickly implement into their classroom instruction. Davis (2015) investigated teachers' attitudes around the use of the Twitter platform as PD by analyzing Twitter chats using the EdChat hashtag over a period of three months and interviewing 19 of the teachers who had participated in at least two of the online #EdChat discussions. All 19 participants in the study reported as a benefit of Twitter the ability to obtain instructional strategies that they could quickly implement. As stated earlier, Nasser et al. (2015) reported specific attributes that teachers valued, and easily implemented strategies was identified as one of those attributes. A less robust study (McCray, 2018) that involved 10 secondary teachers on a single campus in Florida also suggested that teachers placed value on easily implemented strategies.

Thirty teachers from two Midwestern elementary schools designated as low performing reported being frustrated by the mandated PD they had received (Kragler et al., 2008) and identified the lack of quickly implemented, practical strategies as one of the causes of that frustration. Lucilio (2009) surveyed 169 secondary teachers in a Catholic Diocese in Ohio and found that they too were frustrated with the quality of PD available to them. The study reported that teachers and PD providers had different priorities and that the providers did not offer teachers practical ways to apply the concepts they taught to the day-to-day constraints of their classrooms. In both studies, when teachers did not believe they were receiving practical, easily implemented strategies, they viewed the providers of PD as disconnected with teacher needs and the PD session as unhelpful.

## Follow-Up

Teachers wanted their professional learning to include support beyond the day of the PD event. The teachers in one study (Kragler et al., 2008) wanted each PD session to be part of a larger, cohesive plan, which would result in an individual teacher's increased self-efficacy, as well as a collective efficacy among colleagues. Instead, they felt inundated with multiple programs that did not align with each other while being offered no follow-up or feedback in implementing any of the programs. Consequently, they were resistant to the idea of altering their teaching practices. Teachers who used Twitter as a professional learning network (Davis, 2015) also reported that they valued feedback, and they stated that they had received it immediately from their colleagues on Twitter. In the previously mentioned study that involved health educators (Flory et al., 2014), participants wanted follow-up support and help with implementation because they believed PD decision makers did not have a clear grasp of the day-to-day challenges of implementing the practices presented in the PD sessions. Kaiser, Rosenfield, and Gravois (2009) focused on instructional coaching as a form of PD and feedback. Instructional coaches collaborated with 274 teachers representing 27 different schools in six different school districts. Teacher satisfaction with this form of PD positively correlated with both their increased use of pedagogical strategies learned from instructional coaches and with teacher self-efficacy. However, researchers in this study did not find a relationship between the implementation of the coaching model and student achievement. A study involving 135 elementary teachers (Bliss & Bliss, 2003) also reported that teachers wanted follow-up support. According to the study, only 11% of teachers believed they were routinely provided any support beyond the day of the

PD. One further study (Lester, 2003) found that teachers wanted not only feedback but also accountability. Elective and core content teachers ( $n = 93$ ) representing eight different high schools responded to a survey, and a subset of those teachers agreed to individual interviews. Although this article did not contain a thorough explanation of the data analysis, it did report that teachers welcomed feedback and accountability checkpoints. Teachers indicated that they were overwhelmed with the amount of information they had received during their PD sessions and that they would have benefitted from having someone available to support their classroom implementation efforts.

#### Choice

The fourth desirable attribute of PD that surfaced in the literature was the element of choice within the structure of the PD. Davis (2015) found that Twitter was a favorable platform for PD, in part because it afforded teachers the ability to choose time, duration, place of engagement, content of learning, level of contribution to the learning, and people with whom they would collaborate. Jones et al. (2018) found that choice was a greater motivator than teacher recognition. A comparison study of teachers ( $n = 138$ ) in low and high SES schools (Torff & Sessions, 2009) reported that the teachers in high SES settings had more positive attitudes about their PD than their counterparts in low SES settings because teachers at campuses with higher SES had more freedom to choose their PD experiences. It is worth noting, however, that this article did not establish how the differences between the two groups with regard to choice were measured or determined.



### *Teacher Input as a Contributor to Teachers' Attitudes*

There is little evidence in the literature to suggest teachers routinely have the opportunity to design their own pathways of PD, yet the literature revealed that teachers wanted a voice in the type of PD offered to them (Shurtleff, 2019). Teachers reported a desire to be part of the planning process for PD sessions, as well as for decision makers to consult with them prior to scheduling sessions, so that they might better understand what types of learning would meet their perceived needs.

In the small study mentioned previously (Conway et al., 2014), music teachers had an opportunity to choose a PD research project. Even those who did not earn credit hours because they did not complete the project reported that they considered it a valuable learning experience because they felt vested in the project, and they were frustrated that most of the PD activities planned by their districts did not meet their specialized needs in terms of music. Similar results were reported in a single case study of PD for general education teachers in a charter school serving kindergarten through eighth grade (Kimbrel, 2018). Participants included seven teachers and three administrators. Administrators reported that teachers lacked interest in PD while teachers reported that they found value in organized PD only when they were able to contribute their own expertise and ideas.

Several research studies have addressed the disparity between teacher and PD provider outcome goals for PD. In a study discussed earlier involving two inner-city elementary schools designated by NCLB as low performing, Kragler et al. (2008) reported that teachers ( $n = 30$ ) of students in kindergarten through Grade 3 were frustrated by the extensive amount of information they received from multiple sources.

Each of the schools had received federal funds to support them in improving their performance. Over the two-year period of the study, teachers attended PD sessions from at least three different vendors and had multiple coaching sessions and demonstration lessons. Teachers believed that the various consultants contracted by the district to support them had given them conflicting advice and information about how to help their students. Teachers stated that their ability to make decisions and to provide input regarding their own learning had diminished. At the end of the two years, there was no evidence that teachers in the study had altered their instruction.

Adams (2014) conducted a small phenomenological study of three high school teachers and found similar results. Because of the school's low performance rating, teachers were compelled to attend PD prescribed for them by their district. In private interviews, teachers expressed frustration with their inability to provide input regarding the expectations placed upon them. Each participant indicated a gap between what their PD experiences were and what they believed PD should be.

Even without the constraints of state or federal accountability systems, Lucilio (2009) found that educators in a faith-based private school district reported that their campus and district leadership ( $n = 28$ ) had different professional learning priorities than did the teachers ( $n = 141$ ). Teachers from each of the district's 14 high schools indicated they believed that, although the nature of teaching at a private school afforded them more instructional freedom than that of a public high school, they still were not included in decisions related to their own district-based professional learning.

A number of studies indicated teachers wanted more PD, but with their input, and even more accountability (Lester, 2003). Bliss and Bliss (2003) reported that only 11%

of the 153 teachers surveyed believed they received adequate amounts of PD, and 93% of teachers stated that they wanted to be involved in the planning and implementation of PD but were not given that opportunity. A study of a Title I high school rated underperforming yielded similar results (Adams, 2014). Teachers wanted more PD and accountability, but they wanted a chance to provide input to decision makers concerning the nature of the PD they received. Rutherford et al. (2017) extended those findings in a study involving 395 math teachers from 50 different elementary schools in California. They reported that teachers' positive attitudes toward PD directly affected teacher self-efficacy, which, in turn, positively influenced student results.

### The Current Study

The body of previous research suggested that teacher years of experience, grade or content level taught, socioeconomic status of the school, opportunities to collaborate, ease of implementation, follow-up or ongoing support, choice in what or how to learn, and input into decision making about their PD each accounted for some of the variance in teachers' attitudes regarding PD. No single study prior to the current one has investigated all of those factors together. Further, this study departed from previous literature in its emphasis on the teachers' perspectives and opinions of their own professional learning. Four research questions guided the study:

1. What are teachers' attitudes toward formal professional development, and what shapes those attitudes?
2. To what degree do teachers' attitudes toward formal professional development vary by teacher years of experience, gender, grade level or content taught, assignment as teacher of gifted students, education level, path to certification, accountability rating of the school, socioeconomic status of the school, or years of experience at the school?

3. To what degree do teachers value the following attributes in formal PD: opportunities to collaborate, ease of implementation, follow-up or ongoing support, choice in what or how to learn, or input into decision making about their PD?
4. What further characteristics of PD, if any, do teachers find particularly effective and/or ineffective?

## Method

### *Setting and Design*

The current study occurred in the United States in a Southwestern state that requires teachers to obtain 150 clock hours of professional development every five years in order to maintain their teaching credentials. A regional education service center (ESC) agreed to partner in the study by allowing participants to be recruited from their scheduled on site PD sessions. The ESC is the second largest in the state, serves more than 80 school districts with varying demographics, and provides professional development sessions both on site and in individual districts throughout a regional service area that includes 10 counties. This made it a favorable setting for gathering data from a cross section of teachers with diverse campus settings and teaching assignments.

Since the intent of this study was to confirm as well as to supplement previous findings, a mixed methods explanatory sequential approach was appropriate (Creswell & Plano Clark, 2018). Data collection occurred in two phases: administering surveys to participants of PD sessions and conducting focus groups to ask questions generated by the findings of the survey data. As recommended in literature on mixed methods (Creswell & Plano Clark, 2018; Ivankova, Creswell, & Stick, 2006), Figure 1 presents a visual model of the process of the current study.

Quantitative Phase	Qualitative Phase
Data Collection – TAP Survey (09/18/19-10/18/19) <ul style="list-style-type: none"> <li>• Demographic questions</li> <li>• Questions based on prior research</li> <li>• Recruitment for participants from session attendees</li> </ul>	
Data Analysis – TAP Survey <ul style="list-style-type: none"> <li>• Data screening</li> <li>• SPSS</li> <li>• Descriptive statistics</li> <li>• Multiple regression final model with 4 predictors</li> <li>• Accountability variable inconclusive</li> <li>• Rank order analysis</li> </ul>	Beginning analysis of open ended responses Constant comparison Open coding
<p style="text-align: center;"><b>Connecting Quantitative &amp; Qualitative Phases</b></p> <ul style="list-style-type: none"> <li>• Completion of text analysis of open ended responses with 9 fixed coding followed by open coding, resulting in 16 new codes</li> <li>• Refining of focus group questions</li> <li>• Purposive sampling strategy for focus group participants, including GT &amp; science</li> </ul>	
	Data Collection – Focus Groups (11/18-12/11/19) <ul style="list-style-type: none"> <li>• Collaboration with presenters</li> <li>• Establishing rapport with participants</li> <li>• iPhone recordings – 6 sessions; one focus group became interview</li> <li>• Field notes</li> <li>• Analytic journaling</li> </ul>
	Data Analysis – Focus Groups <ul style="list-style-type: none"> <li>• Verbatim transcriptions</li> <li>• Constant comparison</li> <li>• Inductive coding beginning 11/20/19 16 new codes</li> <li>• Analytic coding – 6 codes</li> <li>• Saturation after focus group 4</li> </ul>
<p style="text-align: center;"><b>Final Integration of Results of Quantitative &amp; Qualitative</b></p> <ul style="list-style-type: none"> <li>• Emergence of 4 themes</li> <li>• Discussion, Limitations, Implications</li> </ul>	

Figure 1. Visual model of sequential mixed methods process.

### *Quantitative Component*

According to internal records from the participating ESC, attendance at PD events peaks in late September and October and again in February. In order to recruit from the most diverse group possible, the first of the two peak times was chosen as the data collection window for the first phase of the study. In order to minimize the risk of inadvertently asking any teacher to respond to the survey multiple times, the sessions from which participants were recruited occurred as close together as possible. Teachers commonly attend multiple events at the ESC during the year; however, it is unusual for them to attend two events within a three-week period. This time window also accommodated recruiting a sample size large enough for the study to be sufficiently powered, even allowing for unusable data. There were 32 PD events specifically for teachers scheduled to occur between September 28, 2019 and October 18, 2019. Of those, the ESC cancelled three due to low enrollment, and seven were scheduled at times when it was not feasible to collect data. I recruited participants from each of the remaining 22 sessions. PD events for administrators, paraprofessionals, or other non-teaching staff were not considered.

#### Data Collection

In order to recruit participants for the first phase of the study, I visited each of the 22 sessions mentioned earlier to explain the context and purpose of the study and invited teachers to respond to a survey based on the Teachers' Attitudes about Professional Development Scale (TAP; Torff, Sessions, & Byrnes, 2005b). The TAP is available for use in research and consists of demographic information and five items regarding the degree to which participants agree or disagree with each statement (from

1 – *strongly disagree* to 6 – *strongly agree*). Appendix A contains the demographic, rank order, and open response questions added for the current study. Authors of the scale tested and refined it in a three phase process using studies of three separate groups of teachers (Torff, Sessions, & Byrnes, 2005a), and resulting in the current scale. Authors reported an acceptable level of internal consistency ( $\alpha = .87$ ). Items 2 and 5 were reverse scored for analysis. The composite score for the TAP was the mean score of all the items. The higher the score, the more positive the attitude toward PD. One rank order question, two short answer open-ended questions, and five demographics questions (status as a teacher of gifted students, certification path, accountability rating of the school, and socioeconomic status of the school) added to the existing TAP enabled data collection regarding group differences in teachers' attitudes towards professional development. Prior to responding to the survey, each teacher electronically signed an informed consent agreement. Teachers accessed the survey through Qualtrics. Participants did not provide contact information, and the survey instrument did not collect IP addresses.

## Participants

Data collection for the first phase began on September 18, 2019 and concluded on October 18, 2019. An a priori power analysis using G\*Power (Mayr, Erdfelder, Buchner, & Faul, 2007) indicated that a minimum sample size of 172 was required to achieve a power of .80 with  $p < .05$  and a medium effect size of .30 with 10 predictors. In total, 463 teachers were invited to complete the survey during a PD session they were attending, and 367 teachers responded to the survey, yielding a response rate of 79%. The sample consisted of 287 females (87.5%) and 41 males (12.5%). More than

half ( $n = 194$ , 59.5%) held bachelors degrees, and the others ( $n = 132$ , 40.5%) held a post-secondary degree. Slightly more than half ( $n = 184$ , 56%) attained their teaching credentials through traditional university certification, and the remaining ( $n = 144$ , 44%) earned alternative certification. The average years of teaching experience of the entire sample was 10.56 years (Median = 9, Mode = 1,  $SD = 8.0$ ).

### Data Analysis

Quantitative survey data was entered into SPSS for analysis. Composite TAP scores functioned as the dependent variable in the multiple regression analysis with the 10 independent variables being teacher years of experience, years experience on campus, grade level taught, content level taught, socioeconomic status of the school, accountability rating of the school, gender, degree of education, designation as credentialed to teach in a gifted program, and path to certification (traditional or alternative). Response frequencies were calculated for the rank order question. Open ended question responses were exported into Excel for qualitative analysis.

The survey's two open response questions invited participants to describe attributes of helpful and/or unhelpful PD. These comments were analyzed in two ways, which involved multiple readings. The first round of coding was deductive, using the nine findings in previous literature as fixed codes. In subsequent line by line readings, sections of text related to the research questions were identified and tentative codes assigned, using open coding (Corbin & Strauss, 2007). This generated a list of codes which were then used for constant comparison with focus group data.

### *Qualitative Component*

Information gleaned from survey data analysis informed the qualitative



component of the study during which focus group members provided rich data. In their research on the optimal number of focus groups for inductive analysis, Guest, Namey, and McKenna (2017) found that saturation occurs 90% of the time with between three and six focus groups. In keeping with this recommendation, I worked with the presenters of the PD sessions scheduled at the ESC for the remainder of the semester to schedule six focus groups.

### Focus Groups

Presenters scheduled 10 minutes near the beginning of their sessions and allowed me to introduce and describe preliminary quantitative results of the study and to invite participation in a focus group. Session attendees had the opportunity to volunteer to participate at that time. Administrators were not eligible to volunteer. Because of the size of the conference room available, participation for each group was limited to six members. The first focus group met on November 18, 2019, one month after the survey closed. The final focus group met on December 11, 2019. Table 1 presents a description of each focus group member.

Presenters previously agreed to release willing participants for one hour during the full day session so that the focus groups might meet during the time participants were already scheduled to be at the ESC. Arrangements were made so that they would receive full credit hours for their PD sessions, and presenters worked with participants to ensure they had access to the information and resources discussed while focus group participants were out of the room. This method minimized response bias from those teachers with opinions strong enough to cause them to stay at the ESC after the conclusion of their workday. However, it may have introduced the risk that the source of

teachers' motivation to participate in a focus group was an aversion to the PD for which they were registered. Multiple PD sessions occur simultaneously at the same ESC site, so teachers in each focus group were not necessarily from the same PD session in the case of three focus groups.

Table 1

*Characteristics of Focus Group Participants*

Pseudonym	Gender	Content Area	Title I	GT	Focus group
Steve	M	MS Science	Yes	No	1
Kiki	F	MS ELAR	Yes	No	1
Billy	F	MS ELAR	No	Yes	1
Anastasia	F	HS Social Studies	Yes	No	1
Rain	F	MS ELAR	Yes	No	1
PJ	F	MS ELAR	Yes	No	1
Marie	F	MS ELAR	Yes	No	1
Stephanie	F	MS Math	No	No	2 (Interview)
Rose	F	MS Science	Yes	No	3
Crystal	F	HS ELAR	Yes	No	3
Malcolm	M	Elem Math	No	No	3
MT	M	HS ELAR	No	No	3
Isaac	M	Elementary	Yes	No	3
Alex	M	HS Social Studies	No	No	3
DD	M	HS Science	No	Yes	4
Uthred	M	MS Math/Athletics	Yes	Yes	4
Rocshelle	F	MS ELAR	Yes	Yes	4
JJ	M	HS CTE	No	Yes	4
Happy	F	Elementary	No	Yes	4
Elena	F	Elementary	No	No	5
Hailey	F	Elem SPED	No	Yes	5
Serenity	F	Elementary	Yes	No	5

*(table continues)*

Pseudonym	Gender	Content Area	Title I	GT	Focus group
Ginger	M	HS SPED & Social Studies	No	No	5
Rachel	F	Elementary	Yes	No	5
Howard	M	HS Science	No	No	6
Amy	F	HS Science	No	No	6
Bernadette	F	MS Science	No	No	6
Sandy	F	MS Science	No	No	6
Canary	M	HS Science	Yes	No	6

*Note.* MS = Grades 6-8; HS = Grades 9-12; ELAR = English language arts and reading; CTE = career and technical education; SPED = special education

## Participants

Because the attitudes of teachers of gifted students was of particular interest, all members of one focus group were selected from a PD session designated as gifted education hours so that specific questions around mandated gifted and talented training might be addressed. The state in which the study occurred requires all of its teachers in gifted and talented education programs to obtain an initial 30 hours of PD designated as foundational gifted and talented training, as well as 6 hours annually of gifted and talented PD. In both the previous literature (Adams, 2014; Kragler et al, 2008) and in the open response results of the TAP survey for the current study, participants indicated a resentment toward PD that was mandated. However, TAP scores for the gifted and talented teacher group were not statistically significantly different from other groups. Conducting a focus group was an effective method to investigate this phenomenon further.

A similar condition occurred with science teachers. Since results of the TAP showed content area was a statistically significant independent variable, and previous literature (Torff & Byrnes, 2010) reported that science teachers had lower opinions of

PD than non-science teachers, one focus group was comprised of elementary and secondary science teachers. As shown in Table 3, TAP results of the current study also showed a lower score for science teachers, as well as English language arts and reading (ELAR) teachers.

All other focus groups were comprised of teachers who volunteered from various sessions during the time frame specified. PD sessions for administrators, preservice teachers, non-teaching staff, and substitute teachers were excluded from consideration. A total of five focus groups were conducted. An additional focus group had been scheduled, but unforeseen circumstances on the day of the meeting prevented all except one teacher from participating. That session was conducted as an interview with the single teacher. A complete list of focus group participants by pseudonym appears in Table 1. Of the total 29 focus group participants, 20 (69%) were female and 9 (31%) were male; 9 (31%) were elementary school teachers, 10 (34%) were middle or junior high teachers, and 10 (34%) were high school teachers; and 14 (48%) were employed at low SES, or Title I, campuses.

Presenters agreed to release those teachers participating in a focus group from their PD sessions at a designated time, and teachers from various groups convened in a conference room at the same site to become a focus group. Upon entering the conference room, participants introduced themselves using a pseudonym of their choosing and signed an electronic informed consent that included permission to audio record the sessions. Each focus group session lasted one hour.

#### Data Collection

One of the most complex aspects of gathering qualitative data is achieving a

comfortable balance of power between the researcher and the participants (Karnieli-Miller, Strier, & Pessach, 2008). Even though ESC PD providers routinely solicit feedback from their participants, my relationship with the participating ESC potentially raised the risk of response bias or lowered the degree to which participants might have felt comfortable answering candidly during the phase of data collection when participants were not entirely anonymous. Given this set of circumstances, the conception of the interview described by Roulston (2010) was the most appropriate. Using this typology, I prioritized establishing genuine rapport with the interviewees in order to encourage the kind of open discussions that would provide rich data. The potential focus group members met with me early in the day and had the opportunity to ask questions. When they arrived for the focus groups, they received refreshments and a small thank you gift bag containing a water bottle, earbuds, and a screen cleaner. All participants had the opportunity to opt out at any time during the process. With focus group participants' permission, each session was audio recorded and transcribed later. Field notes were kept during the focus group discussions, and those notes were reviewed during the coding process and compared to the transcripts of the focus group discussions.

Construction of questions for the focus groups required special care so that members of the focus group were comfortable expressing opinions. Arksey and Knight (1999) endorsed wording questions about sensitive topics in such a way that extreme answers become normalized or acceptable. In the case of this study, the following is an example of such a question: *Some educators find their PD sessions helpful, and others find little or no value in them. In your experience, how beneficial are PD sessions to*

*your teaching practice?* Other questions used to stimulate responses from and interaction between focus group participants appear in Appendix B.

## Data Analysis

Focus group data were transcribed and analyzed using a multi-phase process that included reading each of the six transcripts multiple times, tagging sections of text according to the fixed codes found in previous literature, as well as the tentative codes found in open responses, and generating new codes. This was an iterative process and included comparing across focus groups and frequently refining codes. Although the purpose was not building new theory, a process related to constant comparative analysis (Merriam, 2009) provided a useful framework for understanding the views expressed by focus group participants. Finally, the units of text assigned to each code were examined together in order to verify that the codes were appropriate and to begin to group codes into larger categories and finally refined into themes. Throughout the process, daily analytic memos were written which allowed for careful reflection and review of both the data and the process. The memos themselves were not coded; however, they were used in verifying and comparing findings. Repeated phrases and filler words such as “uh” and “you know” were not included in textual units of analysis.

## Results

The first phase of the study examined whether variables related to teacher demographics and teaching assignment could explain teacher attitude toward professional development, as measured by the Teacher Attitude about Professional Development Scale (TAP). Based on a systematic review of previous literature, data for ten independent variables were collected for a multiple regression analysis: campus

Title I status, campus state accountability status, gender of teacher, teacher years of experience, years at the campus, gifted and talented credential, post-secondary degree, path of certification, content taught, and grade level of students taught.

### *Survey Data Screening*

Of the 367 survey respondents, 21 exited the survey after answering only the five questions used to compute the composite TAP score. Since no demographic data was provided and those 21 cases could not be analyzed for any of the 10 independent variables, they were removed from the data, leaving a sample size of 346. Upon further examination, there were 18 cases missing data that appeared to be not completely at random (Peugh & Enders, 2004). In four of those cases, the participant stopped after the first two demographic questions. In the remaining 14, participants failed to answer two or more demographic questions that were next to each other on the survey, suggesting that those participants may not have looked at the entire survey. The mean TAP score of the 18 cases was 4.678 which was not statistically different from the overall mean TAP score of 4.387 ( $t = 1.226, p = .221$ ). Because the study had sufficient power, and the 18 cases did not add information to the study, they were removed from the analysis, leaving a total sample size of 328.

### *Multiple Regression Analysis*

Survey data was entered into SPSS for analysis. A series of graphical representations of the data suggested that the assumption of homoscedasticity was achieved. A scatterplot of standardized residuals with standardized predicted values was the expected oval shape. Scatterplots of each continuous predictor variable on the dependent variable TAP did not reveal any outliers. A P-P plot showed that the

residuals of the continuous independent variables conformed well to the expected values. Neither the correlation matrix nor the Variance Inflation Factor indicated multicollinearity. Cronbach's alpha showed the TAP scores for this sample achieved an acceptable level of reliability,  $\alpha = .81$ .

A multiple regression analysis was conducted with all 10 independent variables. Criterion coding was used for both the content variable and the level of course variable in order to aid interpretation of results (Schumacker & Williams, 1993). The overall model was statistically significant,  $F(10,237) = 4.002, p < .001$ . The Model Summary showed an  $R^2$  effect size of .144 with an Adjusted  $R^2$  of .108, indicating slight shrinkage due to sampling error. Only three of the 10 independent variables were statistically significantly correlated with the dependent variable. Those variables were Title I status of the school ( $r = .143, p = .012$ ), degree held by teacher ( $r = .190, p < .001$ ), and content area taught ( $r = .250, p < .001$ ). A second multiple regression analysis was conducted using only the three independent variables found to be statistically significant. This resulted in a stronger model,  $F(3,295) = 11.499, p < .001; R^2 = .105, \text{Adj. } R^2 = .096$ .

Although the overall model with three variables was statistically significant, the three predictor variables together accounted for only about 10% of the total variance of the dependent variable. All three beta weights were near-zero; however, all were statistically significant, as shown in Table 2. The content variable was the dominant predictor according to both the regression equation and beta weights and squared structure coefficients, indicating that it explained 55% of the total effect (see Table 2.) The beta weight for content area of the teacher was also statistically significant, though



scores for the content area variable were skewed by unequal group sizes.

Table 2

*Beta Weights and Structure Coefficients for Independent Variables*

Variable	$\beta$	$r_s$	$r_s^2$
Title I	.163*	.517	.267
Accountability	.066	.310	.096
Years' Experience	.043	-.04	.002
G/T Assignment	.038	-.003	.014
Gender	-.011	-.014	.00
Degree	.137*	.500	.25
Certification Path	-.005	.159	.025
Years at Campus	-.112	-.266	.071
Level of Course	-.058	.218	.048
Content Area	.258**	.743	.552

\* $p < .05$  \*\* $p < .001$

As shown in Table 3, teachers of science and ELAR were the two lowest scoring groups. Fine arts and health/physical education teachers scored highest, although there were only 2 cases in each of those groups. Scores indicated that teachers with more education than a bachelor's degree had more positive attitudes about PD than those with only a bachelor's degree. Degree accounted for 25% of the total variance. Title I status of the campus explained 27% of the total effect according to its squared structure coefficient, suggesting that teachers on Title I campuses had more positive attitudes toward PD than those who were not.

Though it was not a statistically significant predictor in the model, it warrants mentioning that the years at campus variable was also skewed (see Table 4), as 104 teachers (31%) had been at their campuses for one year, and 247 teachers (75%) had been at their campuses for less than six years. Interesting to note was that the two

lowest TAP scores came from teachers who had been at their campuses for 20 and 26 years.

Table 3

*TAP Scores by Content Area of Teacher*

Content Area	<i>n</i>	Mean TAP	<i>SD</i>
Elementary	91	4.48	.90
Math	46	4.31	.90
Science	32	4.24	.92
Social studies	13	4.31	1.19
ELAR	69	4.12	1.09
LOTE	8	4.43	.99
Fine arts	2	5.00	.85
Health / PE	2	5.60	.28
CTE	17	4.22	1.12
Unspecified	43	4.83	.83
Total	323	4.39	.98

*Note.* ELAR = English language arts and reading; LOTE = Languages other than English; CTE = Career and technical education; Unspecified = teacher did not provide content area

Table 4

*TAP Scores by Number of Years at Campus*

Years at campus	<i>n</i>	Mean TAP	<i>SD</i>
0	1	4.80	-
1	104	4.48	.94
2	47	4.48	1.00
3	44	4.26	.90
4	27	4.20	1.06
5	25	4.22	1.13
6	8	4.35	1.29
7	10	4.42	.79

*(table continues)*

Years at campus	<i>n</i>	Mean TAP	<i>SD</i>
8	9	4.56	.98
9	4	5.40	.63
10	1	5.20	-
11	3	4.33	1.36
12	7	4.48	.44
13	5	4.44	1.03
14	4	4.20	1.26
15	8	4.58	1.08
16	4	4.40	.63
17	4	4.60	.69
18	5	4.08	1.28
20	1	1.80	-
21	3	4.20	.87
25	1	4.80	-
26	1	1.80	-
32	2	3.30	.42
Total	328	4.39	.99

There was an unexpected finding with regard to the campus accountability variable. Though it was not statistically significant ( $r = .143$ ,  $p = .053$ ), it should be noted that 19% ( $n = 64$ ) of teachers who responded to the survey chose “unsure” when asked their campus accountability ratings. This point raises questions for further investigation.

#### *Rank Order Question Analysis*

The survey asked participants to rank in order of most important to least important the five attributes of PD that had emerged in previous literature as valuable: collaboration, quick implementation, follow-up, choice, and input. The attribute that easily ranked first among most participants ( $n = 209$ , 60%) was quick implementation,

followed by collaboration ( $n = 105$ , 30%). Of the five choices, input was selected as least important by the greatest number of respondents ( $n = 119$ , 34%), followed closely by follow-up ( $n = 108$ , 31%). These results informed the development of questions for the focus group discussions. Additionally, these data were compared to the focus group data and used to inform the final themes.

### *Open Response Questions Analysis*

Two open response questions on the survey invited participants to describe attributes of helpful and/or unhelpful PD. These comments were analyzed in two ways. The first round of coding was deductive, with the nine findings in previous literature serving as fixed codes. The open response data contained five of the nine codes, but not all nine. Multiple readings of the comments allowed for tagging of individual units of text that were relevant to the research questions. The codes generated were recorded in a codebook and indexed in Excel in order to facilitate retrieval for constant comparison and integration with focus group findings.

### *Qualitative Analysis*

Four major themes emerged from the complete analysis of the qualitative data: 1) A need and desire for collaborative, engaging PD; 2) Perceived interference from outside forces that supplant teachers' own PD goals and wishes; 3) A need to establish a context and a cohesive plan for long-term career and campus goals; and 4) A subgroup of teachers who believe that PD has little inherent value. These themes were the result of a multi-stage iterative coding process and analysis as described earlier. Fixed codes, open codes, analytic codes, and major themes are shown in Table 5.

Table 5

*Origin and Frequency of Codes from All Sources of Text Analysis*

Code	Origin	Units of data found in survey	Units of data found in focus group(s)	<sup>a</sup> Anal. code	<sup>b</sup> Final theme
Fixed codes					
Collaboration / interaction	Literature	188	70	A	1
Quick implementation	Literature	139	32	D	3
Follow-up	Literature	49	16	D	3
Choice	Literature	46	19	B	2
Input	Literature	5	37	B	2
Experience of teacher	Literature	0	25	B	2
Content area taught	Literature	0	6	D	3
Campus accountability status	Literature	0	4	C	2
Campus socioeconomic status	Literature	0	5	C	2
Open codes					
Resources provided	Survey	13	6	E	3
Reading PowerPoint	Survey	23	9	A	1
Presenter style	Survey	77	63	A	1
Wastes / takes time from students	Survey	25	24	B	2
District vs ESC or other	Survey	6	26	A	1
Punitive or demeaning	Survey	9	52	B	2
Not useful	Survey	2	13	C	2
Too theoretical	Survey	24	2	A	1
Format & logistics	Survey	29	30	E	3
Necessary / helpful	Survey	3	23	D	3
General aversion	Survey	1	3	F	4
Irrelevant to job	Survey	164	28	C	2
Time to process	Survey	46	27	A	1

*(table continues)*

Code	Origin	Units of data found in survey	Units of data found in focus group(s)	<sup>a</sup> Anal. code	<sup>b</sup> Final theme
Post-secondary degree	Survey	(Survey item)	5	D	3
Mandatory	Survey	9	25	C	2
Too interactive	Survey	29	0	A	1
Model for classroom	Focus group	0	30	A	1
Lack of continuity / coherence	Focus group	0	61	E	3
Specific to content	Focus group	0	22	D	3
Differentiate for teachers	Focus group	0	25	A	1
Students' perspective	Focus group	0	18	A	1
Mindset of teacher	Focus group	0	10	D	3
Personally costly	Focus group	0	23	B	2
Repetitive	Focus group	0	31	C	2
Outdated	Focus group	0	7	F	4
Inaccurate	Focus group	0	2	F	4
Defeated resignation	Focus group	0	7	F	4
Gifted/talented teacher	Focus group	0	19	D	3
Unrealistic	Focus group	0	7	F	4
Presume negative until otherwise	Focus group	0	9	F	4
Unreasonable time demands	Focus group	0	10	B	2
Information vs PD	Focus group	0	7	C	2

### A Need and Desire for Collaborative, Engaging PD

In the survey open responses and in the focus groups, the most frequently stated opinion ( $n = 258$ ) was that PD sessions should allow participants to interact with each other, to collaborate, and to share their own expertise. One survey respondent stated it this way: “Opportunities to apply it to my situation or my students that I’m currently

supporting. Time to talk to others who are living and breathing the topic.” Teachers cited differentiated instruction for teachers, time to process information, interactive sessions, and activities that simulated student experiences as effective ways to achieve that level of engagement.

Teachers used the specific term *differentiation* in multiple contexts both in talking about their own classrooms and within the setting of PD. They identified it as a common practice that their supervisors expected them to demonstrate, as well as an effective way to reach students. They also recognized that it was often absent from their own learning experiences. Amy, a veteran high school science teacher, expressed it in this way:

I think most professional development would be analogous to walking into a high school and sitting down for a lesson and it not mattering if you were in an English class or a science class or a social studies class. Everybody gets the same lesson no matter their grade level, no matter the subject. And we would never do that to our children. And I don't understand why we do it to our teachers. (Focus group, December 11, 2019)

The concept of trying to accomplish too much in too short a time appeared first in the survey ( $n = 46$ ). When questioned about specific things that were helpful in PD, one survey respondent stated simply, “Time to apply what is being learned.” Another stated, “Less is more...sometimes the session is too jam packed with information that I feel overwhelmed. I would rather focus on a few things and have time to try them out or plan for using these strategies with my students.”

Stephanie, a math teacher at a charter school, believed that PD sessions stopped short of preparing her to take new learning directly into her classroom and seemed frustrated by feeling as though she did not have time to process the information once she got back to her classroom because of the pace of her workday. She stated,

This is really cool stuff that I'm learning. But then when I get back to the school, it's the craziness of school and all the stuff you just learn. Maybe you're able to apply it in a few places, but very often it goes *whoosh!* (Individual interview, November 18, 2019)

The concept of interaction and collaboration surfaced often as well. Some participants credited individual presenters as the reason some sessions were interactive and others were not, such as the survey respondent who stated, "...not a trainer talking and the teachers listening. If I receive 'hands-on' activities for my students then I think the PD was successful." A different survey respondent expressed that it was unhelpful "when the speaker turns things into a lecture. We have been taught to not lecture in our classrooms, and at times are forced to sit through lectures." DD, a science teacher from a large suburban high school and a focus group participant expounded on that idea:

We're encouraged to use all these different strategies and jump through all these hoops and do groups and do entrance ticket, exit ticket, warm up, warm up for the warm up. Then you got to do a lesson and you're timing it. And you're doing all these different strategies and your shoulder partner and your table buddy and you've got roles and responsibilities and everything student led, but also teacher facilitated and student centered but also individualized. And then you show up to the training for it and it's here's this PowerPoint that's gonna tell you all how to do it. Or at least the idea behind it, but not how to do it, should I say. And that's teaching right now. (Focus group, December 9, 2019)

Focus group participants also indicated that simulations of student experiences were a valuable interactive part of learning. Middle school teacher Rose recalled taking a mock-standardized assessment as a teacher in a PD session:

When we actually sat down and did the testing. We were in the student shoes. It was definitely the more instructional moment where we were like, "Oh, this is the nerves that gets to our students, this is the worry." So we put ourselves in student shoes. We're so divorced from being a student sometimes. (Focus group, November 19, 2019)



## Perceived Interference from Outside Forces that Supplants Teachers' Own PD Goals and Wishes

Both survey and focus group data showed that teachers believed that someone other than themselves routinely made decisions regarding their own professional development. The concept of having a choice was integral in both survey comments ( $n = 46$ ) and focus group comments ( $n = 19$ ). For example, one survey respondent wrote, "When I can choose pd based on my field, I love to attend and learn. When I can choose my pd I am much more interested and engaged." Another respondent valued choice as a way of providing differentiated PD for teachers:

I like being able to select and put input into what I need because this fluctuates depending on what point in my career I am, what new areas I may be teaching, what struggles I may have in the classroom.

Anastasia, a high school social studies teacher from a Title I district described during a focus group her concern about choice because she felt like decision makers in her district were not concerned with her individual needs as a learner:

And it's the same five classes every year. I've taken them all. But you don't have a choice, you have to take them again. It's the same five people, the same five books. And so that is really difficult to swallow. I've had GT training three times. It has not changed much. (Focus group, November 18, 2019)

Other respondents, particularly in the focus groups, viewed required PD as a punitive event. This was the case with Rain, a middle school teacher from a small, rural district:

Sometimes PD feels like an "I gotcha." The district has gotten their hands spanked or there's something that they're trying to take themselves from. [agreement from other focus group members] Yeah. So in order to cover their behinds. Yeah, we're pulled out of our classrooms. We're forced to make those decisions and spend that money and spend that time and all of those things because they haven't done what they're supposed to be doing. And so we're catching the backlash of it. (Focus group, November 18, 2019)

Some teachers felt they were required to attend PD at an unfair personal cost,

and it was affecting more than their jobs. Rachel, a teacher from a Title I elementary school said this during a focus group:

I think having to go to so many PDs required, I think that is a lot to do with teacher burnout because as teachers, it's a heavy role that we're playing and we have a lot on our plate and having to put in more time than we already do. I mean, we already put in extra hours on campus. So having to also put in more time for these PDs is just extra strain on our part. And it's not fair. (Focus group, December 10, 2019)

Other comments ( $n = 59$ ) conveyed that teachers felt burdened by logistical elements of some of their PD sessions rather than the content. One survey respondent wrote,

When (as in the time) an actual session occurs is super important. I think these sessions should NOT be held AFTER a work day. We have given our all throughout the day and it can be difficult to sit, listen, and be engaged for another 2 or more hours (with a positive attitude)

#### A Need to Establish a Context and a Cohesive Plan for Long-term and Campus Goals

Teachers expressed a lack of confidence that they would be supported in implementing their learning, but also that their campus or district initiatives changed so quickly that they could not see benefit in investing time and effort into any one initiative.

Hailey, a special education teacher at an affluent elementary school, stated her concern to her focus group in this way:

It's kind of like we're checking all the boxes, but no follow up. We're doing all of the requirements. But there is no follow up. Like, again. How can you better support me? You've provided me with these tools and these strategies. Have you come to see am I implementing these correctly in the classroom or how can I better apply these? Like you show that you know, you have, and you have a consultant. That's great if the consultant comes. But did you include in that package with that consultant them coming in to my classroom to help me make sure I'm implementing this properly? (Focus group, December 10, 2019)

Ginger, a high school teacher with a background in both special education and social studies who described himself as cynical, replied to Hailey's statement in this

way:

And not only that, you don't have time and you don't even want to, because if you become an expert at this system, they're going to go to another system and you wasted all that time. I imagine this salesman coming in to the district and selling this administrator--that hadn't been a classroom in 15 years--this brand new way of doing stuff. And then another administrator gets sold the exact same thing by another salesman. (Focus group, December 10, 2019)

Malcolm, a teacher who hopes to become a school administrator at a faith-based private school expressed the need for PD to be tied to the campus strategic plan:

It goes back to again, what is the strategic plan for the school itself? You know. So if I was true to the plan, it is that we want to focus on STEM. Then I should kind of select STEM PDs and then plan that now...there's always a new theme that's being introduced to the teacher. And I can never focus on the theme at the hand, you know, because every year this is changing. (Focus group, November 19, 2019)

A middle school science teacher with several years of experience, Bernadette preferred longer sessions during which deeper learning could occur. She felt frustrated by PD sessions that were too short and not embedded within a long-term goal. She stated,

Maybe duration. I feel like it's really important because I know you asked earlier about the most effective types of PD. And as I was kind of going through my head at those that were most effective, all of them were at least four days long. And I know that that's a big commitment for teachers who don't give a crap. But that's always been the most effective PD. (Focus group, December 11, 2019)

### Teachers Who Believe that PD Has Little Inherent Value

Focus group participants identified both positive and negative aspects of the PD they had experienced, but some of their comments ( $n = 17$ ) indicated that they believed there were teachers who could find little or no value in PD. One survey participant responded to the question *What other qualities do you find particularly helpful or effective in a professional development session?* by stating, "I haven't." All other survey

responses to that same question ( $n = 320$ ) provided at least one example of a desirable attribute. Interestingly, there were 35 comments from focus group participants expressing the idea that they knew of teachers whose attitudes about PD were primarily negative. Serenity, an elementary teacher in a large district indicated that she typically assumed a PD session was going to be a negative experience and was surprised when she had a positive experience. Speaking about the PD session she had attended the day of her focus group meeting, she said,

I actually enjoyed this one. I usually don't like PDs. Well, sometimes, it depends. Well, I enjoyed this one. I went home, and I was like, "This was actually good!" I mean it was very interactive, we got up. I mean, it was nice. So it's different! (Focus group, December 10, 2019)

Steve, who teaches middle school science in a large district volunteered,

I don't know any coworker who has amicably gone to an administrator and explained a grievance [about PD]. I don't. I don't know a single one. The...what happens with, with every single thing is there's just a total breakdown in communication. Everyone hates PD, and it's kind of understood. I don't know anyone who likes it personally. Everyone hates it. (Focus group, November 18, 2019)

Rain, a middle school language arts teacher from a small rural district shared a similar sentiment:

How many professional developments do we really have? Way too many! That's the problem. We should be able to say, you know what we have in a year's time. We have maybe five PD days. I can get it. I can get with five. But when I lose count of how many I have to go to, to sit in and then I can't recall not one of them, that's a problem! (Focus group, November 18, 2019)

A conversation between Steve and two other middle school teachers in his focus group revealed an interesting perspective about why a teacher might assume PD was going to be a negative experience.

Steve: I think has largely to do with the mindset that you have walking into it as teachers. Certainly at my school and I'm sure this is everywhere. It looks more

like this. I have stuff to do and I have too many things to do. This is one of the things I don't have time to do, but I'm being forced to do it anyways. And so when you go in with that mindset, of course, you're not going to get very much out of it. However, that statement may still be true that you actually do have too much to do. And this is one of those things where I could be grading papers, I could be working, helping the students.

Billie: I can totally agree with like or think about like your mindset, especially whenever it is a school wide like mandated. Everybody is doing the exact same PD.

Kiki: I also see where you're coming from with the mindset, but I do feel like a lot of the mindset comes from sitting through PDs. (Focus group, November 18, 2019)

## Discussion

In this mixed methods study, I sought to understand more fully the professional development needs of teachers by getting a more complete understanding of the attitudes that teachers themselves hold about their own learning. To that end, I used the TAP scale validated in previous research in order to gain an understanding of how receptive to PD the teachers in the current study were. I added to that knowledge by asking questions that could be analyzed qualitatively using both deductive and inductive means. The four research questions were answered in the following ways.

### *What are Teachers' Attitudes toward Formal Professional Development?*

A score of 6 on the TAP would indicate a teacher's complete satisfaction with all PD experiences throughout the teacher's career. The mean TAP score for this entire sample ( $n = 328$ ) was 4.39 which suggests that as a whole, teachers in this sample were more PD receptive than they were PD averse (Torff, Sessions, & Byrnes, 2005b). Attitudes regarding PD as a concept, however, may not mirror attitudes regarding the actual PD that teachers are receiving. While TAP scores suggested that teachers as a

group have a favorable opinion of PD as a practice, findings from the qualitative analysis of the current study suggest that they may not be satisfied with the PD they consistently receive. The candid assertion that “Everyone hates PD” made by focus group participant Steve serves as evidence of that. This same participant made these remarks later during the focus group session:

The heart behind it [PD] most the time is in the right place. But it comes down to, like I mentioned, to fidelity. And in the execution of it is where we kind of fall to the wayside a little bit. Is it? I don't think PD is bad. I just think that a lot of what we get doled out is kind of. It's not. It's not to the effectiveness that they want it to be for us. But I do see the merit in professional development. (Focus group, November 18, 2019)

Theme 2 that emerged from the qualitative analysis further supports this: perceived interference from outside forces that supplants teachers' own PD goals and wishes. The single negative comment that occurred most frequently ( $n = 192$ ) in the qualitative data collection was that teachers had experienced PD that was irrelevant to their jobs. This is consistent with previous research that found that teachers appreciated PD that could be quickly implemented in their classrooms (Davis, 2015; McCray, 2018; Nasser et al., 2015). The only sentiment that was expressed more frequently ( $n = 258$ ) was that PD should be collaborative and interactive which is also consistent with earlier studies (Anderson & Olsen, 2006; Engstrom & Danielson, 2006). This suggests that teachers had strongly held beliefs about the kind of PD they found both effective and ineffective.

*To What Degree do Teachers' Attitudes toward Formal Professional Development Vary by Teacher Years of Experience, Gender, Grade Level or Content Taught, Assignment as Teacher of Gifted Students, Education Level, Path to Certification, Accountability Rating of the School, Socioeconomic Status of the School, or Years of Experience at the School?*

The multiple regression analysis indicated only four statistically significant

independent variables: content taught, education level, socioeconomic status of the school, and years of experience at the school. The findings of the current study were somewhat consistent with a previous study (Torff & Byrnes, 2010) which found that science teachers were more PD averse than teachers of other contents. As a group, science teachers ( $n = 32$ ,  $M = 4.24$ ) did score lower than any other group except ELAR teachers ( $n = 69$ ,  $M = 4.12$ ). Focus group data offered a potential explanation for lower scores among science teachers. Bernadette, in the focus group comprised of all science teachers, had this to say:

We science teachers are telling our kids every day to question things, to ask questions, to find the why, to look at the variables, to look at the control, to just do all of these things. And we do that because that's what we do. We are looking at the whys all the time. That's why we're science teachers. That's why. We are as a department, interested in the things that we teach because that's how our brains work. And so when we sit in a professional development and are expected to just accept this as truth, we're sitting there like. But why? But why? And it's I think a secondary teachers, our kids are reaching and in seventh grade, we're just getting there. But our kids are reaching a maturity level where we can let them have that discourse and let them talk about those things. And when we just have to sit and listen to something that honestly doesn't apply to us all the time. It becomes so negative, it becomes harder and harder each time you do it, just to sit there and participate. (Focus group, November 12, 2019)

As a group, ELAR teachers' TAP results were lower than any other content area group. The reason for this is unclear, and further investigation is needed in order to ascertain whether this finding can be replicated in another context. It is important to note that the content group that scored the highest on TAP was the other/unspecified group. Teachers in this group either did not wish to reveal their content area or believed none of the listed categories specifically included their roles. This is particularly curious since in all cases, participants who answered unspecified/other for content area indicated elsewhere whether they taught a subject assessed by the state accountability system.

The variable that was the strongest predictor of TAP score was the degree held by the teacher. This finding did not surface in previous research, and it warrants a closer look. As reported, the two content groups with the lowest mean TAP scores were science ( $n = 32$ ,  $M = 4.24$ ) and ELAR ( $n = 69$ ,  $M = 4.12$ ). The content group with the highest mean TAP score was other/unspecified ( $n = 43$ ,  $M = 4.82$ ). Similarly, the other/unspecified group had more teachers with advanced degrees ( $n = 31$ , 72%) than teachers with bachelor's degrees ( $n = 12$ , 28%). This was not the case with either the science group ( $n_{\text{bachelor's}} = 19$ , 59%;  $n_{\text{advanced}} = 13$ , 41%) or the ELAR group ( $n_{\text{bachelor's}} = 45$ , 65%;  $n_{\text{advanced}} = 24$ , 35%). More information is needed in order to interpret these results. One possibility is that at least some of the members of the other/unspecified group were administrators rather than classroom teachers. Although we stated during the recruiting process that only classroom teachers were eligible to participate in the study, there could have been administrators in the PD sessions who chose to fill out the survey. We specifically targeted PD sessions that were designed for and advertised to teachers, but it is common for an administrator or instructional coach to attend a PD session with a group of teachers from the same campus or district. An advanced degree is required to become an administrator, so this could account for the higher percentage of advanced degrees found in the other/unspecified group. Often administrators are responsible for providing PD, so if the other/unspecified group were comprised of some or all administrators, response bias may have been a factor.

Socioeconomic status of the campus was also a statistically significant predictor. In the current study, teachers at Title I campuses demonstrated a slightly more receptive attitude toward PD than those at campuses not designated as Title I. This



contradicts the earlier study (Torff & Byrnes, 2010) which found that teachers at high SES campuses had a more favorable opinion of PD because they had more choice in the type of PD they attended. It should be noted that the Torff and Byrnes (2010) study was conducted in a single school district which had mostly affluent schools, and the total sample size ( $n = 150$ ) was smaller than the current study. Either of these two conditions could have affected the outcome. The current study included data from a much more diverse sample with a higher percentage of low SES campuses. Rachel, a focus group participant and an elementary teacher in a Title I school indicated that she wanted more support than many of her colleagues at higher SES campuses. She offered this explanation:

So but as a Title 1 teacher, there's so much pressure on you with the all the baggage that the kids are bringing because they have all these difficulties in their home lives and their scores are going to be low. So the principals are—like there's just a lot more on your plate because you are a Title 1 teacher. (Focus group, December 11, 2019).

This should be an area of future study, particularly in light of the increasing research regarding achievement gaps due to poverty (e.g., Rutkowski, Rutkowski, Wild, & Burroughs, 2018).

Finally, years of experience at a campus had a statistically significant effect on teachers' attitudes toward PD. This finding was particularly interesting, as total years of experience was not statistically significant ( $r = -.062$ ,  $p = .130$ ) in the current study. Two previous studies (Anderson & Olsen, 2006; Torff & Sessions, 2008) reported that teachers in their first or second year of teaching were more receptive to PD than those who were at a later point in their careers. Data from the current study showed only that teachers in their first two years at a campus demonstrated a more receptive attitude

towards PD. Torff and Sessions (2008) reported that teachers had renewed interest in PD when they had taught for 10 years. The current study did not find that to be the case; however, data did show a spike in TAP scores for teachers in their 8<sup>th</sup> and 9<sup>th</sup> years at a campus. In the Torff and Sessions study, TAP scores did not significantly decline after year 10. In the current study, the spike occurred only in years 8-9, and the group sizes were unequal, with 151 cases in the new to campus group and only 13 cases in the 8-9 years group. This finding should be explored further, as these conditions present a limitation to interpretation.

As stated earlier, data on the accountability predictor variable was inconclusive as approximately one fifth of the survey respondents did not know the accountability rating of their campuses. Consequently, it was impossible to investigate what impact being on a campus designated as low performing might have on a teacher's attitude toward PD. This was especially problematic given that schools with lower accountability ratings often receive extra and mandatory PD, and both the literature and focus group data suggested that teachers resented PD that was mandatory.

As expected, gender of the teacher did not influence attitude toward PD in the current study ( $r = -.012$ ,  $p = .376$ ), nor was it reported as significant in previous studies.

Similarly, path to certification did not influence attitude ( $r = .074$ ,  $p = .091$ ). The number of alternatively certified teachers in the United States continues to rise ("Characteristics of public school teachers," 2018), and I wanted to investigate whether there might be differences in attitude, as the two groups receive their preparation and credentials in different ways.

As stated earlier, the opinion of teachers who hold the credentials to teach in

gifted and talented programs was an area of special interest. Teachers in this group are mandated to receive more PD hours than those not teaching in gifted programs, and previous literature reported that teachers resented mandated PD (Kragler, Martin, & Kroeger, 2008). The multiple regression analysis did not indicate a difference in the scores of the gifted education group. In order to investigate further, we scheduled a focus group comprised of only teachers in gifted education and asked them about their mandated gifted hours. Analysis of data from this focus group illuminated the possibility that something in the nature of gifted PD caused teachers to view it differently from the way they viewed other mandated PD.

High school science teacher DD spoke frankly about a mandatory PD he had attended in his district and compared it to his gifted PD. His comments suggested the possibility that he equates mandatory PD with ineffective facilitation or presentation which is consistent with the finding that the style of the presenter affects teachers' attitudes toward PD:

And so it [other mandatory PD] was not only just kind of insulting, it was also just really felt like a waste of time because it was so useless. As far as GT training today, it is a compliance thing. And I think the reason today's has been so good is because it's through the service center and this is what they do. And I think if it was something the school put on, it would be just as bad as the other trainings we have. (Focus group, December 9, 2019)

Happy, an elementary teacher at a private school talked about the practical things she had taken from her mandated gifted PD. Her comments are consistent with the findings about a preference for PD that can be quickly implemented:

You have to have something that you're going to be using. And if you're not going to be using, you don't want it to be a waste that you throw it out. And that's the main thing here, is that is that if you use it, if it's information that you can use and you can use it in your class right now, tomorrow, the next day or whatever, then it's useful. And that's what I liked about this. I could see using the square. I could

see using the poster board. I could see using the post its on the board. It was good. And she presented it in a simplistic way, but interesting. (Focus group, December 9, 2019)

Uhtred teaches at a magnet school for gifted and talented middle school students. He implied that he saw something valuable about the content of his gifted PD:

So for me, it was very revealing. I could see some of myself in the GT kids, but a lot of it was like, "Wow, that's so different to anything that I've ever experienced in my life." You know, it's the feeling that I was definitely not GT. So it was it was interesting. It's learning about a type of kid that we didn't really know enough information about up to this point. (Focus group, December 9, 2019)

Similarly, Happy commented,

It's eye opening... You can take advantage of using some of the things that she said or this is this is why this kid is doing this or this is why this kid is doing this. And then you say, ah, it's like, I understand... you're putting yourself in their shoes. And maybe that's why they act the way that they do. And this is how I can deal with this or this is how I can make them succeed. (Focus group, December 9, 2019)

The data from the current study does not show that teaching in gifted programs predicts teachers' attitudes about PD based on the condition that it is mandatory; it does provide a starting point for further investigation.

*To What Degree do Teachers Value the Following Attributes in Formal PD: Opportunities to Collaborate, Ease of Implementation, Follow-up or Ongoing Support, Choice in What or How to Learn, or Input into Decision Making about Their PD?*

This question was answered using both survey and focus group analysis. As stated earlier, collaboration and interaction emerged as the single most noted attribute that teachers desired in PD in both quantitative and qualitative data. This finding is clear both in the current study and in previous literature. Teachers mentioned it as a desirable attribute, and they also frequently mentioned its opposites, such as reading a PowerPoint and lecturing, as attributes they found ineffective.

Teachers likewise showed a preference for PD that included information that

could be quickly implemented. A typical survey comment about helpful characteristics of PD was this one: “The workshop needs to have something that can be turned around and used tomorrow in the classroom.” Many teachers expressed views similar to focus group member Happy’s statement, “If it’s information that you can use and you can use it in your class right now, tomorrow, the next day or whatever, then it’s useful” (Focus group, December 9, 2019). This finding is likely related to the time constraints and pressure that teachers indicated was part of their jobs. Kiki, a focus group participant, tied it together in this way:

And they'll tell you how it could be adapted to each subject area. I still don't leave with what I need to make me go back in my classroom and use it. Is it like as in you have to show me, because to tell me ... I know there are things that I absolutely love to do that I've learned from somewhere and just telling it to somebody, they're like, OK. But if I'm not showing you how to apply that and really getting down to a deeper level and showing you why this has been beneficial and how it's going to help and who it's going to help and then show you how to actually implement it, you're not going to because you have like you said, there's so much on your plate. I don't have time to sit here and really teach myself how to use this in my classroom. (Focus group, November 18, 2019)

The concept of follow-up or ongoing support for PD has been investigated extensively (see Darling-Hammond, Hyler, & Gardner, 2017). Data analysis of the current study adds deeper dimension to this concept, however. More than having someone follow-up with them after a session or scheduling a follow-up session, teachers seemed to desire context and a cohesive, long-term strategic plan for their PD. Kragler, Martin, and Kroeger (2008) documented teachers’ frustration over PD sessions that philosophically contradicted each other. Focus group participants in the current study expressed the same frustration but expounded on it. Malcolm, who teaches at a faith-based private school, was surprised when he was told by his administration he was required to attend 30 hours of gifted PD, scheduled for the very next week. He

emphasized that while he had benefited from the PD, he was frustrated by a perceived lack of overall plan or purpose.

OK, I have to do this because you've got to do 30 hours as a state requirement with no background information of why. What should I be looking for? You know, as an administrator, as a teacher, when I'm attending these, come up with better strategies of how to kind of, map it out, for example, like, attending a gifted and talented training. You know, if our school doesn't have a gifted talent program, how would I implement this tomorrow when I go back? Or am I looking in my head to say, "OK, you know, I want you to attend this professional development, because next year, we're going to implement GT." So now I have some background. (Focus group, November 19, 2019)

T, who teaches in a very different setting at a high performing, affluent high school expressed a related concern.

There's been several PDs that I've been to where they train you in a certain method. But there's no follow up—or because there's no follow up, there is a new training and a different technique that kind of trumps the old one. (Focus group, November 19, 2019)

Rachel, in still a different setting at an elementary school in a large Title I district, stated it this way: "I feel like there's too many chefs in the kitchen and there's everybody who's saying—I mean, who gets to say, 'Oh, I can tell you how to do your job better'." (Focus group, December 10, 2019)

Anastasia, an experienced high school teacher compared PD to diet trends.

I feel like sometimes education is almost like weight loss. It's always the next pill. [laughter from others] It's always the next new supplement. It's always the next thing. It's always the next new tech. And then in two years, when none of it's done with fidelity....on to something else. (Focus group, November 18, 2019)

When asked specifically on the survey to rank how important they considered input into decisions about their own PD, only 7% ( $n = 23$ ) of teachers ranked it as a top priority, and 36% ( $n = 119$ ) ranked it as least important. Interestingly, this was inconsistent with the comments teachers made both at the time they completed the

survey and during focus groups. In 21 of the 22 sessions from which survey participants were recruited, participants expressed appreciation for being asked what they thought about PD. In two of those sessions, participants spontaneously applauded when we explained that we wanted to study teachers' attitudes about PD. This suggests that teachers were not accustomed to being asked their opinions and that they appreciated being asked.

*What Further Characteristics of PD, if Any, Do Teachers Find Particularly Effective and/or Ineffective?*

Time to Process

Participants in the current study demonstrated a desire for in depth information and time to fully process that information. This sentiment was expressed in both positive and negative ways both on the survey ( $n = 46$ ) and in focus group comments ( $n = 27$ ). In answer to the question *What other qualities do you find particularly helpful or effective?*, one survey respondent wrote, "Time to talk with colleagues to brainstorm and plan and implementation of engaging, interactive, thought-provoking activities." Another answered, "The time to assess my own teaching practice outside the classroom with like-minded colleagues." Others expressed the same idea in negative terms in answer to *What other qualities do you find particularly unhelpful or ineffective?* As one teacher wrote, "Information overload is unhelpful to me. If there is no guided practice for 1 or 2 ideas/concepts I feel anxiety that I have been given too many tools that will not stick because I am overwhelmed." Another stated, "When there is too much information to actually take and implement immediately without time to process and plan for the classroom."

Focus group participants echoed that idea. Sandy, a science teacher at a private

school, stated,

That's a real key too is not to be overloaded with ideas. That's really not beneficial when you don't implement them....You don't come home with a hundred ideas, but we've got a couple of good ones or, you know, I think less with more depth and really learning it is better than a million links that I never go back to. (Focus group, December 11, 2019)

Serenity, a second-year teacher, described a PD session that she appreciated and contrasted it with others where she felt like she had not had enough time to process.

Some of them just kind of rush through. They don't show us how to do it. They just kind of show the PowerPoint. "Oh, this is how you could use it." OK. That's it. And we move on to the next one. But this one was actually more like it was more hands on and more interactive. She made it. She let us work on our own pace. We didn't feel too rushed. So I enjoyed it. I thought that was very neat how that was demonstrated and then she gave us time to work on it. (Focus group, December 10, 2019)

While the concept of time to process did not appear in previous literature, it is closely related to the characteristic discussed earlier and found both in the current study and in previous research: ease of implementation. It seems reasonable to assume that at times providers or facilitators of PD have misinterpreted teachers' needs and prioritized offering attendees a large quantity of ideas and strategies above time to internalize fewer ideas.

#### Reading from a Slide Deck

One of the most interesting results of the current study was that teachers articulated *presenters reading a slide deck* as an ineffective characteristic of PD. While it should come as no surprise that someone would dislike the practice, it is odd that it would occur so often that it would come to mind without prompting as teachers ( $n = 23$ ) answered an open response question on the survey. One survey respondent put it



concisely: “Reading from a PPT (I can read it 2).” Focus group participant DD was just as frank when he said, “I just want to comment that I think it's funny that we're discouraged from teaching via PowerPoint and then every training we go to is via PowerPoint” (Focus group, December 9, 2019). This finding clearly illuminates a problem that should be addressed. If teachers are expected to provide quality instruction, they should also expect to receive it.

### Limitations

Inherent in all research studies are limitations, and the current one is no exception. Although I made every effort to recruit a sample of teachers with various years' experience, the sample was skewed with 75% ( $n = 248$ ) of survey respondents having five or fewer years' experience. While that is largely a function of the current state of education as a profession and the attrition rate of teachers, future research should include more variability in years' experience.

Also problematic was the circumstance that so many teachers did not appear to know the accountability rating of their campuses. It is not clear whether this is indicative of lack of interest on the teachers' part. Given the high stakes nature of accountability ratings, that would seem improbable. Another possible explanation is the fact that so many teachers ( $n = 104$ ) in the current study were in their first year on their campuses. It is possible that they had not become familiar with their new campus rating. Whatever the reason, future researchers should take steps to mitigate this problem, particularly since previous research indicated that accountability rating of the campus was correlated with teacher attitudes.

## Implications

### *Practice Implications*

These findings have multiple implications for those who develop and provide professional development events for teachers, the most obvious and least employed being to explicitly ask teachers for their opinions and insights. Given the scarcity of studies regarding teachers' attitudes about PD and the qualitative data collected in the course of this investigation, it seems clear that teachers are not often consulted about their own professional development needs and a systematic, concerted effort should be made to ask for their input.

As they design learning experiences for students, teachers are expected to evaluate the needs of each student (Guskey, 2018), plan instruction congruent with an established set of standards, and continually monitor and refine their teaching practices (Stronge, 2018). Professional development providers should adhere to the same processes as they design learning for teachers. As many of the teachers in this study articulated, districts and PD providers should collaborate with teachers to provide an intentional, cohesive, and long-term plan for teacher learning. Just as teachers differentiate instruction and establish long-term goals for their students, so should teacher supervisors differentiate and establish long-term goals for their teachers.

Teachers' responsibilities include presenting content to students in interactive and engaging ways, none of which includes reading a slide deck to their students. Each state and district have a well-established, well-publicized method for evaluating whether teachers are accomplishing that. There are no parallel systems in place for the evaluation of content presented to teachers. Steps should be taken to establish and

monitor the quality of instruction afforded to teachers.

### *Research Implications*

Districts, campuses, and individual educators are arguably under more scrutiny currently than they have ever been. Accountability ratings are available to anyone, and news organizations and social media outlets publicize them. They influence the public's perspectives of homes, neighborhoods, schools, and school districts. It seems probable that they would also affect teachers' mindsets. Previous literature (Green & Allen, 2015; Wolff, McClelland, & Stewart, 2010) reported that teachers at lower performing campuses were less receptive to PD. The regression analysis results in the present study for the accountability variable were problematic because 19% of respondents did not provide their school's accountability rating. Three teachers in the focus groups commented about accountability status, but they did not indicate a negative attitude towards the PD provided to them. Rather they expressed frustration with the type of PD they were offered and with their administrators and supervisors. Future research should include investigation of the impact working on a campus designated as low performing has on teachers to determine their professional growth needs.

According to the regression model, the variable that best predicted TAP score outcome was level of degree held by the teacher. Teachers who had an advanced degree ( $n = 132$ ) had more receptive attitudes toward PD than those with only a bachelor's degree ( $n = 194$ ). One possible explanation is that teachers who attain advanced degrees have a common trait or characteristic (e.g., intellectual curiosity or openness to experience) that causes them to be more likely to pursue an advanced degree. If so, the same trait could also be predictive of teachers' attitudes toward PD.

An alternative explanation is that attaining an advanced degree cultivates an intellectual curiosity within teachers that causes them to be more receptive to PD. The field of education would benefit from research in this area. Future research should include a means of verifying that participants are classroom teachers and not administrators.

A third potential area of research stems from the finding that the gifted education teachers TAP scores in this sample were not different from teachers who were not in gifted programs. This is notable because gifted training is mandated by the state, and teachers in the study did voice a dislike or disapproval of state mandated PDs. Research should be conducted to determine whether that finding is unique to this particular sample, as many of the teachers in the study earned their gifted training hours from the same provider. Further, research should be designed to determine what factors may have caused teachers to perceive gifted training differently from other mandated training.

### Conclusion

For educational researchers, professional development providers, administrators, teachers, and teacher advocates, this study represents an opportunity for a shift in focus toward designing professional learning for teachers in a manner more aligned with the way we provide instruction for students in classrooms. It brings to light the lack of attention currently placed on consideration of teachers' opinions and perceived professional learning needs. The findings have implications for the ways we approach and plan professional development experiences and a framework for beginning to prioritize elevating the quality of educational support we afford teachers as we continue to expect them to provide high quality learning experiences for kids.

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## TEACHERS' ATTITUDES TOWARD PROFESSIONAL DEVELOPMENT: A SYSTEMATIC LITERATURE REVIEW

A substantial amount of research has been conducted on professional development for teachers (e.g., Cordingly, 2015; Darling-Hammond, 2016; Guskey, 2012; Guskey & Yoon, 2009). Much of the published research thus far has been on its impact as an agent of change for teachers (e.g., Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 2002; Ross & Bruce, 2007) or its effects on student achievement (e.g., Blank & de las Alas, 2009; Koellner & Jacobs, 2015; Richardson, 2008; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Although these are important areas of investigation, little has been studied on teachers' attitudes toward and perceptions of professional development. Educational stakeholders expect teachers to change their practices and thereby affect student outcomes as a result of their professional learning, yet researchers have done little to investigate teachers' attitudes and beliefs about that learning. This is particularly worrisome in light of the abundant research that identifies teachers as the single most important factor in student achievement (e.g., Marzano, 2003; Stronge, Ward, Tucker, & Hindman, 2008). Educational psychologists spend time studying and developing ways to engage children and adolescents more fully, and the importance of that work is undeniable. Educators seek new methods to make learning attractive and fun for school-aged students, and administrators expect teachers to know and use the latest research and techniques (e.g., Marzano, 2003; Presseisen, 2008). Despite all of this, research to understand the motivation and attitudes of teachers regarding professional development is rare.

As is the case with most professions, the field of education requires teachers to continue to deepen their knowledge through a routine recertification process, continuing education hours, or other professional development. Administrators and other stakeholders expect those learning experiences to equip teachers with knowledge and skills to create optimal learning environments for their students. When we develop learning experiences for those same teachers, however, we do not always expend the same energy, resources, and attention to providing optimal learning environments for them. A variety of entities serve as professional development providers for educators, such as state or regional education agencies, non-profit organizations, private for-profit educational companies, district or campus personnel, universities, and professional organizations (Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009). At times, professional development providers simply disseminate information to teachers without teaching it (e.g., Darling-Hammond et al., 2009; Guskey & Yoon, 2009). At other times, time and resources allocated for professional development are depleted by the process of training educators how to employ a particular product or program that has been purchased by the campus or district (Crowley, 2017). As a result, teachers approach professional development opportunities with differing levels of receptiveness (Killion, 2018).

The No Child Left Behind (NCLB) Act of 2001 brought attention to professional development and required that school districts ensure they provided *scientifically-based* professional development activities (No Child Left Behind [NCLB], 2002). The reauthorization of NCLB in 2015 as the Every Student Succeeds Act (ESSA) continued to place a focus on professional development, but revised the terminology from

*scientifically-based* to *evidence-based* (Every Student Succeeds Act: Federal Elementary and Secondary Education Policy, 2017). The mandated emphasis on the quality of professional development of educators warrants a closer look at current practices.

For the purpose of this review, the terms *professional development* (PD) or *professional learning* are interchangeable and refer to a purposeful, organized session or sessions devoted to deepening a teacher's knowledge and/or skills in a particular area. This might include online, face to face, or blended learning platforms, but does not include teacher certification or university courses taken prior to receiving teaching credentials. Here the term is not used in a broad or a long-term sense as in the professional development of a teacher over an entire career.

The aim of the current paper is to carry out a systematic literature review of empirical evidence about the views and attitudes that teachers have concerning their own PD experiences. A clear understanding of teacher perceptions would aid professional development providers, school administrators, and other decision makers in designing learning experiences based on the readiness of the teacher. If there is a mismatch between teachers' perceived needs or wishes and their available PD opportunities, this contributes to frustration for both teachers and providers of PD. Teachers may perceive that their needs are not being considered while the providers of PD may perceive that their work is not being valued.

In designing student learning experiences, pre-assessment plays a pivotal role (Guskey, 2018). Best practices indicate that teachers must continually monitor and assess learning in real time (Stronge, 2018). This practice seems to be absent in

designing learning for teachers, however. Scheduling of PD events is often contingent upon such factors as availability of time and space for a learning event, expertise of available PD providers, funding and resources, and the desires or viewpoints of stakeholders such as administrators, textbook publishers, or PD providers (Burke, Aubusson, Schuck, Buchanan, & Prescott, 2015). Instructional decisions for children generally follow a pattern that is less haphazard. Curriculum for children is tailored to address learning standards and is measured by performance objectives (Null, 2011). When students do not show mastery, educators must find ways to make the content more accessible to children (Dean & Marzano, 2012). Yet this culture of learning does not seem to exist in most PD settings (Kragler, Martin, & Kroeger, 2008), and it cannot exist until more is known about the learning needs and perceptions of teachers.

The present study seeks to bridge that knowledge gap. This understanding could have important implications for future research and PD design, as well as implications for teacher retention. The field of education routinely expects its teachers to begin their careers working alone in a classroom where they are solely responsible for students' academic needs and well-being for extended periods of time (Immordino-Yang & Gotlieb, 2017). First year teachers are expected to perform at the same level as veteran teachers from the first day of school often without help or support from another adult throughout the school day (Ferguson-Patrick, 2011). Because they spend so much time with children, teachers are uniquely positioned to understand the educational, social, and emotional challenges and strengths of each of their students. However, when administrators and other decision makers plan professional learning, they often use data from standardized tests, benchmarks, or accountability ratings to guide those

decisions (Hochberg & Desimone, 2010). PD providers, while they are often teachers or former teachers, cannot know the intricacies of day-to-day classrooms in which they do not work. Given that no data set measures the correlation between an individual teacher's knowledge level, experience level, strengths, and insecurities and an individual student's psychosocial well-being and academic performance (Immordino-Yang & Gotlieb, 2017), evidence of teacher perceptions about their own abilities and needs is crucial.

### Method

Wolfswinkel, Furtmueller, & Wilderom's (2013) five-stage model using grounded theory provided the structure for data analysis and interpretation for the current review. This process enabled the identification of concepts within the literature and revealed connections between those concepts. The results section of this review further details the process of coding and the development of themes and subthemes. Data were triangulated between the researcher and the dissertation chair.

Because of the impact of NCLB on PD practices, the year it was passed, 2001, served as the beginning publication date for the search. The earliest article that met the criteria for review was published in 2002, and the latest was published in 2018. The date of the last database search was September 8, 2018. Only articles published in English were considered since the focus of the study concerns educational policy specific to the United States.

The databases most relevant to education and to PD include Academic Search Complete, Professional Development Collection, Education Source, Education Database, and ERIC. The researcher searched each of those databases, using the

Boolean search terms *teacher development* OR *teacher learning* AND *teacher attitudes* OR *teacher perceptions* NOT *preservice teachers* OR *pre-service teachers* OR *student teachers*. A tiered process informed by Marshall and Sykes (2010) drove the selection process of articles. In order to qualify for the current review, each study had to be conducted after NCLB took effect. Other criteria included a focus on teacher attitude rather than student outcome and a focus on PD as a concept rather than a specific PD provided by a vendor or company. An initial examination of each title determined potential relevance to the review. If the title indicated the study was specific to a professional development vendor or program, or that the purpose of the study was to measure the effectiveness or student impact of PD, it was not considered. Each database produced a list of potentially relevant titles. An investigation of each title determined which abstracts to retain for closer review. Thoroughly reading each abstract allowed for further narrowing of the list of potential articles and determined which full articles to curate. After the initial reading of each article, preset criteria described earlier determined which additional articles to eliminate. The remaining articles are the focus of the current paper.

Academic Search Complete yielded 590 results. Of those, 83 remained for possible inclusion based upon titles. Based on their abstracts, 51 met the criteria for closer examination. The same search terms in Professional Development Collection database yielded 205 results, which were narrowed to 31 possible articles after titles were examined. After elimination of duplicate articles and reading of abstracts, 11 articles remained for further consideration. Education Source database, similarly, yielded 490 results, which were narrowed to 33 based upon title. Of those, 13 met the



criteria for the review. Using the same search terms, Education Database yielded more than 5,000 results. After reading the titles of the first 100 results, it became clear that the search terms used were too broad for this database, as they had not retrieved relevant articles. The researcher repeated the search using the terms *teacher professional development OR teacher learning AND teacher attitudes NOT preservice teachers or pre-service teachers or student teachers*. This yielded 121 results, two of which fit the criteria. Finally, a search of ERIC resulted in 410 results. Of those, 11 were appropriate for further inspection based upon their titles and abstracts. Since the ERIC database has search terminology specific to it, the researcher altered the terms to *teacher development descriptor:teacher attitudes of –descriptor:university – descriptor:student outcomes*. The total number of articles collected from all searches was 119.

The first reading of all 119 articles revealed that teacher preparation and continuing education requirements vary enormously by country; consequently, the next step in the process was to limit the current review to just those studies conducted in the United States. Of the total 119 possible studies, 34 were conducted in the United States and were retained for further review. Of those 34, 10 articles were ineligible because, although not apparent in the title or abstract, they explored teacher perception of activities related to learning in general (e.g., methods of coaching, game-based learning, technology in general), but not actual professional learning of educators. The remaining 24 articles are the focus of the current paper (see Table 6).

Data extracted from each study included title and author, publication date, research methodology, number of participants, context of study, and key findings.

Table 6

*Chronological List of Coded Articles*

Citation	Title	Sample Size	Theme*	Methodology	MMAT
Broady-Ortmann, 2002	Teachers' perceptions of a professional development distance learning course	4	V	Qualitative	1
Lester, 2003	Planning effective secondary professional development programs	93	A, C, V	Qualitative	2
Bliss & Bliss, 2003	Attitudinal responses to teacher professional development for the effective integration of educational technology	135	A, V	Quantitative Descriptive	1
Anderson & Olsen, 2006	Investigating early career urban teachers' perspectives on and experiences in professional development	15	A, C	Qualitative	3
Engstrom & Danielson, 2006	Teachers' perceptions of an on-site staff development model	11	A, C	Qualitative	2
Kragler, Martin, & Kroeger, 2008	Money down the drain: Mandated professional development	30	A, C, V	Qualitative	5
Torff & Sessions, 2008	Factors associated with teachers' attitudes about professional development	214	C	Quantitative Descriptive	5
Kaiser, Rosenfield, & Gravois, 2009	Teachers' perception of satisfaction, skill development, and skill application after instructional consultation services	274	A	Mixed Methods	5
Buehl & Fives, 2009	Exploring teachers' beliefs about teaching knowledge: Where does it come from? Does it change?	110	A, C	Qualitative	5

*(table continues)*

Citation	Title	Sample Size	Theme*	Methodology	MMAT
Lucilio, 2009	What secondary teachers need in professional development	169	A, C, V	Quantitative Descriptive	4
Torff & Sessions, 2009	"Teachers' attitudes about professional development in high-SES and low-SES communities"	150	A, C, V	Quantitative Descriptive	3
Torff & Byrnes, 2010	Differences across academic subjects in teachers' development	432	C	Mixed	5
Wolff, McClelland, & Stewart, 2010	The relationship between adequate yearly progress and the quality of professional development	5400	A, C	Non-Randomized	3
McConnell et al., 2013	Virtual professional learning communities: Teachers' perceptions of virtual versus face-to-face professional development	54	A	Qualitative	3
Adams, 2014	Teacher and policy alignment: A phenomenological study highlighting title I high school teachers' professional development experiences	3	V	Qualitative	5
Flory et al., 2014	US urban teachers' perspectives of culturally competent professional development	23	A, C	Qualitative	4
Conway, Edgar, Hansen, & Palmer, 2014	Teacher research as professional development for P-12 music teachers	7	C, V	Qualitative	3
Davis, 2015	Teachers' perceptions of twitter for professional development	19	A, V	Qualitative	5
Nasser et al., 2015	Head Start classroom teachers and assistant teachers' perceptions of professional development using a LEARN framework	27	A	Qualitative	3

*(table continues)*

Citation	Title	Sample Size	Theme*	Methodology	MMAT
Green & Allen, 2015	Professional development urban schools: What do teachers say?	271	A, C	Non-Randomized	2
Rutherford, Long, & Farkas, 2017	Teacher value for professional development, self-efficacy, and student outcomes within a digital mathematics intervention	395	V	Non-Randomized	5
Kimbrel, 2018	High quality professional development in charter schools: Barriers and impact	10	V	Qualitative	5
Jones, Hope, & Adams, 2018	Teachers' perceptions of digital badges as recognition of professional development	99	A, C	Mixed Methods	4
McCray, 2018	Secondary teachers' perceptions of prof development: a report of a research study conducted in the USA	10	A	Qualitative	2

Note. \*A = Attributes impact perception; C = Job context impacts perception; V = Perceived voice and input impacts perception.

Articles ranged in date of publication from 2002 until 2018. Number of participants in each study ranged from three (Flory et al., 2014) to 5400 (Wolff, McClelland, & Stewart, 2010). The number of participants in all studies combined was 7,955.

The Mixed Methods Appraisal Tool (MMAT) provided a protocol for assigning a quality rating to each article (Hong, Gonzalez-Reyes, & Pluve, 2018). Users of this tool answer two initial screening questions about each article: *Are there clear research questions? Do the collected data allow the researcher to address the research questions?* If the answer to each of these questions is *yes*, the study has met the requirements to be measured by the MMAT. Next, the tool directs users to answer five questions about each study with *yes*, *no*, or *can't tell*. These five questions vary depending upon the type of methodology the study authors used. Each *yes* response awards a single point in the total score, and each *no* or *can't tell* response adds no points to the score. The sum of each set of questions determines the overall rating, which is between 1 and 5 for each article with 5 being the highest score. Of the 24 articles in the present review, nine met the criteria for the highest score (see Table 6). Further, as seen in Table 6, six of the articles reviewed scored only a 1 or 2 which suggests that they may not be as robust as other studies.

Correlation coefficients were computed to determine whether a relationship existed between any of the following variables: MMAT score, year of publication, and number of participants. The only statistically significant relationship was the correlation between MMAT score and year of publication ( $\rho = -.956$ ,  $p < .001$ ). This finding suggests that the quality of studies on teachers' perceptions of PD has increased since 2001.

Although the MMAT accommodates various methodologies, it is problematic to compare this group of studies based solely upon this rating. Ratings were assigned in order to more fully describe each study but should not be considered as an endorsement or non-endorsement of any particular study. By design of the MMAT instrument, papers that described robust methodology receive higher scores than those that do not. MMAT scores did not prohibit any study from inclusion in the current review.

## Results

As outlined by Wolfswinkel et al. (2013), the process of extracting information from each study began with reading each article and highlighting sections containing information regarding teacher attitudes toward PD. The purpose during the second reading was to code each section of highlighted information as positive, negative, or mixed and to begin to identify concepts. A third reading provided the opportunity to write a short summary of findings regarding attitudes for each article and compile those summaries into a separate summary of attitudes document. Three main themes emerged from and were notated on the summary of attitudes document:

1. *Job context* impacted teacher attitude about PD.
2. Teachers valued *specific attributes* in PD.
3. The degree to which teachers perceived they had *voice and input* into designing their own learning experiences impacted their attitudes about PD.

The next step of the process was to return to the original articles and label them with one or more of the three themes without referring to the summary of attitudes document. Further, this allowed an opportunity to triangulate the coding procedure as well as to consider whether more themes needed to be added. The researcher then compared the themes coded on the articles themselves with those on the summary of

attitudes document to cross check for consistency and accuracy. Finally, reading each article a fourth time, as well as subsequent readings of the highlighted excerpts, provided additional opportunities to cross check that the original labeling of the codes remained viable, to ensure that the labels used had retained their original meaning and intent, and to determine whether new codes needed to be added. Of the 23 studies, 21 included more than one of the three themes, and all included at least one. Themes for each article are labeled as follows (see Table 6): Theme 1 is coded as C (context), Theme 2 as A (attributes), and Theme 3 as V (voice). Subthemes emerged within both Theme 1 and Theme 2 and are described further in the Results section. See Table 7 for a list of themes and subthemes.

Table 7

*Summary of Themes and Subthemes in Reviewed Literature*

Theme	Subthemes
Job Context	Campus accountability rating Experience level of teacher Specific job role
Desired Attribute of PD	Time to collaborate Easy to implement Follow-up support Choice
Teacher Input	

*Theme 1: Job Context*

For the purposes of this review, *job context* refers to the point at which an educator is situated within the larger view of time and place. For example, the setting of a particular campus or district (e.g., rural or urban), the stage of a teacher’s career (e.g.,

first year teacher), and the climate and culture of the campus might all be considered *job context*. Early career teachers had different perceptions and needs than did more experienced teachers. Perceptions and needs also varied by school demographics and by the school's rating in the state or federal accountability system. There was some indication that subject taught might have had some influence on teacher attitudes, but the pool of articles available was too small to further explore that concept. Of the 23 studies, 13 were coded with this theme, and one was coded exclusively with this theme.

Three subthemes emerged within the theme *job context*. First, a school's rating as high achieving or low achieving within the federal or state *accountability system* influenced teacher satisfaction with PD. Two (Green & Allen, 2015; Wolff, McClelland, & Stewart, 2010) of the three articles coded with this subtheme asserted that the achievement level of the individual campus was positively related to the level of satisfaction that teachers had with PD. In a study involving eight schools and 271 teachers, Green and Allen (2015) stated that there was a causal link between schools that used the Learning Forward PD standards and both teacher satisfaction and student achievement. It bears noting that the MMAT score for this article was 2. The methodology did not account for the differences in socioeconomic status, percentage of minority students, or percentage of students receiving special education. Further, only half of the participants in the higher achieving schools indicated that their PD experiences were aligned with Learning Forward PD standards.

One other study (Kragler et al., 2008) examined two schools designated as low performing by the federal *accountability system*. Researchers found that over the two-year period of the study, the 30 teachers who participated believed that certain PD



sessions they were required to attend were philosophically opposed to one another and therefore overwhelming and unhelpful. Their designation within the *accountability system* had prompted multiple PD initiatives on each campus. Teachers believed that PD providers viewed them as incompetent because of their campus *accountability rating* that and that too many demands had been placed upon their time.

Three studies (Anderson & Olsen, 2006; Buehl & Fives, 2009; Torff & Sessions, 2008) reported that the *experience levels* of teachers impacted their attitudes toward PD. These were coded with the subtheme that phase of career impacts perceptions of PD. In a study of 15 teachers who received university-based PD, Anderson and Olsen (2006) identified two distinct PD needs at specific times. They reported that in the first two years of their careers, teachers wanted guidance regarding classroom management, and teachers with three to six years of teaching experience preferred learning related to theory and leadership. In a larger study ( $n = 214$ ), Torff and Sessions (2008) also found differences in level of interest for PD related to years' experience. Teachers had more positive and receptive attitudes about PD during their first two years of teaching, as well as after year 10 of teaching. During years three through nine, their attitudes were less receptive. According to this research, teachers' worldviews and social interactions changed over time and thereby affected their perspectives. At the beginning of their careers, teachers seemed to be eager to learn and to respond positively to feedback. By year three when teachers were more comfortable in their roles, their attitudes were less receptive, but teachers who continued teaching after year nine were less complacent with their practice and more eager to learn. The focus of the third study (Buehl & Fives, 2009) was to understand what sources of pedagogical

knowledge informed practicing and preservice teachers. Both practicing ( $n = 57$ ) and preservice ( $n = 53$ ) teachers identified PD as a source of knowledge. The authors of the study reported that practicing teachers differed by level of experience in their attitudes about PD, but they did not report further analysis or discussion of that point.

A third subtheme that emerged was that teachers' specific *job roles* affected their views of PD. Two studies (Jones, Hope, & Adams, 2018; Torff & Sessions, 2008) found that within the context of their data collection, teachers of elementary students had more supportive attitudes toward PD than their counterparts who taught junior high or high school. In the first of these Jones, Hope, and Adams (2018) hypothesized that earning digital badges would motivate teachers to engage in more PD. Their findings did not support this theory. In the process of the study researchers discovered differences in the way elementary and secondary teachers perceived both digital badges and PD in general with elementary teachers responding more favorably to both. The study did not report how many of the 99 teachers who participated were elementary teachers, so group size may have affected results. Torff and Sessions (2008) also reported that elementary teachers were more receptive to PD than secondary teachers, particularly those who had taught less than 10 years. Findings of this study further suggested that teachers in schools with higher socioeconomic status (SES) valued PD more than their counterparts in lower SES schools.

Three studies (Conway, Edgar, Hansen, & Palmer, 2014; Flory et al., 2014; Torff & Byrnes, 2010) explored the perceptions of teachers based upon their content areas. In one case (Conway et al., 2014), all seven music teachers interviewed expressed frustration with the difficulty of finding PD opportunities related to their field, as musical

achievement is not measured as part of state or federal accountability and music teachers' needs vary substantially from the needs of teachers in academic content areas. In the second (Flory et al., 2014), health educators in eight different urban high schools perceived a gap between the cultural awareness of their PD providers and the cultures of their students. Teachers in the study ( $n = 23$ ) stated that the individuals who led their PD workshops did not have a clear understanding of the experiences of the students with whom the teachers worked. The students were diverse adolescents living in an urban food desert with low SES and a high crime rate. Their perceptions of nutrition, attitudes about tobacco use, and concerns about physical safety were not aligned with those of the PD providers. As a result, the PD providers offered methods and strategies for encouraging health and well-being among students, and the teachers perceived their instruction as inappropriate and culturally irrelevant to their students. The third study (Torff & Byrnes, 2010) investigated group differences in attitudes toward PD based on content area taught. The research took place in an affluent, high achieving school district in New York, and 432 teachers from all grade levels participated. Secondary science teachers appeared to have the least favorable attitudes toward PD, and elementary teachers had the most favorable, as measured by the Teachers' Attitudes about Professional Development (TAP) scale. This study did not explore reasons within the district that might have accounted for that variation, such as differences in PD design or in the administrators responsible for planning PD among various content areas.

### *Theme 2: Desired Attributes*

Teachers placed higher value on PD experiences that included a specific *desired*

*attribute* or attributes that they identified as important to them. They reported seeking out PD that included those attributes. Likewise, teachers articulated specific undesirable characteristics. They had negative perceptions about PD that they considered impractical to implement or that contained what they considered too much information. In the studies included in this review, no single attribute surfaced as a positive characteristic in one study and a negative one in another, or as a negative attribute in one study and a positive one in another. This theme appeared in 17 of the 23 articles, and four of the articles, this was the single theme. Four features of PD emerged as distinct desirable attributes and are considered subthemes: *time to collaborate*, activities that could be *quickly implemented* into their classrooms, coaching or other type of *follow-up support*, and elements of *choice*.

Teachers expressed a desire for *collaboration* regardless of experience level, content, or grade level taught. In a Michigan study investigating preferences for digital versus face to face learning (McConnell et al., 2013), science teachers reported that they valued being a part of a collaborative community within a professional learning event, irrespective of the learning platform. The 54 teachers worked in groups of four to five over the course of an entire academic year in a multi-session formal PD on inquiry learning. Group size and duration of PD may have affected teacher attitudes toward collaboration, but neither was considered in the study. A separate study (Nasser, Kidd, Burns, & Campbell, 2015) found that both certified teachers and assistant teachers of preschool preferred collaborative learning. A convenience sample of 27 teachers was used in the study, and it bears noting that a different sample might have yielded different results. Similar results were found in a study of early career teachers in an

urban setting (Anderson & Olsen, 2006). This was a small study ( $n = 15$ ) of teachers, each of whom received their teaching credentials from the same university program. Authors of this article did not report its limitations, and it is difficult to know whether teachers' similar preparation for teaching influenced their attitudes about *collaboration*.

Engstrom and Danielson (2006) reported that even when teachers participated in designing their own PD sessions, they chose a *collaborative setting*. There are two areas of concern with this study, however. The authors reported using a random sample, although the 11 participants consisted of the only individuals from the 30 invited who consented to the study. No further description of the participants appears in the article. Further, no teacher in the study reported changing classroom practice as a result of the PD. According to Buehl and Fives (2009), even when teachers fundamentally disagreed on other constructs related to professional growth, such as the role of technology, they agreed that *collaboration* was an important way to build knowledge and skills.

A second attribute that teachers valued was strategies or activities that could be *quickly implemented* into their classrooms (Davis, 2015; McCray, 2018; Nasser et al., 2015). Davis (2015) investigated teachers' attitudes around the use of the Twitter platform as PD by analyzing Twitter chats using the EdChat hashtag over a period of three months and interviewing 19 of the teachers who had participated in at least two of the online #EdChat discussions. Among the benefits of Twitter that teachers reported was the ability to obtain instructional strategies that they could quickly implement. All 19 participants in the study reported this as a benefit. As stated earlier, Nasser et al. (2015) reported specific attributes that teachers valued, and *easily implemented strategies* was

identified as one of those attributes. A less robust study (McCray, 2018) that involved 10 secondary teachers on a single campus in Florida also suggested that teachers placed value on *easily implemented strategies*.

At times the preference for *easily implemented strategies* surfaced within the context of stating negative perceptions of PD experiences (Kragler et al., 2008; Lucilio, 2009). Thirty teachers from two Midwestern elementary schools designated as low performing reported being frustrated by the mandated PD they had received (Kragler et al., 2008). They identified the lack of quickly implemented, practical strategies as one of the causes of their frustration. Lucilio (2009) surveyed 169 secondary teachers in a Catholic Diocese in Ohio and found that they were frustrated with the quality of PD available to them. They reported that they and the PD providers had different priorities and that the providers did not offer them practical ways to apply the concepts they taught to the day-to-day constraints of their classrooms. In both studies, when teachers did not believe they were receiving practical, easily implemented strategies, they viewed the providers of PD as disconnected with teacher needs and the PD session as unhelpful.

Third, teachers wanted their professional learning to include *support beyond the day of the PD event*. The teachers in one study (Kragler et al., 2008) wanted each PD session to be part of a larger, cohesive plan that would result in an individual teacher's increased self-efficacy, as well as a collective efficacy among colleagues. Instead, they felt that they were being inundated with multiple programs that did not align with each other while being offered no follow-up or feedback in implementing any of the programs. This resulted in resistance to the idea of altering their teaching practices. Teachers who

used Twitter as a professional learning network (Davis, 2015) also reported that they valued feedback, and they stated that they had received it immediately from their colleagues on Twitter. In the previously mentioned study that involved health educators (Flory et al., 2014), participants wanted follow-up support and help with implementation because they believed PD decision makers did not have a clear grasp of the day-to-day challenges of implementing the practices presented in the PD sessions. Kaiser, Rosenfield, and Gravois (2009) focused on instructional coaching as a form of PD and feedback. Instructional coaches were paired with 274 teachers representing 27 different schools in six different school districts. Teacher satisfaction with this form of PD was positively correlated with their increased use of pedagogical strategies learned from instructional coaches and with teacher self-efficacy. However, researchers in this study did not find a relationship between the coaching model and student achievement. A study involving 135 elementary teachers (Bliss & Bliss, 2003) also reported that teachers wanted *follow-up support*. According to the study, only 11% of teachers believed they were typically provided any support beyond the day of the PD. This study did not, however, provide information regarding the instrument used to measure teachers' attitudes, which made further analysis of it problematic. One further study (Lester, 2003) found that teachers wanted not only feedback but also accountability. Elective and core content teachers ( $n = 93$ ) representing eight different high schools responded to a survey, and a subset of those teachers agreed to individual interviews. Although this article unfortunately did not contain a thorough explanation of how the data were analyzed, it did report that teachers welcomed feedback and accountability checkpoints. Teachers indicated that they were overwhelmed with the amount of

information they had received during their PD sessions, and they would have benefitted from having someone available to *support their classroom implementation* efforts. Rather than a PD session standing as an isolated event, teachers stated that they would prefer that it have the attribute of connection to past and future learning.

The fourth subtheme that surfaced was that teachers valued an element of *choice* within the structure of their PD. Davis (2015) found that Twitter was a favorable platform for PD in part because it afforded teachers the ability to choose time, duration, and place of engagement, content of learning, level of contribution to the learning, and people with whom they would collaborate. In a study intended to examine the degree to which recognition via digital badges motivated teachers (Jones, Hope, & Adams, 2018), researchers instead found that *choice* was a greater motivator than recognition. A comparison study of teachers ( $n = 138$ ) in low and high SES schools (Torff & Sessions, 2009) reported that the teachers in high SES settings had more positive attitudes about their PD than their counterparts in low SES settings. The article stated that teachers at campuses with higher SES had more freedom to *choose* their PD experiences than those at campuses with lower SES. It is worth noting, however, that this article did not establish how the differences between the two groups with regard to choice were measured or determined. This study also contradicts the authors' earlier finding (Torff & Sessions, 2008) that teaching experience predicted attitude toward PD. In the 2009 study, the authors report that their multiple regression analysis found that teacher attitudes did not vary by years of teaching.

### *Theme 3: Teacher Input*

There was little evidence in the literature that teachers routinely had the



opportunity to design their own pathways of PD. Sometimes the formal learning opportunities they engaged in were routine compliance trainings or requirements related to a campus or district's accountability rating. When teachers attended professional learning opportunities outside those parameters, a single individual, such as a campus principal or district content specialist, typically chooses the content of those sessions. The studies reviewed here revealed that teachers wanted a voice in the type of PD offered to them. They reported a desire to be part of the planning process for PD sessions and for decision makers to consult with them prior to scheduling sessions, so that they might better understand what types of learning would meet their perceived needs.

In a small study (Conway et al., 2014), music teachers had an opportunity to choose a PD research project. Even those who did not earn credit hours because they did not complete the project reported that they considered it a valuable learning experience that they would voluntarily repeat because they felt vested in the project. They expressed frustration that most of the PD activities planned by their districts did not meet their specialized needs in terms of content knowledge and application to music courses. Similar results were reported in a single case study of PD for general education in a charter school serving Kindergarten through eighth grade (Kimbrel, 2018). Participants included seven teachers and three administrators. The researcher interviewed each participant and analyzed PD plans and PD surveys for each. Administrators reported that teachers lacked interest in PD while teachers reported that they found value in organized PD only when they were able to contribute their own expertise and ideas.

Four articles (Adams, 2014; Broady-Ortmann, 2002; Kragler et al., 2008; Lucilio, 2009) addressed the disparity between teacher and PD provider outcome goals for PD. In a study of two inner-city elementary schools designated by NCLB as low performing, Kragler et al. (2008) reported that teachers of students in Kindergarten through Grade 3 ( $n = 30$ ) were frustrated by the extensive amount of information they received from multiple sources. Each of the schools had received approximately \$400,000 in federal funds to support them in improving their performance. Over the two-year period of the study, teachers attended PD sessions from at least three different vendors and had multiple coaching sessions and demonstration lessons. Teachers believed that the various consultants contracted by the district to support them had given them conflicting advice and information about how to help their students. Teachers stated that their ability to make decisions and to *provide input* regarding their own learning had diminished. At the end of the two years, there was no evidence that teachers in the study had modified their instruction.

A small phenomenological study of three high school teachers (Adams, 2014) yielded similar results. All participants were from the same high-poverty, low-performing high school in New Mexico. Because of the school's performance rating, teachers were compelled to attend PD prescribed for them by their district. In private interviews, each teacher expressed frustration with their inability to *provide input* regarding the expectations placed upon them. Each participant indicated a perceived distance between what their PD experiences were and what they believed PD should be.

Even without the constraints of state or federal accountability systems, educators in a faith-based private school district (Lucilio, 2009) reported that their campus and

district leadership ( $n = 28$ ) had different professional learning priorities than did the teachers ( $n = 141$ ). Teachers from each of the district's 14 high schools indicated they believed that, although the nature of teaching at a private school afforded them more instructional freedom than that of a public high school, they still were not included in *decisions* related to their own district-based professional learning.

Several articles indicated that teachers wanted professional learning opportunities (Adams, 2014; Bliss & Bliss, 2003; Rutherford, Long, & Farkas, 2017) and even welcomed accountability (Lester, 2003). In one study (Bliss & Bliss, 2003), only 11% of the 153 teachers surveyed believed they received adequate amounts of PD, and 93% of teachers stated that they wanted to be involved in the *planning* and implementation of PD but were not given that opportunity. As stated earlier, this study has limitations. It is difficult to discern how teachers were chosen to participate in the study, which could have produced biased results, and the specific instrument used to survey teachers was not provided. A study of a Title I high school deemed by the accountability system as underperforming yielded similar results. Adams (2014) reported that the three teachers in her study also wanted more PD than they had received and believed they should be held accountable for implementing that PD. Along with that accountability, though, they wanted a chance to provide *input* to decision makers concerning the nature of the PD they received. Rutherford, Long, and Farkas (2017) extended those findings in a study involving 395 math teachers from 50 different elementary schools in California. They reported that teachers' positive attitudes toward PD directly impacted teacher self-efficacy which, in turn, positively impacted student results.

## Discussion

The aim of this systematic review was to understand teacher perceptions and attitudes toward PD experiences since the passing of the No Child Left Behind act brought new attention to PD in the United States. The hope is to spark further research and conversation around the needs, motivation, and desires of teachers regarding their professional learning. To that end, the researcher attempted to find all relevant studies conducted in the United States since 2001 and coded each using a multi-stage process rooted in grounded theory (Wolfswinkel et al., 2013). Analysis revealed common themes, implications for practice, and gaps in research.

The findings of this review suggest three separate but interconnected influences on teacher attitudes regarding PD: 1) the context in which the teacher works, 2) specific attributes of PD that each teacher values, and 3) the degree of voice or input into the design of PD that the teacher perceives he or she has. Two of the factors affecting teacher attitude may be segmented into distinct components, referred to here as subthemes. First, in the studies reviewed here, the theme of context in which teachers worked included the subthemes of a) performance of the school as measured by the state or federal accountability system, b) years of experience each teacher brought to the classroom, and c) specific grade level or content area each teacher taught. Second, these studies suggested that individual teachers sought specific attributes of PD sessions, including the four subthemes of a) opportunities for collaboration, b) learning that was easily transferable into their own classrooms, c) choices in what and how they learned, and d) professional learning experiences that were embedded within a larger coherent sequence of learning. These insights are critical for decision makers and PD

providers to understand as they plan PD for teachers, and they are essential to teachers as they reflect upon their own classroom practices.

The theme of teacher's context appeared to affect not only the attitude toward PD but also the other two themes that affect teacher attitude. Music teachers in one study (Conway et al., 2014) expressed that PD specific to the discipline of music was rare. Being situated within the context of music education led them to value having a voice in decisions about their own PD. This viewpoint seems particularly evident in music educators, given that music is a non-tested subject in state and federal accountability systems and consequently is less likely to receive PD resources commensurate with subjects considered core content (Robinson, 2017). Teachers of other non-tested courses, such as dance, visual arts, and world languages, presumably experience comparable frustration (Croft, Roberts, & Stenhouse, 2015).

Similarly, in a study of urban districts (Flory et al., 2014), health educators voiced frustration that their PD providers were unaware of the cultural diversity of their students and thus were not providing culturally responsive PD. This led them to state that the attribute of collaboration was important to them in learning experiences because it allowed them an avenue to work with their colleagues to meet the needs of their diverse students. They believed that their common experiences and similar settings would lead to more efficient and strategic solutions to their problems of practice. Teacher collaboration as a concept is complex, generally ill-defined, and affected by multiple factors, such as school climate (Vangrieken, Dochy, Raes, & Kyndt, 2015). The perceptions and effects of collaboration with regard to teacher learning and effectiveness warrant further investigation.

Two studies (Torff & Sessions, 2009; Wolff, McClelland, & Stewart, 2010) compared attitudes of teachers in schools with a high socioeconomic status (SES) with those in schools with a low SES. According to both studies, teachers in higher SES schools had more positive attitudes toward PD. One possible explanation cited was that teachers in high SES schools experience the attribute of choice more often than their counterparts in lower SES schools. Making the issue more complex still is the likelihood that student SES impacts teacher beliefs (Glock & Krolak-Schwerdt, 2014). At minimum, the impact of context on the other two factors, voice and attributes, raises questions about whether *job context* might through further research be identified as the most important contributor to teacher attitude about PD.

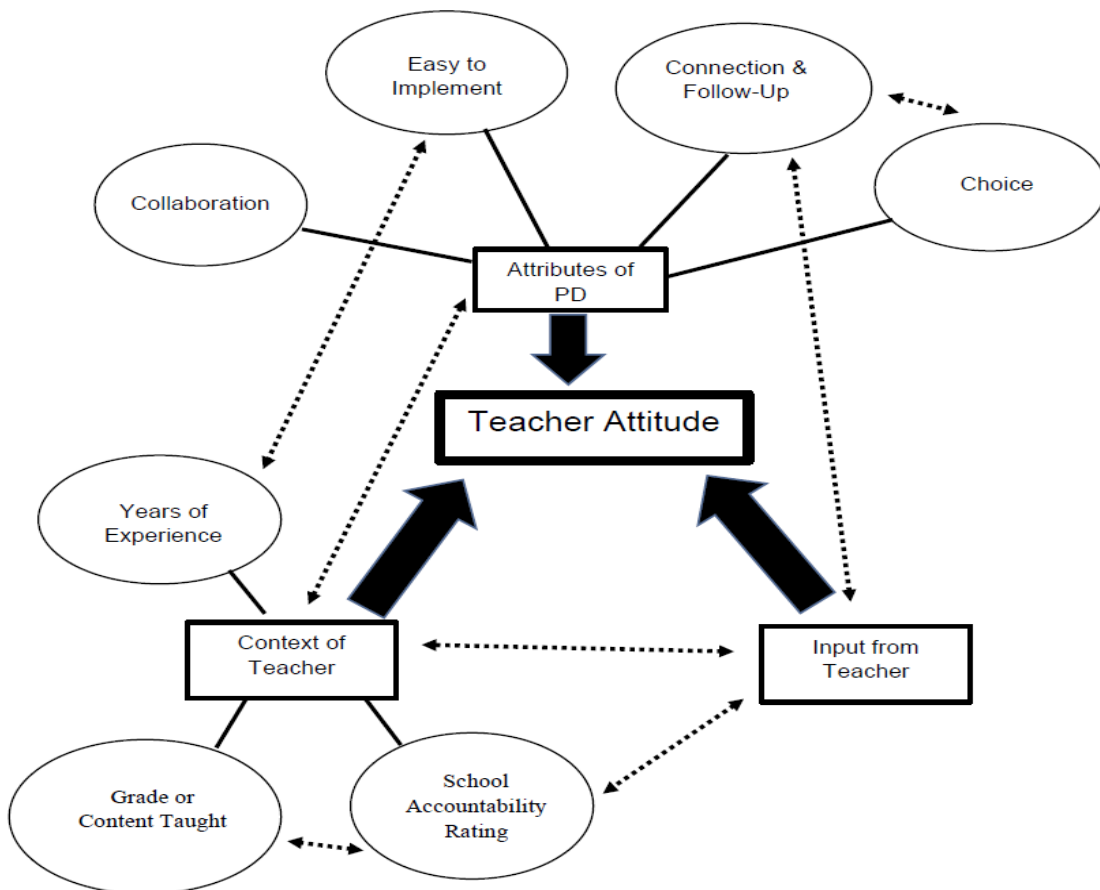


Figure 2. Relationship between themes (dotted lines represent hypothesized connections).

Thematic synthesis of the combined findings of all the studies led to further hypothesized bidirectional relationships among themes and subthemes (see Figure 2). A closer look at those relationships might serve as a beginning point for decision makers in education to begin to reframe their approach to PD. The impact of the accountability rating of a campus might vary, for example, depending upon the role each teacher plays at the campus. A teacher who is responsible for teaching content measured by a state assessment in an underperforming school may perceive a different level of agency in his or her own choice of professional learning opportunities than one who teaches a grade level or a content area that is not assessed and does not factor into the school's accountability rating. Taking that into consideration might allow a campus or district leader to strategically address those differing perspectives with different kinds of PD experiences. A teacher's perception of how practical and transferable a PD session is might depend on his or her experience level. An early career teacher may feel less inclined to experiment with an idea encountered during a PD session than a teacher with more experience may, or vice versa. PD providers might leverage those natural propensities by designing a PD session in such a way that enables veteran and novice teachers time, opportunity, and a process by which they might freely exchange ideas. While such relationships among themes and subthemes might not be immediately apparent in any single study, a thorough review of all the literature affords an opportunity to discover them. Research that investigates those relationships would inform the way PD providers design PD and would enable campuses and districts to tailor more effectively the PD opportunities they make available to teachers.

The field of education has many stakeholders and all of whose voices should be heard. A survey of the literature reveals that of all the stakeholders, teachers are among the least likely to be asked for their opinions and views. However, teachers are uniquely positioned to understand the challenges and strengths of their students, as well as those within themselves. They experience the daily effects of the gap between their students' current abilities and mastery of a topic, concept, or skill. They know their own shortcomings and feel the daily frustration of lacking the knowledge or resources needed to support their students. Despite this, the studies in this review suggest that PD is selected and planned without teacher input.

The very point that only 23 studies on teacher perception of PD in the United States were published since the passing of NCLB raises important questions. If, as stated earlier, the importance of both teacher quality and of teacher development have been established, why are teachers not routinely consulted about their own learning needs and asked to participate in planning their own paths of PD? There is further evidence of this oversight in the information that the United States Department of Education routinely collects from teachers. The Schools and Staffing Survey (U. S. Department of Education, 2011) contained a section titled Professional Development that included 11 questions about the types of PD teachers had received, such as content specific, technology-related, supports English learners, and classroom management. While the questionnaire asked teachers to rate each general type as *not useful, somewhat useful, useful, or very useful*, it did not ask teachers to indicate what kind of PD they would consider useful or favorable. The National Center for Education Statistics (NCES) redesigned the survey following the 2011-2012 administration into its



current form, the National Teacher and Principal Survey. In the only published version of the results of the redesigned survey, there is no section on Professional Development (U. S. Department of Education, 2015). According to the NCES website, future administrations of the survey will contain questions on PD, evaluation, and working conditions that rotate on and off the form from administration to administration. To date, however, there are no questions asking for teacher opinion about professional learning on the survey.

Many of the studies reviewed in this analysis implied that PD decisions are made on the basis of accountability ratings or other school wide measures. A school with low reading assessment scores might require the entire campus to attend PD on reading in the core curricular areas without regard to what factors might have contributed to the low reading scores or which teachers are already well versed in literacy strategies. Standards for educating children, however, are based on the needs of each individual child. As such, differentiated instruction has become a widely accepted practice (Tomlinson & McTighe, 2006). For example, when children demonstrate an ability to read above grade level, teachers are expected to provide age appropriate challenging texts for them. Similarly, when children demonstrate that their reading ability is below their grade level, teachers are charged with scaffolding instruction to make reading accessible to those children while building their reading skills. Basing a child's education on the performance of an entire school or even an entire grade level would not be tolerated (Hattie, 2012; Marzano, 2003; Marzano, Norford, & Ruyle, 2018). Each student must demonstrate mastery before progressing to the next grade level, and each student must individually meet requirements for graduation from high school. Yet, there

is no evidence to suggest that the same rigorous educational decision-making that we use for student learning also occurs for teachers.

### Limitations and Future Directions

As is the case with all studies, this one has limitations. There is probable risk of bias in several of the studies reviewed. For example, in one study (Conway et al., 2014), the author previously knew each of the research subjects. In another (Bliss & Bliss, 2003), the school district involved in the study limited the researchers to participants all at one school specifically chosen by the district. It is not clear whether participants from a different school in the same district might have given different responses. In other cases (Bliss & Bliss, 2003; Engstrom & Danielson, 2006; Green & Allen, 2015; McCray, 2018), the methodology was not detailed in such a way that it was possible to determine how rigorous the studies were. Finally, the dearth of empirical studies on this topic presents a challenge in itself. As stated earlier, every study that fit the criteria was included in the review, regardless of its quality or value as measured by the MMAT. The intent of this review was to survey all existing literature; therefore, some of the studies included are likely more trustworthy than others. Any of these conditions may have affected findings or interpretations.

There is a clear need for further research that investigates teacher perception of PD, including factors that influence those perceptions. As stated earlier in this review, the existing body of research includes only 23 articles that the researcher could find. The changing nature of technology and the passage of ESSA have rendered some of those studies outdated (e.g., Bliss & Bliss, 2003; Broady-Ortmann, 2002; Lester, 2003). None of the existing research has been replicated, so future research should include

attempts to examine those earlier findings in light of updated technology and legislation.

Additionally, theme one of the current study deserves further consideration, as a better understanding of how *job context* produces differing learning needs for teachers would help those responsible for providing PD to design more effective learning experiences. Torff and Sessions (2008) found teachers' attitudes and needs were dependent upon their experience level. Flory et al. (2014) found that teachers did not believe their PD providers understood the culture particular to their school. If these and similar findings can be verified, it should inform districts' PD policies.

Research is needed to understand how administrators and others responsible for planning PD sessions determine what they provide and design for teachers. If, as the studies in the current review suggest, teachers believe that their needs are not heard or addressed, what measures are being used to determine appropriate professional learning opportunities?

Finally, the success of any teaching strategy, educational initiative, or curricular program, regardless of how well-developed, lies in the fidelity of its implementation. Fidelity of implementation, though, depends upon the teacher's attitude and commitment to it. In the current climate, educational decisions appear to be made based on factors outside the teacher's perspective. Research is needed to determine how teachers define reliable sources of PD, to better understand the attributes they value in PD, and to learn the type of coaching or follow-up to PD that would most benefit teachers.

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## APPENDIX A

### ITEMS ADDED TO THE TAP SCALE FOR THE CURRENT STUDY

## Demographic Questions

1. Gender
  - a. Male
  - b. Female
  - c. Non-binary
2. Years of full-time teaching completed:
3. Which of the following best describes your current teaching assignment?
  - a. STAAR-tested elementary grade
  - b. Non STAAR-tested elementary grade
  - c. STAAR-tested middle school subject
  - d. Non STAAR-tested middle school subject
  - e. STAAR-tested high school subject
  - f. Non STAAR-tested high school subject
4. Which of the following best describes what you teach?
  - a. Elementary
  - b. Math
  - c. Science
  - d. English language arts and reading
  - e. Social studies
  - f. Fine arts
  - g. Languages other than English
  - h. Career and Technical Education
  - i. Health/Physical Education
  - j. Other

5. In your position, do you serve gifted students and/or are you required to obtain 6 hours of gifted professional development annually?
  - a. Yes
  - b. No
6. What is the highest level of education you have attained?
  - a. Bachelor's degree
  - b. Master's degree
  - c. Doctorate
7. How did you obtain your teaching certificate?
  - a. Traditional university certification
  - b. Alternative certification
8. How many years have you been employed at your current campus? (If this is your first year, please answer with 1.)
9. Is your campus designated as a Title I campus?
  - a. Yes
  - b. No
10. What is your campus accountability rating?  
A    B    C    D    F    Unsure

#### Other Items Added to the TAP Scale

1. Please rank the following qualities of professional development in order of *most important to least important*.
  - A. Opportunities for collaboration with colleagues
  - B. Ideas or strategies that I can easily implement into my classroom instruction
  - C. Follow-up support beyond the day(s) of the professional development
  - D. Choice regarding the format of my professional development
  - E. Opportunities to help plan or provide input regarding professional development for my campus or district

2. What other qualities of a formal professional development do you find particularly *helpful* or *effective*?
3. What other qualities of a formal professional development do you find particularly *unhelpful* or *ineffective*?

APPENDIX B

INITIAL QUESTIONS FOR USE WITH FOCUS GROUPS

1. Research has shown that some educators find their PD sessions helpful, and others find little or no value in them. In your experience, how beneficial are PD sessions to your teaching practice?
2. PD facilitators use various ways to engage their participants. Some create very collaborative learning spaces and allot time for participants to work with colleagues while others design sessions geared more toward independent learning. Describe the degree of collaboration you generally prefer during your professional development time.
3. Think about the content of some of your most valuable PD experiences. What type of activities, resources, or new knowledge added value to those experiences?
4. How helpful is it for a PD event to include communication, support, or activities before the day of the event and/or communication, support, or activities as a follow-up to the event?
5. Sometimes teachers must attend certain PD sessions because of the wishes, policies, or mandates of their campus, district, or state. Other times, teachers are free to choose the format, content, or provider of their PD. In your experience, does the ability to make choices such as these affect the benefit you receive from the PD?
6. Ideally, who should be responsible for planning PD for teachers? To what extent should teachers be involved in planning PD for their campuses or districts? To what extent would you like to be involved in planning PD for your campus or district?

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