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"We Felt Like Pioneers": Exploring the Social and Emotional Dimensions of Teachers' Learning During Online Professional Development

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During the 2020-2021 academic year, teachers worked to adapt to newly virtual environments as the COVID-19 pandemic closed schools and moved both classrooms and professional development activity online. Even before the shift to online learning brought about by the COVID-19 pandemic, online professional development (PD) had become increasingly common. Researchers have highlighted the potential for online PD to help teachers reflect on their existing practices and develop and shift their understandings of teaching. Few studies, however, have considered the social and emotional components of teachers' learning in online settings. Responding to this gap, this case study examines the social and emotional dimensions of five middle school teachers' experiences over the course of a semester-long online professional development program. The findings highlight (a) the creation of a supportive and collaborative community online, (b) the co-occurrence of positive emotions and intellectual discussions, and (c) the impact of positive emotional experiences during online PD in supporting teachers' professional identity development. The findings can help researchers and educators understand the nuanced social and emotional dimensions that impact teachers' learning and experiences during PD.

INTRODUCTION

Research over the last four decades has shown that teachers' own experiences as learners are often mirrored in their curriculum design and instruction (Darling-Hammond et al., 2017; Lortie, 1975). Given that learning happens within sociocultural contexts over long periods of time (Heath, 1983; Lave & Wenger, 1991), research highlighting this connection should not be surprising, as teachers develop their pedagogical understandings and practices not only through books or university programs, but also through ongoing learning experiences in concert with their colleagues. Teachers' replication of the curriculum and instruction they have experienced as students/learners in the curriculum and instruction they design for K-12 students includes the replication of the social and emotional aspects of the learning environments, even as these topics have received less attention in research on inservice teachers' professional development (PD) (Gaines et al., 2019).

Over the course of the COVID-19 pandemic, researchers have documented the emotional, physical, and mental strains that accompanied pandemic-related schooling for teachers as well as students (Hatzichristou et al., 2021). Although the pandemic created unprecedented conditions for teaching and learning, including the shift to online PD for teachers (Webb et al., 2021), the movement towards virtual learning and professional development is not without precursors. Even prior to the pandemic, online professional development for teachers had been increasingly common as districts and universities embraced newer technologies and sought to cut budgets (Lay et al., 2020).

Few researchers have examined teachers' experiences and emotions during online PD (Powell & Bodur, 2019). Moreover, although educational researchers have increasingly attended to the social components of teacher learning (Desimone & Garet, 2015 ; Putnam & Borko, 2000) and to teachers' emotions in classrooms (de Ruiter et al., 2019), teachers' emotions as learners during PD have not received nearly as much attention (Gaines et al., 2019), with even fewer studies examining the emotional aspects of teacher learning during *online* PD specifically (Pinar et al., 2021).

Responding to this gap, this case study (Stake, 1995) examines the social and emotional dimensions of five middle school teachers' experiences over the course of a semester-long, synchronous online PD. This study draws from a larger participatory design-based study (Bang & Vossoughi, 2016) of the experiences of a group of middle school teachers. This group met weekly for two-hour Zoom sessions during the Fall 2020 semester; the teachers learned about digital literacies, engaged in inquiries into their own

teaching practices, facilitated learning experiences for one another, and designed curriculum together. This study explores the social and emotional dimensions of teachers' experiences during online PD and the ways in which the online environment mediated these dimensions. The findings in this study have implications for the design of emotionally- and socially- supportive online learning environments for teachers, and point to the ways in which such environments may impact teachers' ongoing development both of curriculum and professional identities

LITERATURE REVIEW

In a profession plagued by burnout and retention issues (Atmaca et al., 2020) that have been tied to teachers' social and emotional health (Zembylas, 2003), it becomes particularly pressing to attend carefully to the social and emotional dimensions of teachers' experiences during learning activities. Emotions are central to teaching and learning (Hargreaves, 1998), and learning activities are, in teaching more than any other profession, the purview of the job. Teachers thus need effective and supportive learning experiences to engage in their work as effective, caring, and continually-improving professionals (Darling-Hammond et al., 2017).

Teachers' experiences in school-sponsored and other official forms of professional development have been tied to ongoing motivation to continue learning, innovating, and building relationships with students (Borko, 2004; Guskey, 2002). A central part of teachers' experiences in PD are the emotions that accompany learning (Gaines et al., 2019; Pinar et al., 2021). Despite a lack of studies, particularly case studies, on the emotional dimensions of teachers' learning during PD experiences, there is agreement among researchers who consider teachers' emotions that "affective determinants are of paramount importance in teacher learning" (Pinar et al., 2021, p. 176; see also Torres & Evans, 2020). Given the centrality of social and emotional factors to teachers' PD experiences and the degree to which PD experiences deeply influence classroom practice, planning, and self-conceptualization/efficacy, research on the social and emotional aspects of PD experiences may provide powerful tools for supporting ongoing teacher and student learning and well-being.

Moreover, research has shown that teachers replicate the kinds of learning environments they themselves experience as learners; this kind of replication can happen over time, and includes teachers' own experiences as students (Lortie, 1975) or their experiences in professional settings (Dar-

ling-Hammond et al., 2017). To support socially and emotionally supportive classroom environments, then, it becomes especially important to consider the social and emotional dimensions of teachers' own learning environments (Zembylas, 2003). In this section, the author describes extant research on teachers' social and emotional experiences in PD and the impacts of these experiences on K-12 classrooms and students.

The Social and Emotional Situatedness of Student and Teacher Learning

A long history of educational research and theory has highlighted the inherently social and emotional aspects of learning (Do & Schallert, 2004; Vygotsky, 1978). This work stands in concert with a separate, but related, body of research focused specifically on social-emotional learning curricula in which learners engage with social and emotional topics, skills, and habits as content to be learned, developed, and applied in and outside of schools (Dietrich, 2021). In the twenty-first century, scholars have increasingly examined the social and emotional components of learning not only for K-12 students, but for teachers as well (Gaines et al., 2019; Putnam & Borko, 2000; Zembylas, 2003). In this body of research, researchers have attended to the social-emotional experiences of preservice teachers (e.g., Hartshorne et al., 2020), teachers' work in classroom spaces (e.g., De Ruiter, 2019), or the challenging emotions and social situations of struggling teachers (Zembylas, 2003). There is less research, however, examining the social and emotional components of teachers' PD experiences (Gaines et al., 2019).

Social Learning in Professional Development

Research on teacher learning in professional development has framed teachers' learning as essentially social and best supported through opportunities for collaboration (Putnam & Borko, 2000). In numerous studies and literature reviews examining effective PD practices more broadly, researchers have highlighted the centrality of community building, collaboration, and collective participation in PD (Darling-Hammond et al., 2017; Desimone & Garet, 2015). Voogt et al. (2011) emphasized the importance of collaborative design work, in which teachers not only collaborate in the learning of established content, but also work together to design curriculum. The findings, emphasizing the social nature of teachers' learning during PD, sit in stark contrast to many of the PD opportunities teachers are provided

in which information is passed on to teachers in a “sit and get” style, with teachers then being expected to implement new content or methods with fidelity (Dillon, 2019).

Teacher Emotions in Professional Development

Despite a body of research focused on the emotional aspects of teachers' lives, “teachers' emotional experiences during PD have received little attention” (Gaines et al., 2019, p. 54). For example, researchers have studied teachers' feelings, attitudes, and emotions in relation to their teaching (e.g. Atmaca et al., 2020) and in relation to their developing professional identities over time (e.g. Chen, 2020). These findings highlight the centrality of emotions to life in schools as well as the emotional challenges that accompany the work of teaching. Other researchers have examined PD in which teachers learn and develop pedagogical conceptions and instructional practices that incorporate and support students' social-emotional learning (e.g. Burgin et al., 2021; Dietrich, 2021; Edgar, 2013), but studies examining teachers' in situ experiences and emotions as learners themselves remain rare (Osman & Warner, 2020). Similarly, researchers focused more specifically on PD in online settings have emphasized the need for more studies considering teachers' experiences (Powell & Bodur, 2019). This lack of studies does not represent the importance of the topic, however, with scholars arguing that, as for younger learners, the emotional dimensions of learning are just as central to teachers' experiences (Pinar et al., 2021).

METHOD

This case study draws from a larger qualitative study focused on how teachers in a semester-long online PD learned about digital literacies and designed a digital literacy curriculum. The broader study examined teachers' conceptual development, curriculum design, and learning processes over the course of six months' participation in a PD held weekly for two hours on Zoom. The findings reported on in this article are focused specifically on the social and emotional components of the teachers' learning, thematic categories that emerged from a larger analysis of myriad aspects of teachers' learning during the PD. The case study design allowed for a detailed examination of participants' in situ social and emotional experiences (Thomas, 2016), something that has been lacking in research on online PD. The study

was structured around the following question: how did social and emotional factors mediate teachers' learning during a semester-long online PD?

Participants, Setting & Context

The participants in this study were five reading and language arts teachers who worked together at a public middle school. At the time of the study, the school described its student population as 85% Latino/Hispanic, 8% White, 6% Black, and 1% multiracial. The school was located in a large city in the southwestern United States. Participants were chosen through purposive sampling (Merriam & Tisdell, 2016) and were identified through their involvement in their city's National Writing Project site. Participants, who comprised an entire middle school English department, were invited to join the study based on their department's existing emphasis on sociocultural approaches to literacy (a central theme in the PD's content) and their interest in beginning to incorporate digital reading into their curriculum (a second emphasis within the PD). Participants elected to participate and were free to withdraw from the study at any point. With the exception of the department chair, who had been teaching for fourteen years at the outset of the study, all of the teachers were early career educators with fewer than three years' experience. Three of the participants (Melissa, Leo, and Claire) identified as Latinx or Hispanic, and two (Charlie and Michael) identified as White. All names are pseudonyms.

Data collection took place between July 2020 and January 2021, beginning with initial interviews in the summer of 2020 and ending with final interviews. The professional development sessions occurred throughout the fall semester once per week for two hours. All sessions were conducted synchronously on Zoom. The Zoom platform was chosen because participants were familiar with it through their online teaching which began in spring 2020 when their physical school was closed due to the COVID-19 pandemic.

Data Sources

Data sources for the study were ethnographic, and included interviews, field notes, video recordings, artifacts and chat transcripts from PD sessions.

Interviews

Two 60-minute semi-structured interviews were conducted with each participant. The first interview was conducted before the start of the professional development and the second at the close. Initial interviews focused on participants' teaching experiences, familiarity with digital teaching and learning, and existing views of digital literacies (e.g., "Tell me about your previous experiences as a learner in online spaces," "Tell me about your previous experiences teaching in online spaces"). Closing interview questions focused on teachers' learning during the professional development sessions, their work with their teammates, and their shifting identities as professionals. Sample questions included:

- What did you learn from the other teachers in the group?
- How, if at all, has your identity as a teacher shifted over the course of the semester? and
- How did your experience in this professional development sequence compare to your experience in other PD activities?

Both interviews also included questions outside the scope of the current article related to the aims of the larger study.

Video Recordings and Field Notes from Professional Development Sessions

Through the Zoom platform, recordings of all participants were undertaken simultaneously. Recordings displayed on-screen boxes which show each participant's face and audio that includes all participants. All Zoom recordings were transcribed and screenshots from the video recording were also used as artifacts.

DATA ANALYSIS

Data were analyzed using the constant comparative method (Strauss & Corbin, 1990), in which analysis occurs as data is collected. After the initial round of open coding was completed at the close of data collection (Saldaña, 2016), initial codes were combined to form thematic categories, which were then used to recode data. During this process, some codes shifted or were combined. For example, the initial codes, "playing in the chat"

and “supportive community” were subsumed under the thematic category “building community online.” Following this recoding process, extended analytical memos were created based on each thematic category, which serve as the basis for the findings. It is important to note that data analysis centered teachers’ own social and emotional experiences as learners; even as there is some discussion of how they applied this thinking in their curriculum design, the study remains focused on teachers’ own in situ experiences during PD.

To ensure that the findings were trustworthy, findings were triangulated across data sources, and member checking was conducted, with emergent findings shared with participants. During and following member checking, extended memos were written, and peer debriefing was conducted using masked data (Merriam & Tisdell, 2016; Miles et al., 2014; Thomas, 2016).

FINDINGS

The findings are organized around three central themes: (a) the participants’ community-building in an online learning space, (b) the co-occurrence of positive emotions and intellectual discussions during online PD, and (c) the impact of positive emotional experiences during online PD in supporting teachers’ professional identity development.

Community Building in an Online Learning Space

Throughout the semester, participants and the PD facilitator worked to construct a supportive and collaborative environment, an oft-cited element key to effective learning in classrooms and professional development settings (Darling-Hammond et al., 2017; Vygotsky, 1978). They did so by navigating the challenges of the online learning space and utilizing the affordances of the digital platform in creative ways.

Challenges of Sustaining Social Connections in an Online Environment

As compared to in-person PD, the teachers found connection and community-building more challenging online. This challenge persisted even for a group of teachers who worked together in the same school. As Melissa explained in her final interview, “there’s something about being *in a room*

with everybody and being able to build off that energy. That can happen on Zoom, too, but there's a sense of something missing when you're together online." Across participants, the sense of there being "something missing" when engaging online was recurrent. Charlie, for example, discussing the participants' collaborations, opined the online setting as well, explaining how "there's something to be said about sitting in the same room as the people you're working with, especially when you're creating together; when you're learning together." Here, Charlie built on the ideas Melissa expressed by connecting embodied, in-person connection to collaborative learning, noting that the personal connections fostered by shared physical space are closely related to the learning and productive work that happen in a space, whether physical or virtual. Charlie also emphasized the "tactile" elements of in-person learning, noting that writing on paper or even a whiteboard had a different feel for her than virtual composition. Leo echoed this sentiment, explaining that, "with any piece of technology, there are some limits, and I would have loved to meet in a library space somewhere with a big whiteboard and have our coffee and just be talking and getting ideas going" (Interview 2). Despite their sense that online learning limited their personal connections and community-building, the participants still found ways to build a learning community virtually.

Reflecting on Community-Building Through Experiences as Learners

The group saw the virtual learning space as a powerful venue for considering how teachers could build community and create positive social, emotional, and intellectual experiences for their students, who were at the time learning online as well. As Charlie put it, "It's COVID times, that's the way it is, everybody's Zoom Zoom Zoomin' – so it's good practice for us." Claire expanded, explaining that "It was really good to think about how our kids experience the classroom on Zoom, what they're feeling or noticing." These comments highlight that being in similar positions to their students – as learners in a virtual setting – helped the teachers to better understand their students' experiences and to plan and design curriculum and instruction to serve them. Leo added that conducting the PD online was particularly important given the topic they were studying together: the multiple ways of approaching digital reading, including through social, emotional, and sociocultural lenses. Indeed, these two strands – the content of the participants' learning and the ways in which they were learning - merged explicitly in Session 7, when participants discussed the emotional components of digi-

tal reading on social media platforms, using their online learning space to play a digital game together about emotional manipulation online.

Playfulness and Humor in the Chat

A related article (Nash, et al., 2021b) detailed the use of Zoom’s chat feature to support multifaceted conversations; here, the focus is specifically on the way participants used the chat to support one another and engage in community-building. The participants used the unique affordances of Zoom’s chat space to maintain an informal dialogue alongside the main discussion that allowed them to engage playfully and build community, despite the limitations of the virtual setting. Claire, a Latinx woman, described how during in-person PD, she often felt like her voice was drowned out; she described reductions in anxiety when she was able to contribute her thoughts in writing via the chat. Across interviews, the participants noted the ability to contribute to the discussion without interrupting, adding that it made them feel more at-ease during PD.

Indeed, participants took up the chat as a playful space, using it to add jokes and be silly. Here, one of many examples in which the participants built community through playful dialogue in the chat is provided:

Leo: We also need to talk about LISTENING
 Michael: HOW DO U LISTEN
 Melissa: ^^^^
 Melissa: We should watch that one Doctor Who episode
 Charlie: doctor who?
 Melissa: [https://en.wikipedia.org/wiki/Midnight_\(Doctor_Who\)](https://en.wikipedia.org/wiki/Midnight_(Doctor_Who))
 Michael: Mike Jones!
 Leo: Wow Mike
 Claire: nice... I'm impressed
 Leo: Melissa is just ignoring me now

Although the full context of this chat excerpt is not completely transparent without the corresponding videoconference (or the cultural references to which the participants were drawing upon), this example is intended to highlight how participants used the chat as a second discussion space to build and sustain social connections, relieve stress, and have fun, even as they engaged in “extra PD” every Friday afternoon. As Leo explained, they used the chat to build “humor and camaraderie” and “be a little goofy.”

Charlie expanded on these thoughts, noting that this kind of silly, playful, community-building space “was especially needed at the end of long weeks, figuring everything out anew teaching online, you know, people are tired, so we built energy with the chat” (Charlie, Interview 2).

Co-Occurrence of Positive Emotions and Intellectual Discussions During Online PD

Participants' discussions and learning activities during the semester were accompanied by a strong affective dimension, a finding that emerged during data analysis following the first two PD sessions. Towards the end of the first session, when the discussion was picking up steam, the group was feeling comfortable with each other, and participants were making connections while exploring new elements of online reading, Leo, in the background of the discussion, began rapping lyrics to a popular song to himself (not interrupting the discussion at all), doing small dance moves at his desk, and adding little bits of the song into the chat messages: “Bap,” “Bap,” “Bap.” “Yeah – that’s some – Uh! Uh! Uh!” Leo’s seemingly spontaneous movements and contributions may have been related to his excitement about the topics and his engagement in a rich discussion with his colleagues. This came in the midst of a rousing discussion, one in which Leo had just expressed shifts in his thinking. Just before his musical engagement began, Leo had commented:

I thought what Michael was saying was so interesting, and to draw on everyone, what I think is so interesting is like, this word ideology comes up a lot in conversations about online reading, but it didn’t come up in our talk about physical reading, right, like when I’m here with a book in my home, we don’t think of that as forming our ideology. Right. But as soon as we step online, it becomes political. And ideology seems to take a bigger role. I think that’s really, really interesting and I hadn’t thought about that.

This comment is excerpted at length to highlight the vigor of Leo’s intellectual engagement. Leo’s comment had led the group to a deeper discussion of the role of ideology and ideological formation online, and the feeling of making such a powerful contribution may have energized him. Indeed, it was during this conversation, approximately one minute later, that Leo added affective interjections, which may have stemmed from his enjoyment

of the conversation, and of the intellectual work he was doing with his colleagues. When asked about the role of affect and emotions in his learning, Leo confirmed the excitement that accompanied PD sessions and his learning throughout the semester, adding a description of his emotions during the sessions:

*I love the process of creation. There's nothing I love more. And so there's nothing better for me than having the feeling of being so excited to speak, but I have to hold back my speaking because someone else's speaking, but I'm just so ready!... I felt excitement when in the process of creation. I think there were lots of feelings of fullness - there *are* lots of feelings of fullness. Like, I feel full right now. I feel a part of something. I feel good, creating this. I felt present. I felt in the moment. (Interview 2)*

Leo's feelings of positivity and excitement suggest the important affective dimension that accompanies creative intellectual engagement, and his lingering feeling of positivity following the close of the semester highlights the importance of these emotions for teachers' ongoing learning.

These experiences were not unique to this session or to one participant. Rather, participants' expressions of positive emotions (Pekrun & Perry, 2015) were repeatedly noted during data analysis, with examples occurring throughout the semester, including excitement and comfortability. For example, at one point in the third session, midway into a rapid, constructive exchange of ideas in which Charlie and Melissa were sharing thoughts about online disinformation, they became excited and had to navigate sharing the conversational space:

Charlie: Yeah! I, for...

Melissa: It's the blind leading the blind! Oh, sorry!

Charlie: No no no, I'm just trying to bounce off your idea!

Here, the conversational pattern, in which both participants were so excited by each other's ideas that they spoke at the same time, evidenced the excitement that came from exploring and inquiring, as well as from the collaborative nature of this inquiry, in which the idea generation was shared with colleagues.

In interviews, the participants all described the emotional and affective dimensions that accompanied and supported their learning. Perhaps the most common emotions participants mentioned were excitement and inspi-

ration stemming from the intellectual and collaborative work of the group. As Melissa explained in her second interview: "I felt excitement. There was like a lot of discovery happening...(with) what we were piecing together and thinking about and trying to produce together." Here, she connected the experience of collaborating exploring a topic with colleagues with the emotion of excitement. She also tied intellectual exploration to enjoyment:

We were asking a lot of interesting questions and trying to think about the answers. And that's always fun. Like, that's not something that happens a lot...it's mostly like, 'here's what you have to do.' And there's not a lot of room for creativity.

By contrasting the "fun" of exploring questions to the negative emotions associated with a lack of agency in other PD experiences, Melissa strengthened the connection between the kinds of learning activities she engaged in and her affective states. Lastly, she tied ownership over her learning to positive emotions:

I felt like, with this inquiry project, it was the first time we were being really asked: what do you think?...So that was really exciting! It was really interesting and fun...And...once we saw our ideas at work in the classroom - they were *our* ideas!...We felt like pioneers! We were bringing new stuff to the table that we hadn't tried. So it was fun! It was useful. It was fun. It was exciting.

Here, Melissa connected the feeling of excitement to intellectual inquiry, collaboration, pioneering new ideas in the classroom, and having ownership over the generative process. In this way, the affective component of her learning stemmed from the interrelationship between aspects of her learning experience that researchers have tied to effective PD practices, including agency, relevance, and opportunities to collaborate (Darling-Hammond et al., 2017).

Participants, when describing these positive emotions, often contrasted their experiences to school- or district-sponsored PD, which they saw as didactic and disconnected from their classroom experiences. Claire, in her second interview, made connections between her feelings of excitement and feelings of hope and inspiration, contrasting the hope she felt to the discouragement she felt both from the testing pressures placed upon teachers and students, and from the ongoing pandemic:

I would get so excited, so inspired. And ...I felt hope during our conversations. Because, you know, whenever you go so long without talking about what's best for kids, it gets discouraging, because all you see is what's the result of not taking time to [talk about what's best for kids]...I needed this during the pandemic. Like, this PD really did give me a lot of hope for teaching because I was so discouraged before.

Claire's juxtaposition of excitement and exhaustion during the pandemic were reflected in multiple comments about the role that exhaustion played during their semester. Charlie, speaking in her position as the team's instructional coach, reflected on both her own feelings and her observations of the teachers: "I saw and I felt a lot of emotions: Pride, just being so proud of the teachers I work with. I saw, I felt excitement And...that desire to create and think and learn. Wonder. Curiosity." This description came in the context of Charlie's account of the teacher's productivity, thus reflecting findings in the literature that positive emotions support motivation and learning (Do & Schallert, 2004; Gaines et al., 2019). Charlie contrasted these emotions to the teachers' feelings of frustration with the limitations of the testing- and accountability-based school and PD structures that were more common in their professional lives.

For her, recognizing this contrast could be frustrating as well as "awakening" and "energizing" because the teachers could "look at what can be good for kids in a classroom" and "at the constraints." Here, Charlie struck a similar tone to Claire, noting a contrast between the deflated feelings stemming from the focus in many urban schools on test preparation (Booher-Jennings, 2005), which Claire had euphemized as not being what is "good for kids," and the positive emotions stemming from the teachers' work together. She also highlighted the importance of teachers having positive emotions in PD for their own curriculum design as teachers.

In her second interview, Charlie extended her commentary, noting how the teachers' emotions, intellectual inquiry, and motivation were tied together. For Charlie, an experienced educator and teacher leader, this kind of engagement on the part of teachers only comes about when they are positioned as respected professionals rather than as implementers of established ideas and curricula (Philip et al., 2019). Finally, participants described feeling grateful and caring for their colleagues. As Leo mentioned, he "love[d] praising other people's ideas." Michael described how social engagement with his peers on a professional learning and curriculum design project oriented his previously negative approach to collaboration. At the close of

the semester, he explained that, although he had previously preferred to work alone, positive experiences collaborating had led him to reorient his view of learning as something that is most powerful when done socially. Charlie, in a segment of conversation characterized by a great deal of excitement itself, praised the ongoing motivation and dedication of the teachers with whom she worked, explaining, "How often have you seen a whole department be that excited and that continually focused on working on something that is *completely* extra!?" Here, she highlighted the role of positive emotions in spurring ongoing learning and increasing motivation (Nash et al., 2020).

Impact on Supporting Professional Identity Development

The participants' positive emotional engagement with a collaborative intellectual community during PD, one in which their social, emotional, and intellectual labor were honored, led to shifts in their identities as professionals. Claire, for example, described how the experience of working together in a group led to increased confidence in herself as a teacher: "I felt confident whenever I would share something and people would support me." This support came through participants providing positive reinforcement and engaging with her ideas, "pushing [her forward]" and "help[ing her] think a little bit deeper." She described feeling "thankfulness," explaining her inner monologue in this way: "Wow, I'm growing, like, *I do know* what I'm talking about, and my experience is valuable." Claire expressed the degree to which this work made her feel good about her identity as a teacher:

Whenever I started hearing everyone share their ideas, I was like, 'Whoa, like, I get to work with these people.' So I felt very grateful. And just excited. And like, 'Man, I'm so happy. I'm so happy I'm in this profession.'

Claire's comments highlight the relationship between positive collaborative experiences and professional identity development.

Participants also reflected on the ways in which their professional identities shifted as a result of having agency and ownership over their learning. Every participant highlighted that having a say in the direction of their learning led them to feel empowered about themselves as professionals and intellectuals. The celebration of agency was a common theme across participants' interviews and discussions throughout the semester. Michael, for

example, highlighted how his perception of his own role as a learner was influenced by his feelings of control and led him to welcome collaboration more in the future, noting that collaborating with colleagues on their own curricular designs gave him “much more ownership over [his] teaching and [his] mind, as a person working in a school.” Michael’s comments align with research on teachers’ professional learning that highlights the importance of teachers having ownership and control over their learning, and suggests the importance of autonomy in positive emotional learning experiences (Lambirth et al., 2019).

These experiences had been rare in the participants’ professional lives. Participants regularly contrasted the impact of their positive emotions with previous PD experiences that had left them feeling depleted and disrespected. For example, Leo explained, “so often in PD... everything’s mandated....so it’s exhausting to try to rework it all to make sense with your kids.” Melissa expressed similar sentiments, critiquing the notion of “fidelity” to predetermined practices that was common in her previous formal PD experiences, which she described as something she “had no stake in.” By contrast, she explained that, during the semester, “having a collaborative community gave us an opportunity to really question and think critically about what we were bringing to the table.” At the end of the semester, she described herself and her colleagues as “teacher-researchers” who were figuring out “what *we* thought would be most influential or effective.” Claire, in her final interview at the end of the semester, explicitly contrasted traditional PD with a model that honored her knowledge and the knowledge of her colleagues:

It’s been so nice to focus on my own education and feel like my ideas are honored. I am being trusted to research - as a teacher should. I’m not being told what to do...So yeah, it made me feel special. Like I know that’s a little silly, but it made me feel like a professional. It’s sad because PDs don’t usually make me feel like a professional. It’s funny because they’re called professional development but in most of them I feel like a kid in the classroom, like I’m being told what to do or being told what I’ve been doing wrong. And it’s like, that’s not how learning should go... [this experience has] instilled in me, it’s always worth taking time to put in this extra work so our kids can get good lessons: authentic, helpful lessons that matter to them and that respect them. And this has motivated me to just keep learning.

In this extended excerpt, Claire highlighted how having a voice in relation to the content she was learning served to motivate her to continue learning throughout the semester and into the future. She also highlighted the influence of a positive emotional experience during PD on her curriculum design, noting that she, as a respected professional, wanted to extend the same kind of experience to her students and be sure to design curricula that honored them. These participants' comments reflect existing research showing dissatisfaction with conventional professional development in schools (Dillon, 2019; Joyce & Showers, 2002), and suggest that more agentive, more emotionally and socially supportive professional development can lead to powerful shifts in teachers' conceptualizations of themselves and their work. The online environment may present particular affordances here, as it allows teachers to physically separate themselves from their work environment, which may provide additional autonomy and facilitate learning more conducive to be perceived as personal or professional growth (Rodesiler, 2020).

Lastly, these feelings impacted the teachers' curriculum as they drew upon their own experiences to design a learning space in which their students felt honored and respected, and had opportunities to collaborate. As Claire explained,

These feelings of being respected as a teacher helped me transfer that idea to my kids too, like I always value their experiences, but this reminded me, like, you know, people just don't think their experiences are valuable, or their ideas are or not going to matter. And they need to.

Indeed, the curriculum the participants designed was intentionally social, built around the uptake of students' existing knowledge, and included explorations of the emotions that accompanied digital literacy practices in social spaces.

DISCUSSION AND IMPLICATIONS

At a time of increasing deprofessionalization (Philip et al., 2019) in which many teachers are dealing with emotional burnout, this study highlights the important role of social and emotional factors in teachers' professional development experiences online, and the important role that such experiences have in helping teachers craft socially and emotionally supportive

curricula for students. The following discussion considers each finding in relation both to teachers' learning experiences more broadly and to the online environment in which they learned.

Building Community in a Virtual Learning Environment

Despite not being together physically, and explicitly noting the challenges that the online environment presented for community building, the teachers' supportive collaboration highlights the potential of collaborative spaces in which "everyone learns from everyone" (Hobbs & Coiro, 2016) for teachers' ongoing learning. In such spaces, teachers often design curricula for K-12 classrooms that mirror their own learning environment, foregrounding students' collaboration (Desimone & Garet, 2015). Powell and Bodur (2019) have noted that in many online PD environments, teachers' own perspectives can become sidelined in favor of pre-designed activities. The findings of this study highlight a different online PD model, one in which participants collaborate, drawing upon each other's experiences and ideas to create exploratory curricula in which students too could learn from one another. This progression highlights "the value of collaborative production" (Kim & Johnson, 2021, p. 259) in teacher learning spaces and the potential of this kind of activity online.

The participants' work to build community online reflects the difficulty of establishing social and emotional connections in an environment in which participants are physically distanced (Powell & Bodur, 2019). At the same time, their successes suggest new avenues for the expanding realm of online learning for both teachers and K-12 students. Existing research on text-based digital communication has highlighted how digital written communications often allow participants to engage in more social and informal communication, particularly when few rules are established by facilitators to regulate communication, both for adults and child learners (Zengilowski & Schallert, 2020). This study adds to this body of research an examination of how such written communication can support learning that happens in primarily audiovisual modes. Lastly, this finding may suggest possibilities for teachers interested in drawing on digital communications in classroom settings, either as central avenues for in-class discussion (Zengilowski & Schallert, 2020) or via digital platforms that act as backchannels to a primary classroom discourse carried out in other modes.

The Emotions that Accompany Collaborative Learning Experiences Online

The participants' collaborative work was accompanied by positive emotions throughout the semester. The findings on teachers' emotions point to the importance of positive emotions in helping teachers sustain learning during professional development and after it has concluded (Pinar et al., 2021). Moreover, positive emotions during learning experiences directly contributed to the teachers' stated motivation to continue learning and influenced their design of a culturally responsive, emotionally-supportive, and engaging curriculum for their middle school students (Kim & Johnson, 2021). Although researchers have considered the emotional aspects of professional development (Gaines et al., 2019), few have detailed teachers' emotional experiences during PD. Here, the case study design facilitated a closer examination of teachers' in situ emotions and allowed for an analysis of their connections to learning.

Additionally, few studies have considered teachers' emotions and experiences in online PD specifically (Ketelhut et al., 2006; Powell & Bodur, 2019). In their end-of-semester interviews, the teachers described the online environment as one that presented challenges for their emotional connections. Their comments suggest that teacher educators and PD designers working in online spaces may need to put forth additional effort and intentional design to create emotionally-supportive learning environments. In this setting, the teachers attributed their positive emotions and communal atmosphere largely to a learning design in which they had agency to collaborate and follow the threads of their own thinking, a learning design feature that, though common to self-directed online professional learning (Rodesiller, 2020), is less common in more official online PD spaces (Powell & Bodur, 2019).

On the other hand, across the semester and in interviews, the teachers regularly contrasted their current online learning environment to their school-based PD experiences, which they associated with control and restriction. This PD sequence was originally planned to occur in-person and on campus; it is possible that the online environment – more removed from the locus of control and the administrative dictates of school systems moored to accountability systems – may provide a separate space that allows for the emotional aspects of learning to flourish. More research is needed that considers teachers' emotions during online PD in diverse settings.

Identity Development and Motivation

The teachers' reflections on their collaborations highlighted the shifts in their identities as professionals. The social and emotional support the group members provided one another, alongside the ability to direct and take ownership over their learning helped make the group "feel valuable as professionals" (Melissa, Interview 2). These factors serve as important drivers of teachers' ongoing engagement with professional learning. Indeed, research has highlighted that the impact of professional development is often dependent upon teachers' motivation to implement new ideas and continue their learning beyond the time parameters of the PD in which they participate (Kennedy, 2016; Osman & Warner, 2020). This study supports these conclusions in online settings as well. Beyond the fact that the PD occurred in a physical space separated from the participants' work environment, nothing in the findings specifically suggested that particular features of technological tools supported identity development; however, the fact that shifts in teachers' motivations and identities occurred in relation to the holistic context of an online PD do suggest that this kind of powerful impact can take place within online PD settings. More research is needed to determine the impacts of diverse online environments and learning structures for supporting teachers' learning, particularly longitudinal studies that account for learning after PD has completed (see also Rodesiler, 2020).

Application to K-12 Classrooms and Implications for Teachers and Teacher Educators

In the curriculum the teachers designed during PD, they recreated many of the learning conditions they experienced themselves, designing collaborative, emotionally supportive, inquiry-based curricula in which students collectively built upon their existing knowledge (see Nash et al., 2021a). In their curriculum design, the teachers drew upon their own experiences as learners, creating opportunities for students to engage in playful, on- and off-topic discussions using Zoom's chat feature, to collaborate on the design of their own compositions, and to inquire into their existing funds of knowledge. They even began their unit on digital reading with the very same activity they themselves engaged in as learners - an inquiry into students' own digital social worlds. Thus, the findings suggest the important relationship between teachers' and students' learning experiences in hierarchical structures like schools, as well as the importance of positive affective experienc-

es for teachers as they work to apply their learning in the classroom (Gaines et al., 2019). Such connections would not be surprising in light of the long tradition of research that highlights the importance of experiences that reinforce learners' sense of agency, identity, and emotional wellbeing for motivation and learning across age groups (Johnston, 2019).

Professional development providers, teacher educators, and school leaders could draw upon these findings both in the design of future learning experiences for teachers and in the design of autonomy-supporting curricula that allow students to engage socially and emotionally. Such educators might also draw from the teachers' use of digital tools in the online environment in the design of virtual learning experiences for students, consciously designing spaces that allow learners of all ages to engage with each other socially, even when some of the content of their activity might be seen as "off-task" in a more traditional environment. Indeed, this study supports the findings of research that has shown that such humorous, social, or informal discourse, or playful engagements during learning, often leads to innovative thinking, whether the learners in question are adults/teachers or children/students (Kim & Johnson, 2021).

LIMITATIONS AND POSSIBILITIES FOR FUTURE RESEARCH

Given that this study was a qualitative case study, generalizability is neither achievable nor intended. The teachers' activity occurred within a specific context that is not replicable and that represents only one of myriad forms of PD across settings. More research is needed examining the social and emotional aspects of teachers' in situ PD experiences across varied PD settings. Researchers might, for example, study teachers' emotional and social experiences during PD that they did not elect to participate in or feel positively disposed towards. The study was also limited to one semester's data collection. Researchers might consider the impacts of socially and emotionally supportive PD experiences longitudinally, studying how teachers' instruction shifts during and after such experiences, or how their professional identities develop after PD has concluded. Lastly, as a case study, data collection and analysis were limited to one realm of teachers' professional practice; researchers could examine the themes and topics of this study in classroom spaces, considering social emotional learning in relation to online learning and computer-mediated discourse in more varied settings.

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