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Early career teachers' expansion of professional learning networks with social media

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ABSTRACT

Early career teachers (ECTs) face numerous challenges during their transition from preparation programmes into professional employment contexts. Social media platforms have created many new opportunities for teachers' ongoing professional learning by putting them in contact with other teachers from anywhere in the world. However, being connected to more people also means that ECTs must navigate an increased number of potentially conflicting messages about what and how to teach. Thus, entering the profession presents ECTs external conflicts as they adjust to new colleagues and internal conflicts as they encounter cognitive dissonance between old and new ideas. This study explores how and why ECTs expand *professional learning networks* (PLNs) – that is, the supports, people and spaces useful for improving teaching and learning – with social media in response to early career challenges. Interviews with nine ECTs demonstrate that they expand PLNs to navigate change, scarcity of resources and conflicting teaching beliefs. Interviewees use social media to look for supports for instructional practise and for connecting socially, but they also described how they maintain boundaries around their social media use. Implications are discussed for ECTs, administrators and education leaders – especially regarding how stakeholders can help alleviate early career pressures on ECTs.

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Introduction

Teachers face numerous challenges during their transition from preparation programmes into professional employment contexts. At minimum, early career teachers (ECTs) – those with up to three years of experience (Ronfeldt and McQueen 2017) – must move from learning about teaching to actually practising teaching. Social media platforms have created many new opportunities for teachers' ongoing professional learning by putting them in contact with other teachers from anywhere in the world (Spencer *et al.* 2018, Trust and Prestridge 2021). However, being connected to more people in more spaces also means that ECTs must navigate an increased number of potentially conflicting messages about what and how to teach (Horn *et al.* 2008).

Early career challenges may lead ECTs to build their own support systems during their transition into the teaching profession, a form of directing their own professional development (PD). As ECTs seek the benefits of professional learning through social media, they must constantly make purposeful decisions about what spaces to visit, who to listen to and which resources to use. The purpose of this study is to explore how and why ECTs build and expand these self-directed, early career support systems with social media.

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Framework

ECTs' self-organised support systems can be understood as *professional learning networks* (PLNs) consisting of supports, people and spaces – spanning local and online contexts – useful for improving teaching and learning (Trust and Prestridge 2021). PLNs have roots in *situated* learning theories, which assert that learning occurs as an apprenticeship within specific contexts (Lave and Wenger 1991). Because teachers at any career stage have individual professional needs within their particular circumstances (Kennedy and McKay 2011), teachers taking a situated approach to professional learning connect various sources of information, resources and encouragement to build a PLN uniquely suited to their specific needs (Trust and Prestridge 2021). *Supports* in a PLN may include knowledge, skills, teaching resources, curricular materials and encouragement useful for ECTs' professional learning. These supports are shared by *people* with whom an ECT can connect through various *spaces* (e.g. school of employment, district workshops, social media platforms). ECTs' willingness to voluntarily construct PLNs in addition to required PD suggests that there are *underlying reasons* that justify spending extra time and effort beyond the regular demands of teaching. In sum, a PLN can be understood in terms of *why* (i.e. underlying reasons) a teacher constructs a support system, *what* they are looking for (i.e. supports for professional learning), *from whom* (i.e. people) and *where* (i.e. spaces).

A PLN frame is well-suited for this study because it foregrounds ECTs' professional learning and incorporates elements of both traditional PD and informal learning possibilities (Trust *et al.* 2016). PLNs broaden the scope of supports and people accessed by teachers to potentially include local and global spaces, even emergent spaces like social media (Trust *et al.* 2016). A PLN frame also highlights the purposeful choices teachers make by constructing and expanding a system of supports, people and spaces; they are autonomous professionals advancing their PD rather than experiencing PD as something 'done to' them (Carpenter and Krutka 2015).

Review of relevant literature

The PLN framework offers a useful structure to organise a review of what has been studied and what is yet unknown regarding *supports, people* and *spaces* made available to or sought out by ECTs during their transition into the profession. First, though, I look at *reasons* reported in the literature for why ECTs need these supports.

Reasons why early career support is needed

Two themes stand out in the literature related to ECTs' challenges and reasons why early career supports are necessary: adjusting to a new professional context that prompts both external and internal conflicts, as well as the continuous learning needed to become adept in educational practise. Due to these and other factors, many ECTs are not able to work with the same efficiency as their more experienced colleagues and end up working a disproportionate amount of time just to get by (Fantilli and McDougall 2009). I unpack these themes in the following paragraphs.

New professional context

A first challenge for ECTs is that they must adjust to a new professional context. They encounter and must navigate external conflicts as they meet and get to know to new colleagues, administrators, students, curriculum, school culture and school politics (Stanulis *et al.* 2012). In addition, many ECTs also face internal conflicts tied to the development of ECTs' professional identities as educators – that is, how they understand themselves in relation to teaching (Cuddapah and Clayton 2011). Identity development is a social process occurring through interactions with others (Pearce and Morrison 2011), a practise of *positioning*: how an ECT acts within a teaching community and how members of that community view them in turn

(Wray and Richmond 2018). If new teachers position themselves *parallel* to their social context, the experience strengthens the teachers' values. However, if new teachers position themselves *in opposition* to their social context, they encounter cognitive dissonance prompted by competing values between past (e.g. teacher preparation programme) and present (e.g. school building) settings (Horn *et al.* 2008, Vaughn 2013, Wray and Richmond 2018). In the face of such dissonance, some ECTs find it difficult to hold onto prior ideas of teaching; instead, former notions tend to be abandoned in favour of those encountered in the new context (Vaughn 2013).

Continuous learning

A second challenge for ECTs is that they have been credentialed to teach, but they are still honing their educational practise (Stanulis *et al.* 2012). Ingersoll (2012) explained that teacher induction programmes are designed assuming that teaching is a complex practice, with knowledge and skills that can only be fully developed by doing the work itself. Fantilli and McDougall's (2009) survey study reported challenges for ECTs such as differentiating instruction to meet the needs of advanced students, communicating with parents, managing time for planning and managing students' behaviour in the classroom. ECTs are introduced to these skills in preparation programmes, but many have not yet mastered them. Zhukova (2018) found that ECTs tend to focus on personal concerns and resolving classroom management issues, whereas more experienced teachers can focus on curriculum and teaching practices, and only highly experienced teachers are able to focus on long-term thinking and student learning. In contrast to this stage-based view of teacher development, Cochrane-Smith and Villegas (2015) argued that learning to teach means simultaneously improving complex skills related to *intellectual* activities (e.g. reflecting on and adapting teaching practices to best fit specific students and circumstances) in addition to *technical* activities (i.e. the tasks of teaching). Feiman-Nemser's (2001) study took a fully integrated view, drawing from the experiences of an expert mentor teacher to describe a nuanced, ongoing process of teacher learning that fused 'values, theory, and action' (p. 19) – concluding that the goal of teacher support should be to 'enable all teachers to continue learning in and from practice' (p. 29).

Types of early career support

Formal induction programmes

Ingersoll and Strong (2011) noted that formal induction programmes have helped ECTs transition from preparation to practice, from being students of teaching to teachers of students. Past research has argued that induction programmes should be targeted, systematic and structured (Zhukova 2018). Skills and knowledge have been offered through mentoring relationships, dedicated times for collaborative teacher planning, extra classroom assistance and workshops (Fantilli and McDougall 2009, Ronfeldt and McQueen 2017). The nature of these formal programmes varies, with some being scheduled (e.g. workshops) and others just-in-time and on-demand (e.g. mentors, classroom assistance).

Informal learning opportunities

Kim *et al.* (2018) characterised schools as containing informal networks (e.g. who students turn to for expertise) in addition to their formal organisation (e.g. defined teacher positions and roles). This means ECTs likely construct a PLN from both officially assigned programmes as well as more self-initiated help. Spencer *et al.* (2018) noted the importance of informal experiences for ECTs, especially ECTs' conversations with colleagues in the school building. Macià and García's (2016) systematic literature review found that teachers' opportunities for informal learning have been prominently highlighted in social media research.

People: sources of early career support

In-school connections

The teacher induction literature frequently discusses the relationship between ECTs and mentor teachers. Ingersoll and Strong's (2011) literature review highlighted evidence from past studies that mentoring programmes had a positive impact on the performance and retention of ECTs; Stanulis and Floden (2009) reported benefits from mentors working closely and collaboratively with ECTs: observing teaching, co-planning and jointly analysing student work. Davis and Higdon (2008) described how frequent 'just-in-time' assistance from mentors was the most valuable aspect of an induction programme. However, finding trusted mentors can be a challenging task (Fantilli and McDougall 2009).

In addition to mentors, other in-school relationships are also important to the success of ECTs. Schuck *et al.* (2018) argued that all school staff share personal and collective responsibility to help with ECTs' transition into the profession, and studies have shown that inadequate support from the school administration is one of the main factors in ECTs' decisions to leave a teaching position (e.g. Fantilli and McDougall 2009, Ingersoll and Strong 2011).

Out-of-school connections

Research has also shown that many ECTs seek early career help beyond the school building through 'school-external' networks that include family members, friends and former instructors and classmates from preparation programmes (März and Kelchtermans 2020) as well as connections through social media (Spencer *et al.* 2018). However, the literature has rarely connected the specific needs of ECTs with social media use, despite a growing body of research exploring how teachers use social media for professional learning. Rather, the literature has found that educators (broadly defined, not specifically ECTs) regularly use social media to connect with people beyond their local school, often around the world (Macià and García 2016). Some educators have described appreciating how social media connections provide freedom from temporal or geographical constraints, offering perspectives more diverse than would be available locally (Carpenter and Krutka 2015, Spencer *et al.* 2018). Social media connections are particularly helpful for educators struggling with professional isolation (Carpenter and Krutka 2015).

Connections through social media can provide ECTs an outlet to discuss concerns related to rules and norms inside their schools. For instance, Smith Risser (2013) followed one ECT's development of a mentor network through Twitter, and Bartell *et al.* (2019) described how teachers can connect with allies for justice-oriented teaching through social media movements like #EduColor. However, with more voices offering purported expertise, ECTs may experience difficulty in reconciling conflicting messages about what and how to teach (Horn *et al.* 2008).

Spaces: locations of early career support

Local spaces

Spaces that host early career support have most often been studied in a local, offline context. School buildings are the most common spaces, including ECTs' classrooms where mentor teachers can observe and provide feedback (Stanulis and Floden 2009), collaborative planning meetings (Fantilli and McDougall 2009, Ronfeldt and McQueen 2017), peer or mentor teachers' classrooms where ECTs can observe and ask questions afterwards, staff meetings and the teachers' lounge. Local spaces also include locations near, but outside, the school building, such as seminars, workshops and other district-sponsored PD (Fantilli and McDougall 2009, Cuddapah and Clayton 2011, Ronfeldt and McQueen 2017).

Social media spaces

In addition to these local, offline contexts, online spaces are also potential locations of early career help, but these have seldom been studied with ECTs specifically in mind. Still, research has shown that many educators (broadly defined) regularly use social media for professional learning through broad platforms such as Facebook (Ranieri *et al.* 2012), Instagram (Carpenter and Morrison *et al.* 2020), Pinterest (Sawyer *et al.* 2019), Reddit (Staudt Willet and Carpenter 2021), TeachersPayTeachers.com (Shelton *et al.* 2021) and Twitter (Carpenter and Krutka 2015). These spaces further expand educators' opportunities for accessing expertise and informal mentoring (Smith Risser 2013), finding educational resources (e.g. Carpenter and Krutka 2015, Trust *et al.* 2016), collaborating (Staudt Willet 2019) and seeking emotional encouragement (Carpenter and Krutka 2015, Trust *et al.* 2016). However, because of the large number of resources available through social media, educators may have difficulty identifying relevant resources, and low-quality and problematic resources can be disseminated online alongside legitimate ones (Sawyer *et al.* 2019). In addition, educators can be frustrated by what other educators post on social media, such as self-promotional content (Carpenter and Harvey 2019, Staudt Willet 2019), and at times it is unclear whether social media foster collaboration or competition (Lantz-Andersson *et al.* 2018). Finally, increased connectivity may also increase expectations that educators should always be available and accessible to students (Fox and Bird 2017).

Purpose and research questions

Although the teacher induction literature and the teachers' use of social media literature share a broad interest in teachers' professional learning, these bodies of research remain almost entirely disparate. The induction literature tends to focus on formal, local programmes – often defining the scope of inquiry too narrowly to include the full range of supports, people, and spaces potentially made accessible to ECTs through social media. In contrast, the social media literature tends to focus on informal learning opportunities available to educators through worldwide connections, leaving the scope of inquiry too broad by not considering that there may be unique experiences and challenges faced by ECTs as they enter the profession. Also, social media research often focuses on a single platform rather than taking into account the many spaces in which educators may seek professional learning.

The current study addresses these gaps in the literature by specifically addressing both ECTs' early career challenges and social media practices – across multiple platforms. As ECTs seek the benefits of professional learning through social media, they must constantly make purposeful decisions regarding their PLNs: what spaces to visit, who to listen to and which supports to seek. Therefore, this study aims to answer two research questions:

- **RQ1**. Why do early career teachers construct PLNs with social media?
- **RQ2**. How do early career teachers use social media platforms to expand the supports, people and spaces available to them when constructing PLNs?

Methods

I interviewed nine US-based ECTs to ask them about their experiences expanding PLNs of supports, people, and spaces with social media. All interviews occurred in January and February 2020, just prior to when the World Health Organization declared COVID-19 to be a global pandemic on 11 March 2020. Several days after this declaration, US schools began closing and then shifting to modes of *emergency remote teaching* (Hodges *et al.* 2020). Acknowledging this timing is important because ECTs' reports of early career challenges would likely have been different if interviews had taken place in March 2020 or later, when COVID-19 disruptions were experienced widely.

Data collection

Participants were nine US-based K-12 teachers who had been working in education for three years or less. To recruit participants, I emailed the listservs of two Master's degree programmes in the College of Education at a large public university in the Midwestern region of the United States. Both programmes were offered in a fully online modality, even before the COVID-19 pandemic, and they both regularly communicated with students through social media and encouraged students to use social media for professional learning – meaning that I had reason to expect some students in these programmes would use social media in ways related to their teaching. I had been an instructor for one of these programmes for two years prior to the start of this study. To avoid coercion, I communicated with previously known participants outside normal course communications and reiterated, through both written and verbally communicated informed consent statements, their voluntary participation and freedom to withdraw without penalty.

I asked prospective participants to complete an online survey to indicate their interest in the study as well as to provide background information on their teaching experience and social media use. From 15 viable respondents, I selected nine participants (Table 1; all names are pseudonyms) to maximise variation across teachers' assignments (i.e. grade level, subject and classroom role) and students' socioeconomic status. Although this group is a convenience sample, it is also purposeful in providing information-rich cases (Lincoln and Guba 1985).

I hosted a one-on-one, 60-minute, semi-structured interview with each participant on the video communication platform Zoom. I provide the interview protocol in Table 2.

Data analysis

After completing interviews, I transcribed audio recordings into text. I followed procedures for open-ended, exploratory qualitative analysis that Saldaña (2016) called *eclectic coding*. That is, I initially assigned 'first-impression' codes (i.e. a summative word or phrase) that captured the

Table 1. Attributes of Interview Participants.

Name	Location	School Type	Student SES	Teacher Experience	Grade Level	Subject	Role
Amelia	Suburban, West	Public	Low	3rd year	Elementary (K, 5th)	Music	Itinerant Specialist
Anne	Urban, Midwest	Public	Low	3rd year	Elementary (1st)	All	Classroom
Blair	Urban, Midwest	Private	High	3rd year	Elementary (PreK-5th)	Tech	Support Staff
Hallie	Suburban, Midwest	Public	High	1st year	Elementary (3rd)	All	Classroom
Julie	Rural, Midwest	Public	Low	3rd year	Middle (8th)	ELA	Classroom
Mike	Suburban, Midwest	Public	High	3rd year	High School (9th-12th)	Maths	Classroom
Simone	Suburban, Midwest	Public	High	2nd year	Elementary (1st)	All	Classroom
Taylor	Suburban, West	Private	High	3rd year	Elementary (K-4th)	Physical Education	Specialist
Wallace	Suburban, Midwest	Public	Low	2nd year	High School (10th-11th)	ELA	Classroom

Table 2. Protocol for Semi-Structured Interviews.

Primary Question	Potential Follow Up Questions
1. First, tell me a little bit about yourself.	• How many years have you been an educator? • What grade level and subjects do you teach? • What is your school like? (urban/suburban/rural, zip code) • What made you want to become an educator?
2. What are some of the challenges and struggles you have experienced as a new educator?	
3. Have you sought support for these challenges and struggles?	• What kinds of supports? • From whom? • Are there any reasons why you have NOT sought supports as an early career teacher? • Are there any supports you have access to now but are unhelpful or not worth your time? • What supports do you need, but are still missing? WHY?
4. For each of the supports you mentioned earlier: Do you use social media to access or connect to these supports?	• Why or why not? • Which social media platforms? How do you use them? • Have you found any conflicting messages while looking for help? How did you navigate these? Which advice did you follow? What did you end up doing? How did it go? Why?
5. Let's return, for a moment, to the challenges and struggles you mentioned earlier – specifically those where you have not sought support or the supports available have been unhelpful. Do you think social media could be useful for accessing or connecting to new or additional supports?	• Why or why not? • Which social media platforms? How might you use them?
6. For each social media platform mentioned:	• How long have you been using [specific social media platform]? • When did you start using for personal reasons? When for professional purposes? • Was your initial decision to use related to professional use? • How frequently do you use? • Has this frequency changed (increased or decreased) after professional use? • Overall, has this use for professional purposes been beneficial or detrimental? Why?
7. What is your school or district's policy on educators' use of social media?	• In other words, how do administrators feel about you using social media related to work? • How have these policies or expectations been communicated to you?
8. Are there any other ways you would link your experiences as a new educator and your use of social media?	

essential essence of a section of text. I then refined and synthesised these codes through subsequent cycles of recoding. In total, I worked through five distinct, iterative cycles of coding and recoding to identify 11 emergent categories in the final codebook (Table 3).

Trustworthiness of research

I used 'systematic procedures, employing rigorous standards and clearly identified procedures' (Creswell and Miller 2000, p. 129) to establish research validity. First, I took a systematic approach in my process of looking for themes common across participants, creating codes, and making revisions over five distinct coding cycles. Second, I created an *audit trail* by documenting my process in a series of analytic memos (Creswell and Miller 2000). Third, after completing five coding cycles, I recruited a second coder to test the *inter-rater reliability* of categories in the codebook. Fourth, I conducted *member checks* by sending a draft of the Results section to interviewees, asking them if they would like to provide any clarification to how I represented their words in the reported findings (Creswell and Miller 2000).

Table 3. Codebook of Emergent Themes and Categories from Interviews.

Theme	Category	Definition
Reason	Change	Change in circumstances, disruptions or uncertainty experienced by early career teachers (e.g. administrative turnover, starting to teach a new course mid-year).
	Scarcity of resources	Absence or shortage of resources for early career teachers (e.g. an early career teachers' limited budget, absence of curriculum, missing classroom materials, poor physical conditions of school). Contains an explicit comment to the effect of 'I don't have the resources I need.'
	Conflicting teaching beliefs	Tension experienced by early career teachers between their previously held beliefs about teaching and learning and those encountered in their school of employment (e.g. interpretation of state standards, philosophy of student discipline, how to teach curriculum).
Support	For instructional practise	Early career teachers' need to prepare for teaching ahead of time (e.g. generating ideas, creating curriculum, writing lesson plans, finding appropriate resources) and to work directly with students in the classroom (e.g. classroom management, student engagement, helping students).
	For connecting socially	Early career teachers' need to be socially connected, regardless of modality. Functions positively as a type of *social glue* (e.g. chatting with friends, venting about work) and negatively as *social comparison* (e.g. feeling inadequate when looking at a peer or colleague's work).
Connection	In-school	Potential source of assistance for early career teachers that is located within the school building, whether formally required (e.g. mentor teacher, professional learning community), informally initiated by the early career teacher (e.g. talking to colleagues in the teachers' lounge) or accessed by any modality (e.g. offline, social media)
	Out-of-school	Potential source of assistance for early career teachers that is located outside the school building, whether formally required (e.g. district-wide professional development gathering) or informally initiated by the early career teacher (e.g. family, friends, resources retrieved online, social media links to anyone beyond in-school colleagues).
Engagement	Browse	Early career teachers seeking supports for self-interested reasons by looking through existing materials (e.g. looking up resources on TeachersPayTeachers.com, observing posts in a Facebook group, watching YouTube videos). Includes determining whether and how to use available resources and supports.
	Ask	Early career teachers seeking supports for self-interested reasons by inquiring about the existence of materials (e.g. making needs known, venting or personal sharing in hopes of receiving emotional encouragement). Includes determining whether and how to use available resources and supports.
	Exchange	Early career teachers seeking supports by participating as a member of a learning community or team, which may be formal or informal, harmonious or conflictual. Characterised by interaction and dialogue – that is, mutual exchange to satisfy mutual interests (e.g. contributing ideas to a group, giving advice on social media, conversing to determine best practises).

Results

Why early career teachers use social media

In answering the first research question, I found three reasons why ECTs construct PLNs with social media: change, scarcity of resources and conflicting teaching beliefs. These themes were each discussed by multiple interviewees.

Change

Some of the changes, disruptions, and uncertainty experienced by ECTs were inevitable parts of transitioning into a new career. For instance, Taylor and Blair, the only two interviewees without undergraduate teacher preparation, struggled during their first several years in the teaching profession as they assumed primary responsibility for their students and took on tasks like creating a semester-long teaching plan.

Beyond challenges that might be expected, all but two interviewees identified additional change-related challenges. Several interviewees described these changes in representative ways. Simone noted that the field of education is constantly in flux, and so inevitably there are more things she needed to learn. Anne and Simone were both handed new curricula each year, and to them it felt

like the process of adjusting to a new plan never seemed to stop. Julie and Wallace started their teaching careers mid-year, so they entered situations where students' experiences had been disrupted by the previous teacher's departure. Anne experienced a high degree of personnel turnover in her under-resourced school, even in her first few years of teaching. She had to adjust to a new principal at the start of her third year, and her grade-level partner teacher also left in the middle of that year.

Given this backdrop of change experienced by ECTs, interviewees described numerous ways they used social media to navigate these challenges. For instance, Taylor and Blair looked on social media for ideas and resources early in the planning process. Simone turned to a teacher Facebook group and appreciated the perspective she found there. Anne used social media to vent, and Wallace found in-school relationships to reinforced through social media. Although accessed in different ways and for different reasons, interviewees described how social media helped them weather early career change.

Scarcity of resources

Most interviewees constructed PLNs because of a lack of resources. Anne and Amelia described numerous challenges related to scarcity: absence of curriculum, missing classroom materials, poor physical conditions in the school and a limited budget for teaching supplies. The physical environment in Anne's school created an especially difficult setting for work. Her classroom, a modular trailer, lacked insulation to keep out cold Midwestern US winter winds and hosted bugs, requiring her to store personal belongings in sealable plastic bags during the day. Amelia, as an itinerant music teacher serving several schools in a suburban district, lacked a home classroom and had to teach with whatever supplies she could carry with her. Because her district did not assign a set curriculum to follow, Hallie wrestled internally when planning: 'What am I supposed to do? Like, what do you actually want me to do?' She acknowledged the openness of her colleagues, but limitations remained: 'There are teachers that are willing to help, but because my team doesn't do a lot of the actual same activity, it doesn't really help to share planning resources, always.'

As they experienced scarcity, interviewees used social media to secure resources in a variety of ways. Julie was candid about this issue: 'I feel like I filled a lot of gaps. If I couldn't find something, I'd go to social media to find it.' Hallie sometimes made decisions about curriculum independently, but she also turned to social media to seek help. Anne got inspiration from other teachers on Instagram, Simone looked to Facebook, and Taylor turned to YouTube. Finally, Amelia and Wallace benefitted from social media sites organised by their districts where teachers could exchange instructional materials and classroom supplies.

Conflicting teaching beliefs

Nearly half of interviewees also described tension between their previously held beliefs about teaching and those encountered in the schools where they worked. Several of their comments were representative. For instance, Julie experienced dissonance with her school's strict policy on classroom management and student discipline, and she voiced her concerns to her principal:

> I'm only going to do RTC [Responsible Thinking Classroom] when it gets to this point. I'm not going to do RTC every single day. That's just not something that I can justify. And for a lot of those kids, it doesn't work. I don't really see the success in it.

Hallie, in her first year as a teacher, described conflict with more experienced colleagues: 'I have one teacher who just wants to use curriculum from 30 years ago. And I'm just like, "I can't do it." There are just completely irrelevant things.' Hallie also advocated for the inclusion of more anti-racism materials throughout the year, not just confined to Black History Month in February.

Attempting to navigate conflicting beliefs about teaching, interviewees were ambivalent about turning to social media. For instance, Julie acknowledged that she used social media primarily to share and find resources, but she wanted more genuine interaction and collaboration: 'I wish there

was more a way to use social media like, here's a problem I'm dealing with; can people help me with this problem?' Whereas Simone appreciated the broader perspective from social media, and numerous interviewees benefitted from social support, Hallie sometimes looked to social media but often tried to figure things out on her own – to mixed success.

How early career teachers use social media

In answering the second research question, I found two themes related to how ECTs expand PLNs with social media. First, interviewees identified numerous possibilities for expanding PLNs with social media – incorporating numerous supports, people and spaces that span various social media platforms. Second, interviewees emphasised the importance of maintaining boundaries around their social media use, even for professional learning.

ECTs decided how to use social media for professional purposes largely on their own. Only one interviewee (Taylor) was familiar with their school's social media policy for teachers. Even then, Taylor only knew about the policy because a teacher had been fired recently for violating it. This means that schools and districts were not providing guidance to teachers (or the guidance given did not make an impression on ECTs) regarding their use of social media, let alone recommending best practices to ECTs desiring to expand PLNs through social media.

Possibilities for social media use

Interviewees used a variety of social media platforms when expanding their PLNs. ECTs described how they took into consideration the features of various social media platforms to maximise benefits. Through social media, they found supports that helped them improve instructional practice and connect socially, both inside and outside their schools.

Supports for instructional practice. Each interviewee described using social media to improve instructional practice. For instance, all interviewees described using social media to seek planning supports that would help them generate ideas, create curriculum, write lesson plans and find appropriate resources. They found these supports mostly from out-of-school connections spanning a variety of spaces; each interviewee named multiple social media platforms they found to be helpful for this purpose. Interviewees seemed to especially appreciate content-sharing platforms where other teachers regularly shared and sold educational resources: TeachersPayTeachers.com, Instagram, Pinterest and YouTube. Mentioned less often, but still important, were social media platforms where ECTs could easily ask questions to request specific help (e.g. Facebook, Twitter, Microsoft Teams). Taking a slightly different approach than the other interviewees, Julie tended to look for support towards the end of her planning process. For instance, she would turn to social media to refine an existing lesson plan to add 'some extra TeachersPayTeachers flair.'

Two interviewees (Taylor and Simone) also described using social media to find supports for improving classroom practice in addition to planning. Specifically, as they aimed to improve delivery of content and interactions with students, social media was a source of ideas and resources from people beyond their local school. For instance, Taylor subscribed to a PE teacher's YouTube channel to get inspiration for activities to facilitate in her own PE classes. YouTube's video medium was particularly useful for her to see demonstrations of drills and games that she could use. The teacher Facebook group in which Simone was a member had a culture where 'asking questions, asking if we deal with this or do you have any suggestions' was common, and this helped Simone think through navigating issues in her own classroom.

Social media platforms also offered the possibility of seeking supports for instructional practice from in-school connections, not just connections beyond the school building, but this affordance was mentioned by only one interviewee. Wallace described how peer 10th-grade English teachers in his school used a Google Classroom shell (i.e. a blank template in a learning management system) as a repository for sharing ideas and resources with each other.

Supports for connecting socially. Two interviewees discussed how social media help reinforce local relationships by offering opportunities to find supports for connecting socially with in-school colleagues. For instance, Wallace worked at his school for several years as a staff member prior to being hired to teach midyear. Because of his prior experience, he was connected to many school colleagues on Facebook. He believed that this additional layer of personal connection (e.g. seeing photos of co-workers' children) made it easier for him to ask co-workers for help during his transition into teaching. Meanwhile, Amelia capitalised on voluntary connections available to her through a district-wide Facebook group for sharing resources and a Microsoft Teams account where teachers could talk between official meetings.

Much more often, interviewees discussed how they used social media to make social connections beyond their local school. They looked to social media for opportunities to vent their frustrations, seek solidarity, exchange ideas and find resources – often with an explicit appreciation that these connections were not local. For instance, Anne described the helpfulness of venting outside her local context, where so many of her frustrations stemmed: 'A lot of times, if I go to social media, it's for an outlet, for frustrations, and difficulties.' Simone participated in a Facebook group of teachers from all over the US, and she appreciated the perspective of being able to see 'what other teachers are dealing with in their district or their state like, "Are you, are you experiencing these same things?" And they are, and it's nice to know that you're not the only one.' She appreciated being reminded that she was not alone feeling the way she did and that there were other ways to teach besides what she had experienced in her own school and district. These perspectives seemed particularly important to Simone as a Black teacher whose preparation programme had been overwhelmingly white and whose school of employment was diverse but under-resourced.

Boundaries around social media use

In addition to the possibilities afforded by social media as spaces for expanding PLNs, interviewees noted three important boundaries they tried to maintain around their social media use: personal-professional separation, time management and social comparison. These boundary themes were discussed by a subset of interviewees.

Personal-professional separation. First, each interviewee described how maintaining separation between their personal and professional lives on social media was important to them. For instance, Hallie and Simone were more compelled by maintaining personal-professional boundaries than maximising social media benefits, and they chose to limit their social media use for this reason. Julie compartmentalised, using some social media platforms for personal reasons and others for professional purposes. She succinctly summed up the benefit of this approach: 'I know what I'm getting myself into when I open each one of the apps.'

Time management. Limiting time on social media was another important boundary for three interviewees. For instance, Simone had been actively working on improving her time management skills, with a goal of not bringing work home with her from school. This meant she was less inclined to voluntarily use social media in the evening for professional learning. Similarly, Mike was very time-conscious and deliberate in limiting his social media use: 'If I don't have time for myself, then I'm doing [my students] a disservice. I have to have that shut-off button.'

Social comparison. Anne and Mike named a third set of boundaries they believed were important to maintain: those around unhelpful social comparisons. Anne, teaching in an under-resourced school with a challenging physical environment, noted how unhelpful it was to compare herself to teachers in other districts who posted photos of their pristine classrooms on social media:

> Back to the Instagram thing, I do follow some teacher accounts. Sometimes I feel like, it makes me feel like a crappy teacher, because I'm seeing them do all these things. And I'm like, 'I'm tired right now. If I did all those things, I would either never sleep, or I would be just doing those things. I wouldn't be able to follow through with them and actually teach with those tools that they're spending hours making on the weekend.' And it just, it makes me feel like I should be doing more. But I already feel like I'm doing more than I can keep up with.

Anne found that the visual, highly curated nature of Instagram drew her into unrealistic expectations for herself and demotivated her to expand her PLN with social media. Because of these unhelpful social comparisons, she decided to limit her Instagram use. Mike described a similar issue when seeing his best friend's Facebook posts. The income level and number of vacation days inferred from his friend's travel photos caused Mike to question his own choice of a teaching career. He named these feelings of envy as another reason for limiting his time on social media.

Discussion

These results have provided insight into why and how ECTs expand PLNs with social media. In the following paragraphs, I connect major themes from the findings to previous understanding of PLNs from the literature, including how interviewees self-directed their PD, navigated tensions and maintained boundaries. I then discuss implications for ECTs, administrators and education leaders, name limitations of the present study and suggest directions for future research.

Major themes

Self-directing professional development

The most striking point from this study's findings was that all nine interviewees described self-directing their PD. This theme ties back to theories of adult learning, like Knowles' (1975) self-directed learning, by emphasising how adult learners – in this case, ECTs – take ownership of their learning goals, purposes, and processes (Louws *et al.* 2017).

Similar to Carpenter and Krutka's (2015) survey respondents describing their self-motivation for informal PD, interview participants in the current study described taking responsibility for and actively investing in their own self-development as teachers. It was evident that each interviewee made thoughtful decisions regarding if and how to expand their PLN with social media, as they consistently described a purposeful sense of having a job to do as an educator and a determination to find the supports, people and spaces necessary to do that job well. This connects to Bartell *et al.*'s (2019) description of how ECTs 'weave interconnected webs of professional relationships based upon their needs' (p. 303) that may include social media conversations. For instance, Julie, Taylor and others realised they were missing teaching resources and went to specific social media platforms to find what they needed. Anne vented in appropriate social media spaces as an outlet for the frustrations accumulated from teaching under challenging conditions. Simone sought broader perspectives on social media than were available to her locally. In each of these examples, interviewees used a variety of social media spaces to connect with different people, and they typically had a specific goal in mind when visiting each social media platform. The current study's multi-platform approach – specifically inviting interviewees to name and explain each social media platform in their PLN, in contrast to many studies' focus on a single platform (e.g. Facebook, Twitter) – provided a foundation for this emergent finding.

Although each interviewee described self-directing their PD by using social media to expand their PLNs, *why* and *how* they did so differed. Similarly, educators in previous studies made purposeful decisions to ensure their PLNs were 'uniquely cultivated' (Trust and Prestridge 2021, p. 1) to meet their needs. Interviewees here experienced early career challenges – including change, scarcity of resources and conflicting beliefs about teaching – quite differently. A subset of interviewees experienced changes related to new curriculum, staff transitions and shifts in classroom assignments, and they expanded their PLNs with social media accordingly, like teachers' adaptability reported by Carpenter *et al.* (2021).

With differences in contexts and experiences, it follows that interviewees would expand their PLNs in a variety of ways (Kennedy and McKay 2011). For instance, Simone's ability to self-direct her PD as well as give back to other ECTs was strengthened by both contextual factors and her past experiences. In terms of past experience, Simone had received affirmation in response to giving

advice in a teacher Facebook group. In terms of contextual factors, there was a confluence of space dynamics, relationships and confidence (Trust and Prestridge 2021) that helped Simone feel positive about her past engagement in the Facebook group and more likely to give advice again in that space. This may suggest that ECTs thinking about expanding their PLNs as part of self-directing their PD should think carefully about the contextual factors suggested by Trust and Prestridge's (2021) model and reflect on their own past experiences using social media.

Navigating tensions

A second major theme in the findings, voiced by nearly half of interviewees, was navigating tensions experienced when beliefs about teaching and learning conflicted with those held by new colleagues in their schools. Sometimes the process of reconciling differences was as straightforward as pausing to self-reflect in the midst of recognising conflicting teaching beliefs from preparation programmes and schools of employment (Horn *et al.* 2008), but other times the tensions were more complex. This is similar to Vaughn's (2013) finding that in-service teachers experienced cognitive dissonance while attempting to align their instructional practice with their vision of teaching. For instance, Julie had to think carefully about how to go against her principal's expectations for student discipline, and Hallie had to decide how much to push her colleagues to incorporate more anti-racism curricular materials. These examples illustrate how ECTs must choose the degree of conflict they are willing to have with colleagues around issues where educational practice has changed in recent years.

Although social media offer spaces where interviewees could self-direct their PD, tensions around teaching beliefs – between their own views and those of their in-school co-workers – were often exacerbated rather than alleviated by social media. For example, Julie went to social media to get perspective on classroom management and student discipline, but instead of being able to ask directly and get helpful advice, she had to sort through a sea of self-promotional or commercial content, leaving her feeling like the teachers in Carpenter and Harvey's (2019) study who reported 'feeling conflicted, frustrated, or exasperated about various kinds of posts from other educators' (p. 5). Meanwhile, Hallie sought justice-oriented democratic ideas and resources on social media to introduce to her predominantly white students in a wealthy suburban school district, but like teachers have reported in past research, she encountered many low-quality and problematic resources instead (e.g. Sawyer *et al.* 2019). Finally, as interviewees in this study looked to expand their PLNs with social media, they also had to contend with a *local-global tension* where resources available through far-ranging connections must be adapted for the teacher's specific educational context (Jones and Preece 2006).

Maintaining boundaries

A third major theme described by each interviewee was maintaining boundaries by choosing *not* to pursue some of the opportunities available to them. On one hand, social media provide just-in-time PD (Davis and Higdon 2008, Greenhalgh and Koehler 2017) and access to expertise beyond a teacher's local school (Spencer *et al.* 2018). In addition, Wallace found that social media provided an extra point of personal connection with co-workers that strengthened his in-school relationships and gave him more confidence to ask for help when he was just starting as an ECT.

On the other hand, each interviewee was also mindful of preserving personal-professional boundaries, echoing teachers in past research (e.g. Trust and Prestridge 2021). For example, interviewees described feeling pressure to be constantly available with little distinction between professional and personal contexts, a sentiment reminiscent of Fox and Bird's (2017) and Helleve et al. (2020) findings. To balance this pressure, interviewees intentionally chose to limit their time on social media and used different platforms for distinct purposes – some personal, some professional. These practices match the self-reflection and self-awareness that Fox and Bird (2017) argued are necessary for teachers to exert control over how and how much they connect with others through social media. In these instances, declining to pursue some opportunities meant that the ECT would have more time and energy to actively invest in their self-development elsewhere.

Implications for early career teachers

ECTs in this study described how they grappled with issues related to the way social media platforms merge multiple contexts and bring together audiences that would normally be distinct – that is, *context collapse* (Marwick and Boyd 2011) of public and private aspects of teachers' lives (Helleve et al. 2020). In addition, interviewees talked about how they struggle to manage expectations to be being constantly available to students and parents, reflecting themes from past research (Fox and Bird 2017). A consequence of context collapse and assumptions of availability is that ECTs must constantly think about their audience on social media; they can never be sure whether their students, or parents of their students, are paying attention to their social media activity. Numerous interviewees expressed a desire to be free from such scrutiny, and their solution was to be less active on social media or to choose more private spaces, such as teacher Facebook groups.

ECTs' struggle with social comparison is also related to context collapse. For instance, Anne wanted to use social media to vent to about the difficult circumstances in her under-resourced school and find needed materials, but context collapse through Instagram meant she was also seeing cute classroom designs from teachers in wealthy suburban districts. Rather than finding relief, Anne was exasperated by the indirect reminders that other teachers possessed the resources and time to elaborately decorate their classrooms. These experiences demonstrate how social media may elicit more feelings of competition than collaboration (Lantz-Andersson *et al.* 2018), leaving Anne to feel like 'a crappy teacher.' Participants in Carpenter and Morrison *et al.*'s (2020) study made similar comments, reporting how using Instagram raised unrealistic expectations for themselves and made them feel like they were stuck in a 'comparison spiral' (p. 9). Vogel's *et al.*'s (2014) Facebook study also demonstrated negative effects of 'upward' social comparison stemming from comparing oneself to a healthy-appearing or high-activity user.

To minimise negative effects of context collapse and social comparison on social media, ECTs may find better PD support by participating in locally hosted (i.e. school- or district-sponsored) learning management system shells like the one organised by Wallace's school in Google Classroom. Reddit's moderated anonymity may also be useful, as research has shown lower levels of performative and self-promotional content in teaching-related subreddits than in some other social media spaces (Staudt Willet and Carpenter 2021).

Implications for administrators and education leaders

Administrators and education leaders can help support ECTs by expanding notions of what 'counts' for teacher PD and providing guidance in navigating possibilities for professional learning. Informal, self-directed PD opportunities through social media should be taken seriously as a complement to formal induction programmes already offered by schools and districts (Spencer *et al.* 2018). However, although the availability of more supports, people and spaces through social media means more possibilities for professional learning, increased complexity in an ECT's PLN (Trust and Prestridge 2021) will also mean increased demands on ECTs' time and initiative. This does not necessarily mean the aim of PD should be to remove all tensions for ECTs, because conflicts may prompt deeper development of pedagogical reasoning and adaptability (Horn *et al.* 2008). However, the degree of difficulty should be scaffolded so that ECTs are not overwhelmed.

To start, administrators and education leaders should not assume that ECTs will know how to self-motivate, locate and initiate PD opportunities to expand their PLNs through social media. Indeed, such self-directed learning can 'limit how and what educators learn and the potential impact of their PLN on their professional growth' (Trust and Prestridge 2021, p. 9). Therefore, ECTs would benefit from opportunities and guidance, which can be supported through a mix of the right incentives, validation and encouragement (Carpenter and Tani *et al.* 2020). At minimum, schools and districts should have a clear, positively framed (i.e. not just a list of 'Do Not' statements) social media policy that provides suggestions and best practices for expanding PLNs with social media.

PD stakeholders may also wish to establish password-protected online spaces (e.g. platforms for sharing resources and ideas for lesson plans) as initial offerings towards expanding ECTs' PLNs. This would follow interviewees' appreciation of private social media platforms like Amelia's district-wide Facebook group and within-school Microsoft Teams messaging app. These protected spaces would satisfy Julie's interest in being able to ask for help with specific problems she encountered. Interviewees seemed to want emotionally safe contexts to seek supports, echoing Ince's (2017) finding that adult learners need safe environments for taking risks on the path to professional learning. From the current study's results, it seems likely that ECTs would benefit from a network of safe environments as part of their PLN. In addition to creating these spaces, stakeholders could direct ECTs to established platforms such as the discussion forums hosted by the International Society for Technology in Education (*ISTE's professional learning network [online], 2022*).

Limitations and future Research

This study's qualitative design does not aim to produce generalisable results, which raises several limitations and possibilities for future work. For instance, the findings reported here cannot speak to wide-scale trends in early career challenges or ECTs' social media use. However, results have established a codebook (Table 3) that could be applied in hand-coded content analysis or machine-learning classification of large-scale social media data to study ECTs' self-directed professional learning.

Conclusion

This study draws from both the teacher induction and social media literatures to explore how ECTs develop and expand PLNs of supports, people and spaces through social media across many platforms as they begin teaching. Findings offer practitioners insight into how fellow beginning teachers have overcome early career challenges, and these results contribute recommendations to administrators and education leaders regarding how to support ECTs as they transition into the profession.

Early career challenges have real effects on ECTs, who may feel like they are in survival mode (Zhukova 2018), left to 'sink or swim' in the isolation of their own classrooms and educational contexts (Ingersoll 2012). Even when ECTs take initiative to expand their PLNs to overcome challenges, their time, initiative and energy are finite resources, and if fully spent, ECTs may find they have little choice but to leave the profession. These insights are important because even prior to the disruptions of the COVID-19 pandemic starting in 2020, teachers had been leaving the classroom at an unprecedented rate (Carver-Thomas and Darling-Hammond 2017), with especially high attrition among ECTs (Ronfeldt and McQueen 2017). Teacher departures have high costs to schools and districts. More importantly, teacher turnover negatively affects students, including by reducing learner achievement (Carver-Thomas and Darling-Hammond 2017).

Early career challenges remain, and ECTs must continue to find ways to meet and overcome these challenges. Social media provide appealing possibilities for many ECTs because of how these platforms continue to expand the number of available supports, people and spaces useful for teachers' professional learning. As challenges persist and possibilities expand, ECTs, administrators and education leaders must likewise continue to expand their understanding of how these different pieces fit together to form an effective PLN that includes traditional PD offerings but also extends beyond with self-directed opportunities.

Disclosure statement

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