

Using an online social media space to engage parents in student learning in the early-years: Enablers and impediments

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Abstract

Unprecedented changes to family life in the new millennium have left many parents feeling unable to effectively participate in their child's school-based learning. This article presents research which explored enablers and impediments when using social media as part of an inquiry curriculum to promote parent engagement in student learning in one Australian school. Using collaborative inquiry research, various data were collected from two early-years teachers, their students, and the students' parents using surveys, a full-day meeting, online weekly meetings, interviews, and the social media digital platform of Seesaw. Rogoff's three interrelated planes of sociocultural analysis – personal, interpersonal, and community – were used to examine participant interactions and their effects. The agency|structure dialectic provided a conceptual lens to further explain how the social media apparatus of Seesaw enabled learning and teaching. The findings showed that access to forms of language needed to contribute to online social media spaces drew attention to the importance of teachers having at the ready a substantive knowledge of inquiry. Implications for future research are discussed.

Keywords

agency|structure dialectic; digital technologies; early-years; inquiry curriculum; parent-school engagement

I. Introduction

There has been overwhelming research evidence for more than the past half century that not only student learning and wellbeing but also school improvement are positively linked to parent¹ engagement (see Epstein, 1995; Fan & Chen, 2001; González & Jackson, 2013; Henderson & Berla, 1995; Hoover-Dempsey et al., 2005; Jeynes, 2005, 2011; Lightfoot, 1978, 2003; Pushor, 2001; Willis, 2013). Continual, complex, and rapid societal change in the digital age has also positively impacted the lives of parents, altering the possibilities of how, when, and if parents, schools, and teachers connect about student learning. The widespread use of digital technologies as teaching tools in schools attests to their benefits for teaching and student learning. The adoption of new technologies for communicating quickly, conveniently, and variously with parents (e.g., through email, text messaging [SMS], and online social media platforms such as Facebook), also signals their potential for strengthening connections across settings such as home and school. Yet, despite the promised advantages of digital technologies for enhanced home-school relations, some parents have experienced a decrease in confidence for participating in their children's learning at home (Peters, Seeds, Goldstein, & Coleman, 2007). The purpose of this article is to probe how using social media both enabled and impeded parent engagement in student learning. The article presents research in which two early-years teachers, their students, and the students' parents from one Australian school participated in inquiry curriculum using the social media digital platform, Seesaw. The article describes what is meant by parent-school engagement; reviews the relevant literature; and outlines the research methodology and methods. This research outline includes the use of Rogoff's (1995) three interrelated planes of sociocultural analysis to examine participant interactions and the agency|structure dialectic (Sewell, 1992) to further conceptualise the findings. The enablers and impediments of using Seesaw to facilitate parent engagement in inquiry curriculum are explored and discussed under the headings of Rogoff's three planes of analysis namely personal (apprenticeship), interpersonal (guided participation), and community (participatory appropriation). Conclusions and implications for future research are drawn.

II. Literature Review

Research shows that student outcomes (e.g., attendance, behaviour, school retention, academic achievement, and wellbeing) improve when parents engage in student learning and schools (Povey et al., 2016). The proclaimed benefits of parent-school engagement for student learning and wellbeing and school improvement continue to drive public-policy initiatives in Australia and elsewhere (e.g., United Kingdom [UK]; United States of America [USA]). In Australia, for example, the Queensland government's, *Parent and community engagement framework*, states that: "Partnerships between parents, students and schools promote student learning, wellbeing and high expectations for student success" (Department of Education & Training [DET], 2018). DET (2018) propounds that parent-school engagement creates relationships considered valuable and valued by each partner. This notion of parent-school engagement transcends traditional ideas of parent involvement – once limited to activities such as volunteering and fundraising – and/or representative roles (e.g., sitting on school councils) to ones which position parents more centrally alongside teachers as co-educators in their children's learning (Willis, 2013).

Alongside this shift in thinking about home-school connections from traditional parent involvement to parent engagement has been the rise of online digital technologies, especially in technologically-advanced societies. These technologies have transformed: information exchange (e.g., through email, SMS, and Twitter); the way pictures and videos are shared (e.g. through Instagram and YouTube); and participation in face-to-face, real-time communication (e.g., FaceTime, Skype, and WeChat). At the same time, students' out-of-school experiences have

¹ In this article the term, *parent*, refers to a student's biological parent or grandparent, guardian, caregiver, or other stakeholder with primary responsibility for a child's wellbeing.

become increasingly infused with digital technologies (Dezuanni & O'Mara, 2017). According to Nansen and Jayemanne (2016) parents are far from passive, instead are active participants in thinking about and deciding when, where, how, and why their children used digital technologies.

Most schools have long used different strategies to connect with parents (e.g., newsletters, telephone, face-to-face meetings, student communication books, and home visits). A review of the literature shows that digital technologies have increased the number, range, frequency, speed, efficiency, and richness of connections possible and the concomitant expectation that these improved connections will enable productive parent-school relationships (e.g., Ho, Hung, & Chen, 2013; Lewin & Luckin, 2010). Enhanced home-school communication, in particular the timeliness of communication (Grant, 2011), has been found to improve parent-school relationships. Quan and Dolmage (2006) indicated that when parents and teachers initiate such contact freely (active parent-teacher communication), the potential for parent engagement in student school learning increases. Olmstead (2013) found that positive meaningful parent-teacher communication improved parent engagement by not only supporting student learning but also enhancing parents' self-efficacy for assisting their children to learn. Previous research (e.g., Somekh, Mavers, & Lewin, 2001) showed how creating home-school links through technology extended student learning opportunities (e.g., laptop programs to improve homework) and increased transferability of student work between settings (e.g., through access to school intranets).

Many schools already boast a range of strategies and practices that involve digital technologies to encourage home-school links. A recent Australian study in the State of Queensland found that schools developed school websites and used Facebook, electronic newsletters, and State-supported school applications (e.g., QSchools) to communicate with parents (Willis, Povey, Hodges, Carroll, & Pedde, 2018). These schools also supported teachers in their use of digital technologies such as email, SMS, ClassDojo, and Ed Studio for letting parents know what their children were learning and how they were going to be assessed (Willis et al., 2018). Hence, parents could be a part of the decision-making about the kind of support to offer their children at home (Willis et al., 2018). The adoption of similar digital technologies by schools in the UK has enhanced communication with parents (Goodall, 2016), providing them with increased access to information about their child's homework and progress. In the USA, Schwartz (2017) also described a situation where many schools use a range of digital technologies to communicate information, reminders, and updates to parents about school happenings, student assignments, attendance, and scheduling. Schwartz noted the value of in-built parent-communication tools in digital platforms such as ClassDojo, Edmodo, FreshGrade, and Seesaw which "allow parents to access student work, view videos and photos from class, and receive updates on student behaviour". She added that many of these platforms "allow users to 'like' or comment on posts" and "have the ability to track parents' engagement with specific content – such as student assignments, test scores, or electronic messages – at the classroom, school, and district levels" (Schwartz, 2017). In China, Guo, Wu, and Liu (2018) observed how the use of WeChat capitalised on multimodal forms of communication to enhance parent engagement. WeChat allowed parents and teachers to send voice or written messages, share information from the Internet, attach photos and videos instantly, share resources, and discuss topics of interest (Guo et al., 2018). Guo et al. found that WeChat improved parent-teacher co-operation through more frequent communication which could be individualised for each parent and their child or used to build a network that enhanced student learning through increased access to parents' resources, knowledge, and talent.

However, Goodall (2016) noted that despite the promise of digital technologies as a means to engage parents and teachers, impediments to working across home and school settings included parents' inability to access the tools required (e.g., Smartphones) or an absence of the "requisite language or technological skills to benefit greatly from the information produced by schools" (p. 124). At the same time, limited experience in the use of digital technologies, lack of preparation and technical support, increased responsibilities and demands on teacher time, the need for changed pedagogies, and the requirement to cover standards-based curricula, feature among

possible impediments for teachers in their use of digital technologies (Meabon Bartow, 2014). Recognised barriers to parent-teacher engagement such as linguistic and cultural differences and traditional views about the roles and responsibilities of parents and teachers in educating children further compound these factors (Willis, 2013).

Yet, examples of how parents can contribute alongside teachers to the curriculum that their children are learning at school continue to be scarcely represented in the literature. Those that include the critical use of digital technologies are rarer still. Among those that shine light on the possibilities of parent engagement in the curriculum through social media are: Exley and Luke (2009), Ridgewell and Exley (2010), Exley and Willis (2016), Exley, Willis, and McCosker (2017), Gu (2008), and Meabon Bartow (2014). Gu (2008), for example, reviewed the literature on changes in parent involvement in China's public schools, finding that opportunities and options for parents to contribute to curriculum design had increased. At the same time, educational resources to support parent-teacher relationships through technology and computer use (e.g., phone calls, emails, parent newsletters) had not only grown but also featured more consistently in the strategies teachers used (Gu, 2008). In the USA, Meabon Bartow (2014) undertook cross-case analysis of five secondary-school teachers who used social media to reimagine their teaching as more dynamic, egalitarian, relational, discursive, and participatory. She found that social media promoted positive teacher-student relationships and increased interactions, "including those fostering a home-school connection, in unanticipated and generative ways" (Meabon Bartow, 2014, p. 48). Meabon Bartow noted that, "Social media increase[d] parents' participation" and, paradoxically: "Rather than creating a sense of too much involvement, these teachers experience[d] parents' appreciation and support for what the teachers [were] doing" (p. 57). The use of social media also changed the teachers' practices inside (e.g., learning directly *from* their students) and outside (e.g., using social media professionally *to learn*) their classrooms. Neither Gu nor Meabon Bartow offered information about how the parents mentioned in their respective studies may have participated in curriculum-making or what specific contributions they made to student learning.

Canadian research by Pushor (2001) provided more insights into the kinds of new school spaces needed to enable parents to share in knowledge, voice, responsibility, and decision-making alongside teachers. She maintained that without these new spaces it was unlikely that parents could contribute meaningfully to essential aspects of their child's education in schools such as curriculum (subject matter), pedagogy, and assessment (Pushor, 2010). Throughout her earlier (e.g., Pushor, 2001; Pushor & Ruitenberg, 2005) and more recent research, Pushor (2010) advocated for a, *curriculum of parents*, as opposed to a *parent curriculum*, to acknowledge that, "children are cared for and educated at home and they are cared for and educated at school" (p. 226). She highlighted the importance of parent engagement as opposed to involvement, where engagement described teachers and schools working *side-by-side with* parents as co-constructors of curriculum, and where involvement "denote[d] a curriculum that does something *to* or *for* parents" (Pushor, 2010, p. 225).

The continual rapid growth of available interactive digital and mobile technologies, particularly social media, and their inevitable adoption by schools and teachers has raised questions about how these technologies may (or may not) facilitate parent-teacher engagement. These questions are particularly pressing in early-years settings since most of the literature about the use of social media has occurred in the context of students in secondary schools and tertiary education. The research featured in this article focused on two different early-years teachers at one Australian school who each invited the parents of their students to engage in their child's learning by participating in an inquiry curriculum that used social media. To begin to respond to some of the issues highlighted by the literature review, the research explored the question: What are the enablers and impediments of engaging parents in student learning in the early-years using social media?

III. Research Design

a. Conceptual Framing of the Study

This interpretive collaborative inquiry research used a sociocultural perspective (Vygotsky, 1978). Vygotsky (1978) advanced that humans exhibit socially-patterned ways of thinking, speaking, and acting relative to their particular historical and cultural contexts. Such contexts are mediated by symbolic tools including Mathematics, Music, Art, Science, but most importantly, language. According to Vygotsky, such tools and their meanings cannot be divorced from the social processes at work that [re]produce them. Drawing on this perspective, Rogoff's (1995) three interrelated planes of analysis provided a framework to examine participant interactions and their effects in this research. Conceived to observe human learning and development, Rogoff's framework describes processes that equate to personal (apprenticeship), interpersonal (guided participation), and community (participatory appropriation) planes. The personal plane focuses on the individual and describes when a less-experienced person participates alongside more experienced others in activities that involve work, school, or family relations. The interpersonal plane focuses on groups or a team of individuals and how they communicate and coordinate their efforts with one another in their social context; hence, their participation can include face-to-face interactions as well as more distal arrangements where co-presence is not required. Involvement is termed as, "guided", as individuals are offered directions and acquire social values through their participation (Rogoff, 1995, p. 8). "Participation" may refer to observations as well as hands-on involvement in activities (Rogoff, 1995, p. 8). The third plane focuses on the community in which individuals participate and describes how they change, that is, their appropriation of new and different forms of participation through their involvement in the activities of the community. Rogoff's three planes are considered to be inseparable, mutually constitutive lenses that interconnect and overlap. These concepts may thus be described as dialectical since they are conceptualised as existing in a recursive relationship where an individual's learning contributes to the development of the communities in which they participate and simultaneously to their own learning and development and so on. Rogoff's planes provide a set of viewing platforms through which to analyse and understand the activities and processes – tacit and explicit – in which humans participate and experience as individuals, with groups, and as part of communities that include children and adults. Rogoff noted that, using this framework, it was possible to bring one or more planes into focus without losing sight of the other/s in the background. In this research, Rogoff's framework provided a means to analyse the data for interactions among and between teachers, students, and parents, and to interpret their participation in light of their different socio-historical and sociocultural contexts.

The agency and structure dialectic (Sewell, 1992) depicted in this article as, agency|structure, was used in coordination with Rogoff's (1995) three planes as a further conceptual lens to describe and explain the research findings. Sewell (1992) described, agency, as "the efficacy of human action" (p. 2). The concept denotes an individual's or group's capacity or power to act (Sewell, 1992) or, simply put, the ability to make things happen. Agency in this research did not refer to the intentions of participants to do something – individually or collectively – but to their *capability* of doing (or not doing) those things (Giddens, 1984). Agency arises from an individual's knowledge of schemas and encompasses their ability to apply such schemas creatively or to new contexts depending on their control of resources with respect to their schemas (Sewell, 1992). For example, in this research, it was expected that when, where, how, and why participants were agential depended on the cultural schemas and resources to which they had access in the school, classrooms, homes, and various communities in which they operated. Structures therefore describe schemas that are virtual and resources that are actual. Schemas include ways of thinking and social rules (e.g., attitudes, values, beliefs) that enable or impede the agency of individuals in their different sociocultural contexts. In this research, for example, the use of social media (i.e., the Seesaw app) to post, like, and/or comment on information, reflected particular schemas that structured how the participants may (or may not) have encouraged interactivity, collaboration, and networking in the virtual space. Resources incorporate material and human elements. Material

resources comprise “objects, animate and inanimate, naturally occurring or manufactured” (Sewell, 1992, p. 9). Material resources used by schools and teachers to communicate with parents can include newsletters, signs, and websites. Sewell noted that human resources are actual insofar as “they are observable characteristics of real people who live in particular times and congregate in particular places. And it is their actualisation in people’s minds and bodies that make them resources” (p. 10). For a teacher using social media to engage parents in student learning in this research, human resources may have comprised their understanding of parent-school engagement, knowledge of interactive digital and mobile technologies, access to technical support, available energy and time, and/or commitment to new learning. For a parent, their linguistic and cultural knowledge for use across settings and/or traditional views about the roles and responsibilities of parents and teachers in educating children may also have constituted human resources that influenced how they acted. Sewell considered that resources and schemas mutually implied and sustained each other; hence, they were dialectically related. The concept of agency then is mediated by the dialectic of resources|schema (i.e., agency||resources|schema). Understood in this way, the agency|structure dialectic provided a powerful lens in this research to further understand and explain the possible enablers and impediments of engaging parents in student learning in inquiry curriculum in the early-years using social media.

b. Method

The research was conducted in Australia in 2016 at a non-government school on the outskirts of a large metropolis in the State of Queensland. The school catered for students from the Preparatory Year (Prep) (five year olds) to Year 12 (17 year olds). The study was undertaken over a six-month period. Two early-years teachers, Erin and Gloria (pseudonyms), who taught Prep and Year 2, participated. Each teacher self-selected for the research. Erin and Gloria had taught in schools for more than a decade. A total of 30 students and their parents participated (Prep $n=15$; Year 2 $n=15$). Data collection chiefly comprised evidence of participation by the teachers, students, and their parents on the online social media platform, Seesaw. These data were harvested using screen captures of posts which showed contributions made by and/or interactions among the participants. Data were also collected from the teachers using audio-recorded: discussions during a full-day meeting with the researchers (authors) to set up the project; individual semi-structured interviews at the end of the research; and individual fifteen-minute online weekly meetings (using Skype or phone) with one or both researchers. These audio-recordings were subsequently transcribed. In addition, data were collected from a total of 28 parents who completed a pre- and post-survey about their: knowledge of and attitude toward parent-school engagement; personal and child’s use of Internet resources such as social media; and perceived risks and benefits for their child of using online digital technologies. Ethical permissions to undertake the research were obtained under the guidelines required by each researcher’s university and the school’s governing authority.

c. The Seesaw App

The research used a free downloadable app called Seesaw which was available for use on a range of online and mobile digital devices. The teachers at the school selected the app because of its: safety features; icon-driven platform which they considered user-friendly for young children using social media for the first time; and ability to closely connect parents with their child’s learning in the classroom. Each teacher set up a closed site so only they and their students and parents of students in their class could participate. Seesaw enabled the students to upload blog posts and learning artefacts using a range of modalities (e.g., written, spoken, imaged, videoed, emoticons). Parents were signed into Seesaw by each class teacher. Each teacher approved all new student items before these were shared with their parents. Whenever a student’s blog post or learning artefact was uploaded, the platform sent a *ping* to the phone of the student’s parent/s. Upon receiving a post, a child’s parent could swipe down, click, and include a comment, emoji, and/or voice message. Blog posts and learning artefacts could be private (among the teacher, student, and parent/s) or public (among all registered account holders, including a whole class or whole

parent group). Incoming media needed teacher approval before release to the designated audience (e.g., the parent's child or whole class).

V. Findings and Discussion

At the full-day meeting to set up the research, Erin and Gloria were invited to comment on four themes relevant to the research: parent-school engagement, inquiry curriculum, their personal use of social media, and their use of social media in the classroom. When asked about the first theme, both teachers articulated views about the importance of parent engagement in student learning. For example, in speaking about the proposed involvement of parents in her Year 2 classroom inquiry, Gloria opined that parents would have much to contribute: "I like the sound of it. I think it sounds good. Just the whole idea of actually involving the parents in a more valuable role". Each teacher used a range of communication channels to regularly contact the parents of their students. Emails, phone calls, and class and year-level newsletters dominated. Parents received information from the teachers about the classroom curriculum, student awards (plus photographs), homework, canteen lists, date claimers, and classroom schedules. Each teacher invited parents and grandparents to assist in weekly classroom rotations that included English, Literacy, and Mathematics activities. The teachers indicated that their main motivation for regularly communicating with parents and inviting them into their classrooms was to build positive parent-teacher relationships while simultaneously enabling informed conversations about school learning at home.

The teachers initially showed inconsistent knowledge and understanding of inquiry curriculum. When asked at the meeting to set up the research about this second theme, Erin perceived that her capacity to teach inquiry had diminished over the past several years with the implementation of the Australian Curriculum (see Australian Curriculum, Assessment and Reporting Authority [ACARA], 2018). Erin commented: "So inquiry based units I think kind of went out the window with the introduction of the Australian Curriculum because we work now to the achievement standards and they're very specific and we teach with the gradual release model". Gloria indicated that she had experience in inquiry curriculum in History but felt that the school subject of Religion was more suitable for inquiry. She explained that topics selected for students to study were sometimes too removed from their life experiences and this impeded the enactment of the intended curriculum. She also shared that she found implementing inquiry difficult in practice, especially with young children for whom it was hard to sustain interest in one topic over several weeks. To understand the nature of inquiry as reflected in the Australian Curriculum documents, the researchers worked with the teachers during the full-day meeting. Using the Humanities and Social Sciences Learning Area, they highlighted the phases of inquiry in the documents which involve: introducing the stimulus material; identifying the problem/s which includes thinking about concepts and developing inquiry questions; suggesting hypotheses to solve the problem/s; analysing and evaluating different solutions posed (i.e., testing the evidence for or against different solutions); and reflecting on the inquiry and acting to create positive change based on the findings (see ACARA, 2018). These phases draw on Dewey's (1916) three key stages of inquiry which involve: initial problematisation; dissection and deconstruction of the problematic situation in order to resolve the problem; and reflection on the inquiry process. Each teacher subsequently discussed how they might develop an inquiry curriculum from an existing unit of work considered suitable for incorporating the use of online social media to engage parents. Erin proposed a Geography unit on the topic of *Place* and Gloria proposed a History unit on the topic of *The Local Creek*. New information and fresh insights about what, where, and how inquiry in the Australian Curriculum was intended to be implemented thus supplied resources that enhanced the teachers' agency to plan their proposed units that included social media with parents.

When asked about the third theme, personal use of social media, both teachers indicated limited use in the number of platforms used and the nature of their participation. Erin commented, "In terms of social media I am a bit of an amateur", and Gloria stated, "I think I might have an Instagram account but I don't know how to use it". Although each teacher used Facebook, this use was limited mostly to looking daily at posts from family and friends rather than posting themselves. The teachers' personal use of social media however, contrasted with their use of social media in the classroom which included to engage parents (theme four). Erin described a program no longer in use but which was developed specifically at the school for the early-years called *Monitoring Prep 1*. She expounded that the program had enabled her to "put parents in the picture about what was happening in the classroom" and simultaneously provided "a monitoring tool" of student learning. Using the tool she digitally represented all of the curriculum learning areas coupled with student photographs of their learning accomplishments and activities. This digital curation served as an accompaniment to the report cards parents received twice a year.

Gloria described how she had used blogs previously in her Year 1 classrooms but preferred weebly since teaching in Year 2. She explained that one of these was a "teaching weebly" with photographs or YouTube videos the class was using and that students would access these when they were doing activities. When they did Mathematics rotations, for example, the students knew to use the weebly to navigate to the Mathematics Learning Area, find the relevant topic such as patterns, and choose from among the games available to help them practise their mathematical skills. Parents also had access to this weebly.

Both teachers spoke about their use of a learning management tool called *LIFE* which the school had adopted. Erin had been part of a pilot project to evaluate *LIFE* when it was first introduced. She found that *LIFE* was "complex and complicated [as] there were a lot of steps to go through to post things but [that] it had a big capacity for sharing information with parents and people being able to collaboratively plan". Erin and Gloria noted other positive features such as a security facility which ensured protection for users online. However, the teachers agreed that problems during implementation and operation meant *LIFE* did not achieve the system-wide uptake its developers had hoped for.

Analysis of the data obtained at the meeting to set up the research signaled that the teachers' different experiences were likely to affect their agency when using Seesaw to implement inquiry curriculum which included engaging parents in student learning. On the one hand, their experiences highlighted structures namely existing knowledges and skills (resources) and positive dispositions (schema) toward parent engagement and openness to new digital technologies in the classroom which positioned them agentially to exploit the use of Seesaw. On the other hand, structures such as emotions of frustration associated with past negative experiences with digital technologies when problems arose associated with logistics of time and ease of operation had the potential to diminish their agency in using Seesaw.

a. Personal (Apprenticeship) Plane

To examine the enablers and impediments of using Seesaw to promote parent engagement in student learning in the inquiry curriculum that each teacher planned, Rogoff's (1995) framework of personal (apprenticeship), interpersonal (guided participation), and community (participatory appropriation) planes provided a vantage point for further data analysis. Described earlier in this article, the personal plane focused on the individual and refers to when a less-experienced individual participates alongside more experienced others in activities that involve work, school, or family relations (Rogoff, 1995). In this research, the individuals involved were the teachers, students, or parents; more experienced others included individuals from among the groups of teachers, students, or parents in the research as well as other school staff and students or outside experts; and the activity concerned the use of Seesaw to participate in inquiry curriculum.

In launching their classroom projects, each teacher actively positioned themselves to maximise their use of Seesaw with their class and the parents of their students. They each spent time experimenting with the app, which included testing out its various features, and accessed additional resources they considered necessary to support their learning and teaching. Erin indicated that initially she accessed online tutorials to help her set up her class on Seesaw. She subsequently benefited from a session with Gloria who mentored her in its use. In a semi-structured interview at the end of the research, she reflected: "This time was helpful in getting to what needed to be done without having to do the decision-making involved if starting alone from the beginning". Gloria's experimentation highlighted that the blog facility could be password protected. This meant that information would not be searchable on the world wide web and would stay within the closed group she created with her Year 2 class and their parents. The teachers noted that sometimes resources to support their initial use of Seesaw could not be accessed. This included times to meet with the digital learning and resourcing specialist at the school. They relayed how meetings were scheduled but often competing priorities for them or the specialist meant these times were forgotten, cancelled, or became unnecessary as they found solutions to their problems themselves or through other means. Hence, high motivation to adopt Seesaw for use with their students and parents, access to resources such as one another, and past experiences with digital technology platforms that included problems identified as potential impediments, provided structures that enhanced the teachers' agency to achieve their goals. Challenges in communication experienced in the day-to-day operation of the school which in turn impacted point-in-time access to resources such as professional learning support however, lessened this agency.

As each teacher gained confidence in their use of Seesaw, they introduced the app to their students. The teachers encouraged the students to experiment with the app's features via some guided pedagogy for producing and uploading videos, making voice-overs that matched pictures, taking and uploading photographs, and commenting on one another's work. For Erin, this introduction also involved working with Gloria to organise for a small group of six students from Year 2 to mentor the Prep class. Speaking in a semi-structured interview at the end of the research about the Year 2 students, Erin observed: "They only needed five or ten minutes and they did the whole class. Like those six students from Year 2. I just sent out a small group and they did them and then I'd send the next lot out".

Rogoff (1995) noted that apprenticeship can involve peers who serve as resources for others in exploring an activity. In this instance, the Year 2 students were positioned in active roles to support the developing participation of their Prep peers. The activity allowed the Prep students to take more responsibility over their use of Seesaw. The success of the activity highlighted the inseparability of Rogoff's personal, guided participation, and community planes, as the personal learning of the Prep students depended on the guided participation they received from the Year 2 students while simultaneously contributing to the learning of the community (which comprised the early-years teachers and their classes). Seen through the lens of the agency|structure dialectic (Sewell, 1992), the creation of a community with similar motives and goals enabled Erin and Gloria to act agentially. For example, together they called on their resources (e.g., flexible teaching arrangements; Year 2 student knowledge and skills in using Seesaw) to enhance the agency of the Prep students for using the app. In turn, they positioned their respective students agentially to teach their parents about the app.

As the teachers invited the parents to use Seesaw to participate in the curriculum that their child was learning at school, they encountered various enablers and impediments. Despite initial skepticism from a minority of parents, the teachers indicated that most were generally keen to be involved. In their weekly online meetings with the researchers, the teachers each described several reasons for this enthusiasm including: existing positive parent-teacher relationships; parents

knowing what was happening in the classroom and being able to engage online with their own child; and the instantaneous communication the app afforded between parents and their child.

Although no qualitative data were collected from parents directly, there was evidence from the teachers that parents learnt about the app informally at home from their child. The parents appeared to value the opportunity to see and comment on their child’s work however, for the most part parents did not use Seesaw to continue and extend conversations with their child about their school learning. Gloria noticed this phenomenon with the participation of parents of her Year 2 students. Speaking about the use of Seesaw for her History inquiry of the local creek she observed that although the parents were “all quite excited about it. I’m not quite sure when I look at the blog how, when I think about inquiry, to get past the complimenting” (Skype, Weekly Meeting 2). She encouraged different forms of parent participation using the class blog facility of Seesaw. For example, she posted questions that the class had brainstormed together before their excursion to the creek and invited parents to comment (see Figure 1).

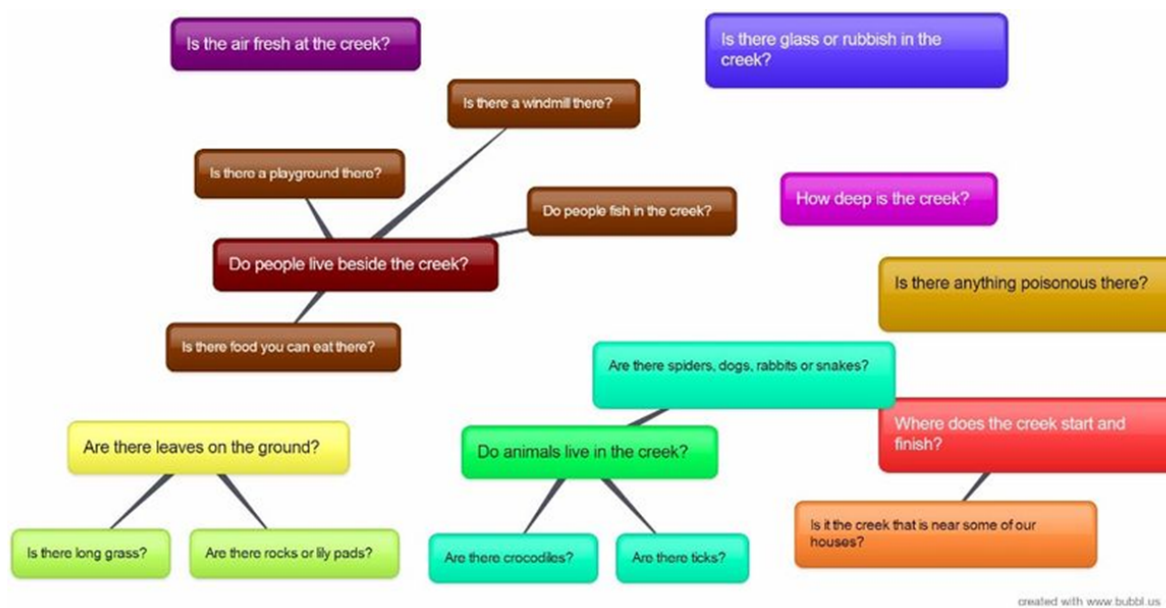


Figure 1: Questions brainstormed about the local creek by Gloria’s Year 2 students.

In all, 15 parents (100% of the participating parents) responded: twelve with emojis (love hearts), one wrote, “Thank you”, one wrote, “Looking forward to seeing all the photos from your excursion”, and another wrote, “I will go there on the holiday”. Soon after, Gloria invited the parents’ participation using a series of student questions about a memorial she and the class were visiting as part of their investigation. Questions included: “When did the wars start?”, “When was the memorial built?”, “Were there ladies in the war”, and “Why do we need a memorial?”. This invitation attracted six responses from three different parents. Most responses provided factual information about the memorial and wars in which Australia took part. One response connected the inquiry to the parents’ knowledge of their child’s family: “Yes, there were ladies in the war. Jake’s great Grandmother used to nurse the men who were injured and she became a doctor.” The use of Seesaw thus enabled the Year 2 parents to contribute to the History inquiry in different ways compared with how they might usually participate (e.g., as classroom helpers or visitors). Although these contributions were limited, Gloria encouraged parent participation on the personal plane through the use of guided participation – Rogoff’s (1995) second plane – that included invitations, student questions, and photographs.

Similarly, Erin guided the participation of parents in her Prep students' Geography inquiry. To explore the topic of, *Place*, she shared a recent photograph of her holiday to New York and invited them together with their child to post photographs of favourite family holiday spots. In a semi-formal interview at the end of the research, Erin indicated that although she was quick to respond to any posts from parents, she was surprised at their low level of participation. She reflected:

A couple did, a couple said, 'Oh yes, I'm going to send one in'. Yeah, but they were a bit slow. I really thought that I would be inundated, which is maybe another reason why I did it straight away because I would have thought, once one started... Yeah. And people would go, 'Oh I've got just the perfect photo to send in'. And some did but it wasn't as fast a rate as I thought it would be. I don't know. I asked a few at the night that we had, the open night, and they said, 'Oh yeah, well we didn't really understand. And so I explained it again and they said, 'Well yes, we'll send one through then'. (Erin, Semi-Formal Interview)

Ultimately, seven parents (47% of participating parents) sent in photographs together with a description of the places they visited and why these were special to their family. All of these contributions called on parent knowledge of their child and family.

Casting the lens of the agency|structure dialectic (Sewell, 1992) over the findings, the teachers variously used their agency to apprentice parents in the use of Seesaw to encourage their participation in the different class inquiries. Despite the parents' enthusiasm and the affordances of Seesaw that made contributions by each parent possible, the teachers reported that parent participation in student learning was limited. One explanation is that parents may have experienced reduced agency to participate given they were new to Seesaw. Another explanation is that parents' usual ways for contributing online using social media such as the language of emoticons and short predictable responses of acknowledgment and congratulations may have impeded knowledge exchange between home and school settings. When the teachers served as resources and introduced new structures (e.g., student questions; personal explanations) to guide parent participation, this enhanced their agency to contribute.

However, the teachers' knowledge of inquiry combined with their knowledge of pedagogies to engage parents through inquiry also emerged as possible impediments. In Gloria's case, she observed throughout the research that the History inquiry she planned limited student agency because she felt they had little experience with the local creek and could not easily relate to the topic. She also drew on a History unit the school had used which highly scaffolded students to complete workbooks throughout the stages of inquiry. These factors combined to produce an inquiry that was somewhat closed. In turn, student questions used by Gloria to guide parent participation mostly called on them to draw on their funds of *world* knowledge (Moll, Amanti, Neff, & Gonzalez, 1992) rather than their funds of *parent* knowledge about their child and families (Pushor & the Parent Engagement Collaborative, 2013). Although several parents contributed information about the creek, because these factors limited their resources they experienced diminished agency to fully participate on Seesaw as co-educators in an open-ended inquiry.

For Erin, Seesaw opened up new opportunities for parents to contribute to the Geography inquiry that she planned with her Prep class. She enhanced their agency by inviting them to contribute personal knowledge of their children and places they visited together. This knowledge-sharing provided resources which she was able to draw upon to enhance student learning about the Geographical topic of *Place*. Erin showed the potential of using Seesaw to position parents agentially in new roles as coteachers of the students. However, parent participation occurred initially (i.e., introducing stimulus material phase), and mostly after Erin guided their participation. Evidence of other aspects of inquiry (e.g., developing inquiry questions, making suggestions to solve problem/s, and evaluating different solutions posed) did not feature in the data set. Hence, the participation of the parents in the Geography inquiry curriculum was not sustained throughout

the research. Rather, the students subsequently used Seesaw to share their work with their parents in other subjects such as Mathematics and Religion. The use of Seesaw to strengthen connections between home and school settings in this research that focused on inquiry curriculum would seem less restricted by the teacher's and parents' knowledge of the social media platform and more by their limited knowledge of inquiry. Without these resources the necessary structures for them to fully exercise their agency suffered.

b. Interpersonal (Guided Participation) Plane

Rogoff's (1995) interpersonal plane focused on how groups of individuals communicate and coordinate their efforts with one another in their social context. In the above section, several examples illustrated how the teachers, students, and parents in this research sometimes participated in overlapping planes particularly the personal (apprenticeship) and interpersonal (guided participation) planes. Different examples included coordinated efforts between: Gloria and Erin; a group of Year 2 students working with the Prep students; and Gloria and Erin using questions, photographs, and direct encounters to guide the participation of the parents of their respective students.

Guided participation was also evident in the classrooms of each teacher as they worked with individuals, groups, and a whole class of students, and as students worked with one another. In a semi-formal interview at the end of the research, Erin described how she incorporated the use of Seesaw that included parents into her classroom practice. Whenever she received a post from one of the student's parents, she used the class data projector, to focus student attention:

I projected it for them and I said we'd had a submission to our blog: 'Jane's mum has sent in a photo. Let's all have a look and Jane you might talk us through what's happening in this picture, where are you, and why this is a special place'.

The use of Seesaw in this way encouraged authentic classroom conversations that focused the students' attention on the Geographical inquiry about, *Place*. Erin also embedded the use of Seesaw in her Literacy rotation activities. She helped each student to write a sentence using pencil and paper and, once she co-edited their work, showed them how to use an iPad to write their sentence, draw a suitable picture, produce a voice-over, upload their text to Seesaw, and send it to their parents. In addition, Erin described how she used Seesaw to discuss texts that students produced:

And then they can have that piece of work put up on the big screen for us all to look at and read and evaluate and not so much critique, but provide feedback to the student on the work they gave. For instance, 'Was their voice adequate, was the volume adequate, was the vocabulary used correct vocabulary, was the grammar appropriate?' Then, look at their writing and their creating of the words and the text. 'Did they have a capital letter at the beginning, a full stop at the end, spaces in between?' You know, 'Did they use their knowledge of their sight words to write the piece of text?' It's endless.... And the kids can give feedback and go: 'Oh, I really like the way she spoke because I could hear her voice clearly'. Or, 'I really like the way they created that image using the camera on the iPad'. (Erin, Semi-Formal Interview)

By projecting the texts that students created on a class screen, Erin enabled conversations among the students about how each text worked, what was effective, and ways these might be improved. The use of Seesaw where each student's parents provided an immediate, known audience motivated them to continually improve their work. Erin noted that as students worked together in groups they helped one another to produce high-quality texts. This meant that students were prepared to retake videos or remake audio recordings numerous times, benefiting from the knowledge, skills, encouragement, and support of one another throughout the process.

The agency|structure dialectic deepens knowledge and understanding about how the use of Seesaw that included parents in an inquiry curriculum in this example positively influenced learning and teaching. The *presence* of the Prep parents in the classroom was evident in at least two ways. First, their posts provided tangible resources which Erin used to structure shared conversations with and among the students. These encouraged them to be open to learning during times when Erin guided their participation through direct teaching and when they provided guided participation for one another during group work. Second, student *perceptions* of their parents' presence in the classroom provided further resources which motivated them to produce texts of high quality. These resources positioned them agentially to take on new roles which included being able to offer and respond in informed, articulate ways to critiques about their own and others' composition and creation of new and different multimodal texts. At the same time, the active inclusion of parents in the classroom through their participation on Seesaw created new structures which agentially positioned Erin to expand and enrich her classroom pedagogies.

c. Community (Participatory Appropriation) Plane

Rogoff's (1995) third plane focused on the community in which individuals participate and described how they change, that is, their appropriation of new and different forms of participation through their involvement in the activities of the community. According to each of the teachers, the involvement of parents through the use of Seesaw created classroom communities which facilitated high student engagement in classroom learning:

Erin (Prep)

So we didn't just do the Geography that we planned to do, we did a Number story so there was some Mathematics in there, there was some Religion in there, there was some Media, so they had to create using images or icons, a little Christmas scene, obviously there was the Geography and Literacy activities as well. Because we just saw it (Seesaw) as being, 'Wow, this is really exciting' and they love it. When their group is allocated Seesaw activity for that day, they get so excited.

Gloria (Year 2)

It's (Seesaw's) also engaging for the children which helps and I think the fact that the parents are going to see it straight away that makes a difference, so really across the board in every subject that I tried it in, the fact that they knew the parents were going to see it, the children wanted to do it and they wanted to do their best work.

The use of Seesaw by each teacher was not restricted to the inquiry curriculum they planned. They soon recognised its potential for use in most subjects, multiplying opportunities for students to demonstrate their knowledge and understanding of particular topics and/or techniques in simple, effective ways. Indeed, the app enabled more equitable participation of students from a diverse range of abilities and backgrounds. For example, Erin noted that she could ask questions of Prep students unable to express their ideas in writing, who instead recorded verbal responses using the app to communicate their understanding (Erin, Semi-Formal Interview). She also tasked them with photographing their favourite places in the school as part of the Geography inquiry. To her surprise, she uttered: "So, but some of the photos they captured! They're better photographers than me! Some of them went into the garden and got up-close shots of beautiful plants in flower or vegetables growing on a bush" (Erin, Semi-Formal Interview). She added, "Well, I mean we hadn't even gone into that yet, but they experimented with focus to take up-close or panoramic shots or videos" (Erin, Semi-Formal Interview). For the most part, Erin indicated that the students learnt side-by-side about different topics and ways to present information without necessarily needing help from her.

In a semi-formal interview at the end of the research, Gloria also described how Seesaw enhanced learning among the Year 2 students. She noted challenges for young students in researching a

topic as their skills were limited, saying, "They can't open up books, they can't do Internet searching because they're too young really". However, the tools on Seesaw increased student access to information. For example, in the past Gloria made PowerPoint presentations to encourage whole class discussions. She was now able to convert a PowerPoint presentation to pdf format which could be uploaded using Seesaw on the students' ipads. Hence, each student could discuss the topic using their own copy of the slides on their ipad. She indicated that this led to less teacher talk and increased critical discussion among students.

Casting the lens of the agency|structure dialectic (Sewell, 1992) over the findings, at the heart of the transformational learning described by each teacher in their classroom was student agency. Changed structures made possible through the use of Seesaw increased the resources available to students to enhance their achievement and motivation for learning. Among these resources was the window social media provided into their classroom learning, making it possible for their parents to view and respond to their work – even before they arrived home from school. Grant (2011) noted that, "The role of children themselves in parental engagement and the home-school relationship is important although often overlooked, with children themselves one of the most significant factors explaining the extent of parents' involvement in schools" (p. 293). This research showed how students together with their teachers actively appropriated opportunities (resources) through their participation in the community plane to share their learning and interests with their parents. This finding contributes to understanding how digital technologies can position students agentially to play new roles in parent-school engagement by connecting learning between home and school settings.

However, each teacher reported restricted use of the class blog facility on Seesaw. Erin though talked about her reluctance toward using the blog, saying:

And getting your head around, 'Oh hold on a minute, have I put enough thought into this?' I know that my Geography inquiry was planned that way to do that with the photos from around the world, their favourite places, but I'm a bit of a control freak; I need to make sure that what I'm putting on there for everybody to look at is okay. (Semi-Formal Interview)

Hence, her concern with posting information that she had not thought through saw her withhold her participation online with the parents of her Prep students. From an agency|structure perspective, at least in Erin's case, her recognition of the immediacy of social media and potential for close scrutiny by parents impacted her online practice. She exercised her agency by adopting a cautious, considered approach toward what she posted. This in turn impacted the resources available to these parents to participate in the community plane, limiting their possible agency to contribute to their child's school learning.

VI. Conclusions and Implications

A number of conclusions and implications for knowledge, practice, and theory in the use of social media to engage parents in student learning in inquiry curriculum arise from this research. The experience of two early-years teachers in one school who used Seesaw highlighted possible enablers and impediments to parent-school engagement. Enablers to initial engagement included the teachers': recognition of the value and importance of parent-school engagement; existing positive parent-teacher relationships; willingness to implement inquiry curriculum; previous experiences with digital technologies; openness to using new digital technologies that included social media in the classroom; and apprenticeship of one another in setting up their different projects. The choice of Seesaw as the social media platform for use in early-years classrooms further aided early engagement. Seesaw provided a speedy, secure, user-friendly, age-appropriate means to cross home and school settings. It encouraged parent enthusiasm for participation by

making visible their child's learning in easy, effective, continuous ways. Hence, they were able to meaningfully and personally connect with their child's school learning throughout the research. The app also enabled information and ideas to be shared with and from parents. This increased teaching opportunities that focused student attention on critical knowledge and skills needed to articulate informed opinions, self-evaluate their work, and provide useful feedback to their peers. The use of social media led to the creation of vibrant classroom communities in which students demonstrated heightened motivation and enthusiasm for learning and strived for mastery in the production of different items and texts. Concomitantly, the use of Seesaw to engage parents expanded and enriched each teacher's classroom practice.

Impediments to parent-school engagement included the teachers': past negative emotions associated with the use of digital technologies; lack of integration of social media in their original plans for teaching; access to timely technical support; and under-utilisation of Seesaw's class blog facility. The teachers' lack of strong knowledge about inquiry curriculum emerged as a further impediment to parent-engagement in this research. This affected their management of the flow of information between school and home. It also affected their ability to recognise how to guide student and parent participation in inquiry curriculum as other immediate and hence, competing curriculum priorities arose. They therefore often appeared to default to using Seesaw as a means of sharing student work with parents or for assessment purposes with students. For parents, lack of knowledge in and examples of ways to participate on social media to encourage student learning in inquiry curriculum appeared to impede their participation. Hence, they may have hesitated or withheld making contributions online. Consequently, the potential of using social media to enable parent-teacher engagement in inquiry curriculum in this research could not be fully realised.

The use of Rogoff's (1995) framework in coordination with the agency|structure dialectic (Sewell, 1992) yielded important learnings and insights. The findings showed how Rogoff's three planes of analysis could be used to foreground what happened at personal, interpersonal, and community planes for the different participants and groups namely teachers, students, and parents. The findings also showed how these three planes were inseparable, making it impossible to think of one without invoking the others. It is therefore possible to draw conclusions by looking at where forms of participation could have occurred in this research but were not captured in the data. For example, although there were data on how teachers participated with teachers, and students participated with students, there were no data to indicate that parents participated with other parents to guide their participation in the use of Seesaw or inquiry curriculum. This lays bare the resources for participation which were seemingly unavailable to parents to enable their participation and hence, impeded their agency. Implications for future research thus include putting structures in place such as dialogic conversations (e.g., cogenerative dialogues [Willis, 2013, 2016]) early in the research where teachers and parents can openly explore: what parent-school engagement entails and its benefits; how to participate using Social media – which goes beyond usual language for participation in online platforms to include guided participation in more elaborated language codes; and the characteristics of open-ended inquiry. Without such structures to build the resources of teachers and parents it is unlikely that participants, in particular parents, will be able to operate in all of Rogoff's three planes. It follows that their agency to participate in and contribute to improved student school learning in inquiry curriculum that includes social media will continue to be minimal.

This research provides an example of the potential of digital technologies to mediate the usual disconnect between home and school settings to encourage parent-school engagement. It therefore invites future, longer-term research based on the findings.

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References

- (ACARA) Australian Curriculum, Assessment and Reporting Authority. (2018). *Australian curriculum*. Retrieved from <https://www.australiancurriculum.edu.au/>
- (DET) Department of Education and Training. (2018). Parent and community engagement framework. Retrieved February 4, 2018, from: <http://education.qld.gov.au/schools/parent-community-engagement-framework/about/>
- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York, NY: Macmillan.
- Dezuanni, M. L., & O'Mara, J. (2017). Impassioned learning with Minecraft. In C. Beavis, M. L. Dezuanni, & J. O'Mara (Eds.) *Serious play: Literacy, learning, and digital games*, pp. 36-48. New York, NY: Routledge.
- Epstein, J. L. (1995). School/family/community partnerships. *Phi Delta Kappa*, 76(9), 701-712.
- Exley, B., & Luke, A. (2009). Uncritical framing: Lesson and knowledge structure in school science. In D. Cole, and D. L. Pullen (Eds.), *Multiliteracies in motion: Current theory and practice*, (pp. 17-41). London: Routledge.
- Exley, B., & Willis, L.-D. (2016). Children's pedagogic rights in the web 2.0 era: A case study of a child's open access interactive travel blog. *Global Studies of Childhood*, 6(4), 400-413. DOI: 10.1177/2043610616676026
- Exley, B., Willis, L.-D., & McCosker M. (2017). Children as advocates – The potential of using social media in the early years of schooling. *Practical Literacy: the early and primary years*, 22(2), 9-12.
- Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, 13(1), 1-22.
- Giddens, A. (1984). *The constitution of society. Outline of the Theory of Structuration*. Cambridge, UK: Polity Press.
- González, R. L., & Jackson, C. L. (2013). Engaging with parents: The relationship between school engagement efforts, social class, and learning. *School Effectiveness and School Improvement*, 24(3), 316-335.
- Goodall, J. S. (2016). Technology and school-home communication. *International Journal of pedagogies and learning*, 11(2), 118-131.
- Grant, L. (2011). 'I'm a completely different person at home': Using digital technologies to connect learning between home and school. *Journal of Computer Assisted Learning*, 27, 292-302.
- Gu, W. (2008). New horizons and challenges in China's public schools for parent involvement. *Education*, 128(4), 570-578.
- Guo, Y., Wu, X., & Liu, X. (2018). Changes in parent-teacher relationship under China's market economy. In Y. Guo (Ed.), *Home-school relations: International perspectives* (pp. 115-135), Springer: Singapore.
- Henderson, A. T., & Berla, N. (1995). *A new generation of evidence: The family is critical to student achievement*. Washington, DC: National Committee for Citizens in Education.
- Ho, L., Hung, C., & Chen, H. (2013). Using theoretical models to examine the acceptance behavior of mobile phone messaging to enhance parent-teacher interactions. *Computers & Education*, 61, 105-114.

- Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Closson, K. (2005). Why do parents become involved? Research findings and implications. *The Elementary School Journal*, 106(2), 105-131.
- Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education*, 40(3), 237-269.
- Jeynes, W. H. (2011). *Parental involvement and academic success*. New York, NY: Routledge.
- Lewin, C., & Luckin, R. (2010). Technology to support parental engagement in elementary education: Lessons learnt from the UK. *Computers & Education*, 54(3), 749-758.
- Lightfoot, S. L. (1978). *Worlds apart: Relationships between families and schools*. New York, NY: Basic Books.
- Lightfoot, S. L. (2003). *The essential conversation: What parents and teachers can learn from each other*. New York, NY: Random House.
- Meabon Bartow, S. (2014). Teaching with social media: Disrupting present day public education. *Educational Studies*, 50(1), 36-64. DOI: 10.1080/00131946.2013.866954
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132-141.
- Nansen, B., & Jayemanne, D. (2016). Infants, interfaces, and intermediation: Digital parenting and the production of "iPad Baby" videos on YouTube. *Journal of Broadcasting & Electronic Media*, 60(4), 587-603. DOI: 10.1080/08838151.2016.1234475
- Olmstead, C. (2013). Using technology to increase parent involvement in schools. *TechTrends*, 57(6), 28-37.
- Peters, M., Seeds, K., Goldstein, A., & Coleman, N. (2007). *Parental involvement in children's education 2007*. London, UK: Department for Children, Schools and Families.
- Povey, J., Campbell, A., Willis, L.-D., Haynes, M., Western, M., Bennett, S., Antrobus, E., & Pedde, C. (2016). Engaging parents in schools and building parent-school partnerships: The role of school and parent organisation. *International Journal of Educational Research*, (79) 128-141. DOI:10.1016/j.ijer.2016.07.005
- Pushor, D. (2001). *A storied photo album of parents' positioning and the landscape of schools*. Unpublished doctoral dissertation, University of Alberta, Canada.
- Pushor, D. (2010). Attending to milieu: Living a curriculum of parents alongside teacher candidates. In J. Kitchen, D. Ciuffetelli Parker, & Pushor, D., Narrative inquiry into curriculum making in teacher education, (pp. 217-238), Emerald Group Publishing. DOI: [http://doi.org/10.1108/S1479-3687\(2011\)00000130014](http://doi.org/10.1108/S1479-3687(2011)00000130014)
- Pushor, D., and the Parent Engagement Collaborative. (2013). *Portals of promise*. Rotterdam, The Netherlands: Sense Publishers.
- Pushor, D., & Ruitenberg, C. (2005). *Parent engagement and leadership*. Retrieved January 10, 2010, from http://www.mcdowellfoundation.ca/main_mcdowell/projects/research_rep/134_parent_engagement.pdf
- Quan, Z. D., & Dolmage, W. R. (2006). Four Chinese teachers' perceptions of parent involvement. *EAF Journal*, 17(2), 95-104.
- Ridgewell, J., & Exley, B. (2010). The potentials of student initiated netspeak in a middle primary science-inspired multiliteracies project. *Research in Science Education*, 41(5), 635-649.
- Rogoff, B. (1995). *Observing sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship*. Retrieved from: https://people.ucsc.edu/~gwells/Files/Courses_Folder/documents/Rogoff.Part-Appr.pdf
- Schwartz, S. (2017). Digital communication tools target ESSA parent-engagement mandate. Retrieved February 2, 2018, from <https://www.edweek.org/ew/articles/2017/04/05/digital-communication-tools-target-essa-parent-engagement-mandat.html>
- Sewell, W. H. (1992). A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 98(1), 1-29.

- Somekh, B., Mavers, D., & Lewin, C. (2001). *Using IT to enhance home-school links: An evaluation of current practice in England*. Annersley, Notts, UK: DfES.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Willis, L.-D. (2013). *Parent-teacher engagement: A coteaching and cogenerative dialoguing approach*. (Unpublished doctoral dissertation), Queensland University of Technology, Brisbane, Australia.
- Willis, L.-D. (2016). Exploring cogenerativity for developing a coteaching community of practice in a parent-teacher engagement project. *International Journal of Educational Research*, 80,124-133. DOI: <http://dx.doi.org/10.1016/j.ijer.2016.08.009>
- Willis, L.-D., Povey, J., Hodges, J., Carroll, A., & Pedde, C. (2018). *Parent engagement in schools: Summary qualitative findings*. Retrieved from <https://issr.uq.edu.au/parent-engagement-schools>