

Chapter 1

Is There Recess on Mars? Developing a Sense of Belonging in Online Learning

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ABSTRACT

The pandemic of 2019 created a multitude of challenges for teachers and students alike. The urgency with which education was forced to transition to a fully online delivery paradigm necessitated a triage and curate process to decide where efforts were to be placed. Teachers, forced to move quickly, leveraged existing research in designing their courses and activities. However, little research exists concerning how to meaningfully create online learning environments for K-12 students. This chapter explores the importance of recess, where children have free-play, self-constructed interactions essential for developing a sense of belonging. Through exploring the sense of belonging construct in the context of how it is formed, its importance for developing social skills, and the connection between a sense of belonging and successful online learning, the authors present critical gaps in research and suggest directions for research.

INTRODUCTION

Ernie loved school. Ok, maybe not all of third grade, but he really enjoyed being with his friends as they played during recess. When one of them did well in kick-ball or four-square, the others yelled and cheered. They were not just there for him in the good times, either. He remembered when his mom was really sick and how his circle of friends helped him stay hopeful for her recovery. Having a tight-knit group of friends even helped him doing school stuff. History is not his best subject but working with his friends on the big project really helped him learn about the pyramids as well as to better understand

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how to make sense of history in general. He felt safe in his community to show that he did not know something and to ask for help.

The time spent at school consumes a significant portion of most students' days and provides the primary avenue for interaction with peers. Through developing an awareness of how they fit in with others and of how their actions impact the relationships they have with their peer group, children develop a *sense of belonging* (Hagerty et al., 1992; Lambert et al., 2013; St-Amand et al., 2017). This sense of belonging is what gave Ernie comfort and support as he navigated the oft-times challenging world of third grade.

In March 2020, the need for developing knowledge and understanding for teaching and learning in an online context increased exponentially when the Center for Disease Control (CDC) announced that the world-wide COVID-19 infection rate indicated the existence of a pandemic. As a response to this announcement and the CDC recommendations, education transitioned from a face-to-face environment to one where distance learning was the sole delivery method. In one broad stroke, it was as if all the students in the world were magically teleported to Mars, where everyone lived in their own isolating bubble, cut off from the world they knew. For Ernie, it was like he was transported to Mars with all his friends, but it was impossible for them to be together at all, much less to hang out during recess like they were used to doing. Even though they saw each other every day during the Zoom based classes, he never felt so alone. Not being able to see his teacher, be in the familiar classroom surroundings, or even eat the terrible cafeteria food at lunch just added to his sense of isolation. All the video classes did was to remind him of how much he missed recess and being with his friends. That sense of belonging Ernie felt when he was with his friends was gone and Ernie felt like he was out in space, alone in a strange and potentially hostile environment.

For elementary students in particular, the shift to online classes was a trying experience. Being deprived of the ability to physically interact with their peer groups took away one of the primary avenues through which they learned how to be social beings. As immature learners, children do not have the emotional resources needed to be self-regulated enough to navigate online learning alone. Their success (or more often failure) depends on the amount of support they can get from both the teacher and their peer group. Part of this support comes from the aforementioned sense of belonging and originates in peer group interactions. Other support comes from the teacher, who, through directed actions, has a substantial impact on academic success. As well-meaning and proactive a teacher may be, the fact that student-teacher interactions are constructed and framed by the teacher mean that these interactions are ineffective and possibly counter-productive in helping children develop peer-based social skills. This ineffectiveness results in a schism, where students might be able to learn how to academically engage through instructor actions, but they will be challenged to develop the kinds of social skills that come from child constructed and directed activities.

This chapter unpacks several concepts and constructs to more deeply explore what a sense of belonging means to children and how this belonging is integrated into and frames their online school experiences. The authors begin by borrowing from health science literature in describing a sense of belonging. Following this background development, the authors again return to health science literature to explore the social lives of children, how and where they interact, and how they develop social skills. Included in this discussion is the impact of family on a child's sense of belonging. After this, the transition to a sense of belonging in an academic context (sense of belonging at school) is described, including a differentiation of a sense of belonging from social presence. Finally, the authors suggest best practices for helping students develop a sense of belonging in an online environment.

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To investigate the impact of moving to an online learning context on the development of a sense of belonging for children and what it means in terms of academic success, this chapter focuses on: 1) what a sense of belonging is and how students develop a sense of belonging, 2) importance of developing a sense of belonging as a precursor to successful distance learning, 3) the challenges of K-12 online education for creating spaces where students can develop a sense of belonging, and 4) suggestions for helping online students develop a sense of belonging.

SENSE OF BELONGING

A sense of belonging is about feeling included and valued. Hagerty et al., (1992) extending the work of Anant (1966), described a sense of belonging as “a personal involvement in a social system so that the persons feel themselves to be an indispensable and integral part of the system” (p. 170). Hagerty detailed two dimensions of sense of belonging: (1) valued involvement: the experience of feeling valued, needed, and accepted; and (2) fit as the persons’ perceptions that their characteristics articulate with or complement the system or environment. Building on the idea of *person-ness* (St-Amand et al., 2017), Sung & Mayer (2012) found that the concept that a sense of belonging centers on friendship, group commitment, and group caring.

Borrowing from health care research, a sense of belonging can be effectively characterized as having five elements: 1) subjectivity, 2) groundedness, 3) reciprocity, 4) dynamism, and 5) self-determination (Mahar et al., 2013). In this construct, these five elements are intertwined to create a sense of belonging. The first element, *subjectivity* reflects how a sense of belonging is unique to an individual, where even though each member feels part of a group or groups, how membership is realized is particular to each individual. *Groundedness* refers to the need to belong to something. Here, groundedness suggests the requirement for a referent group for belonging to, as an anchor for the individual feelings described by the subjectivity element. *Reciprocity* describes an important element, the sense of relatedness shared by the individual and the referent group(s). This relatedness goes beyond identifying group member characteristics to include shared experiences, understandings, and beliefs, all necessary in cementing a person’s feelings of connectedness and creating a sense of belonging. *Dynamism* focuses on contexts, both social and physical, that have an impact on a person’s sense of belonging. This element describes the interplay between enablers and barriers that mediate the development of a sense of belonging. The effects of these factors may be transitory or permanent. The final element, *self-determination*, describes the right of individuals to select how they interact with members of the referent group. This idea of choice suggests that individuals have control over which referent group they belong to and the ability to create meaningfully reciprocal relationships, the foundation for a sense of belonging. Individuals who feel powerless to belong due to factors associated with the dynamism element, but otherwise have the necessary identifying characteristic for referent group membership, may never achieve a satisfying sense of belonging.

THE IMPORTANCE OF RECESS IN DEVELOPING A SENSE OF BELONGING

Children spend the majority of their time in an adult run world and have little opportunity to interact in spaces of their own making. Giving children opportunities to create their own activities is an important

component of developing a sense of belonging. Framing their work with the lens of the cognitive immaturity hypothesis (Bjorklund & Green, 1992), Pellegrini investigated the role recess plays in children's cognitive performance (Pellegrini & Bjorklund, 1997; Pellegrini & Bohn, 2005). The cognitive immaturity hypothesis posits that rather than being a hindrance, children's propensity to be unrealistically confident in their cognitive abilities and social status is part of learning new skills and behaviors. It is this confidence allows children to persist with high expectations of success in the face of failure, leading to self-perceived competence that helps in learning complicated skills and strategies.

Beyond learning new skills, the point of view of the cognitive immaturity hypothesis suggests that during social play, children often enact roles and behaviors that are, at some level, not attainable in real life. Building on the idea that children's social skills increase as they enact different social roles, Pellegrini and Bohn (2005) found that in the process of these interactions, children learn to take other children's "perspectives, comprehend and produce social signals, and inhibit their aggressions" (p. 14). They concluded that the free play, child-directed exchanges most common during recess are significant in fostering cognitive performance and more general adjustment to school. The importance of free, unstructured play was reinforced through the work of the American Academy of Pediatrics, where they describe peer interactions during recess as supporting communication, cooperation, and problem solving, complementing the classroom experience. They concluded that unstructured play gives children the opportunity to "develop important social and emotional skills, essential to a well-rounded education" (Ramstetter & Murray, 2017, p. 18).

Not only are children's activities most often adult driven, the spaces in which children exist are also adult created and controlled. Recalling Mahar's five elements of a sense of belonging, *dynamism*, or the context in which children are interacting, is an important driver for developing a sense of belonging. The playground is a combination of adult and child mediated spaces. Rasmussen (2004) describes this distinction as *places for children* and *children's places*. Playgrounds, with their adult designed structures and adult designed uses, are *places for children*, where the target audience is children, but the space is designed and facilitated by adults. Even though these spaces are designed by adults for the use of children in ways determined by adults, children will often discover or create their own spaces within these larger spaces. These child created spaces are *children's places*, created and facilitated by children for their own, self-directed purposes. Even though teachers plan recess games and often use recess as an extension of the classroom, children will find unintended spaces and create their own micro-worlds where they can act out events and situations of their own making. These discovered spaces are where children do the work of building social skills through self-guided play activities.

Using this conception of a sense of belonging as a lens can bring understanding to Ernie's experiences with social isolation. When quarantining and social distancing policies were introduced, Ernie's world was upended. It did not take him long to realize that he probably was not going to be able to play games with his friends for a long time. While he missed doing some of the school related stuff, it was recess time with his friends that he missed the most. In his new Mars like virtual learning life, the isolating context dramatically affected the dynamism component of his sense of belonging and became the driving force in determining his feelings of connectedness. Rather than having social interactions with his peers, his teacher tried to get students to work together in the Zoom classes. However, Ernie was often grouped with classmates he did not know that well and did not feel connected with them. On top of that, Ernie felt like he never got to just do stuff. It seemed to him like everything was going to be graded, even how well he worked with his group mates. He lost all decision making power in how he engaged with his friends and other classmates, both in and out of school. The much more restrictive

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environment in which he found himself all but eliminated his self-determination, the ability for choosing how he engaged with his social group. This increase in the influence of the context and the reduction of subjectivity and self-determination put Ernie in danger of losing that sense of belonging he felt when he was able to be with his social group during recess and after school.

The emerging themes around a sense of belonging suggest that it is a multifaceted, complex feeling governed by the position and relationships one has with a community, both in terms of individual relationships and with the group as a whole. This acceptance by the group along with the social capital of the individual together create the foundations for building a sense of belonging. The focus on the dynamic interplay between the actions of the individual and the actions of the group is at the heart of a sense of belonging. Living in a Mars like world of isolation changed how Ernie was able to be with his friends and impacted the supportive relationships he had with his teacher and the other students in his class. The change in context eliminated a critical component needed for Ernie to develop a sense of belonging. Moving to a digital environment meant Ernie was going to have to develop his social group all over again, without being able to physically be with anyone. His world was even more dominated by adult created spaces and activities and he was going to have to rely on his teachers for help in creating the communities needed for learning how to be a social being. This reliance on his teacher and other aspects of a school environment points to the need to contextualize a sense of belonging in an academic context. Having a conception of what a sense of belonging in an academic environment encompasses provides a foundation for understanding the challenges faced by the Ernie's of the world.

A SENSE OF BELONGING AT SCHOOL

The nature of K-12 classrooms and students present unique challenges for effective distance learning. Student success in a distance learning environment requires students to be highly self-regulated and motivated (Garrison et al., 1999; Garrison & Cleveland-Innes, 2005). However, younger students often have not sufficiently matured to have the skills to navigate the distance learning environment without support. While literature describes children as having the potential to learn how to initiate, cease, and modulate behaviors with support from cultural and social models (Post et al., 2006), they have not reached the developmental level of older, more mature learners. Combining the need to form productive relationships as a foundational skill required for developing a community of learners that supports meaningful discourse (Kahn et al., 2017; Oh et al., 2018) with the positively correlated relationship between effective communication and increased social cooperation and social independence (Atabey, 2018), implies that children, with their lack of maturity, are a work in progress as it comes to transitioning to a distance model of school (Niess & Gillow-Wiles, 2013; Bolliger & Martin, 2018; Kinsel et al., 2005).

Conceptualizing a sense of belonging as an essential component of academic success grew from ideas around student involvement, characterized as the amount of “physical and psychological energy a student devotes to the academic experience” (Astin, 1984, p. 297). Astin's work combined the Freudian belief that people invest psychological energy in objects and persons outside themselves with what learning theorists refer to as *vigilance* or *time-on-task* to describe the relationship between involvement and academic success. This interweaving of student energy investment and persistence grew into a more encompassing concept described as an academic sense of belonging. As this idea evolved, the connection between a sense of belonging and student academic success became more apparent, detailing how a students' experience of acceptance impacts their perceptions and behaviors (Osterman, 2000).

A sense of belonging being intimately connected with student academic success begs the question of how to think about a sense of belonging as it applies to teaching and learning. One answer is to present a *sense of belonging at school* that is contextualized to an academic environment. Goodenow (1993) described a sense of belonging at school as

being accepted, valued, encouraged, and included by teachers and peers in the academic classroom, and of feeling oneself to be an importance part of the life and activity of the class. More than simple perceived liking or warmth, it also involves support and respect for personal autonomy and for the student as an individual. (p. 23)

Other researchers have focused on other aspects when characterizing a sense of belonging at school. Recall how Ernie felt about being part of a friend group. The critical nature of friend groups was explored when St-Amand et al. (2017) focused on social relationships and found that student friendships were an essential component of belonging.

The critical distinction between young children developing a personal, general sense of belonging and developing a sense of belonging at school lies in the underlying goals of each. In the process of developing a personal sense of belonging, a child learns emotional and social skills, builds relationships, and begins to create an understanding of how to navigate a complex world. On the other hand, building a sense of belonging at school is much more about learning how to work with others towards a common goal through developing a community identity and membership. In this case, while personal growth and development is desired, it is not the primary outcome.

While this definition preserves the aspects of feeling an important part of the community, several critical distinctions require more research and thought. The distinction between a sense of belonging at school and a more general personal sense of belonging results from contextualizing the development of the relationships that drive a sense of belonging. Returning to the five elements of a sense of belonging presented by Mahar et al. (2013) discussed earlier, several elements are no longer under the control of the individual. In a sense of belonging at school, the ways students engage with the group are no longer individual, students cannot choose their desired referent group or how they interact with the group, and the contexts are predefined and highly structured. These differences call in to question the characterization of the sense of belonging at school as a sense of belonging in the more traditional sense. A path to understanding for resolving these apparent distinctions might lie in that, in an online context, there is alignment between the themes of a sense of belonging at school and social presence (Garrison et al., 1999), with the distinction being a matter of emphasis more than focusing on different aspects of community identity development.

SOCIAL PRESENCE AND ONLINE SENSE OF BELONGING AT SCHOOL

The Community of Inquiry (CoI) construct, introduced by Garrison et al. (1999), identified three interrelated concepts (social presence, cognitive presence, teaching presence), describing the interplay between them to characterize the online educational learning experience. In the CoI construct, social presence is the degree to which participants in an online community feel affectively connected to one another. Developing and supporting social presence leads to meaningful community member participation, the development and support of a community of learners, and educational experiences that result

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in meaningful learning (Garrison & Cleveland-Innes, 2005; Hill et al., 2009; Kinsel et al., 2005; Swan, & Shih 2005).

As knowledge around online learning evolved, other researchers began to investigate CoI and develop their own conceptions of social presence. To bring a sense of consistency to how social presence is conceptualized in literature, Lowenthal and Snelson, (2017) used a literature review process to investigate how researchers define social presence and how that definition has evolved.

In general, these definitions all revolve around one or more of the following elements:

- Being there
 - the degree of salience between two communicators
- Being real
 - the degree to which a person is perceived as ‘real’ in mediated communications
- Projecting
 - the ability to project oneself socially and effectively in a community of inquiry
- Connecting
 - the degree of feeling and reaction of being connected on computer mediated communications to another entity
- Belonging
 - a student’s sense of being in and belonging in a course and the ability to interact with other students and an instructor. (p. 3)

The thrust of social presence is to support individuals as they work to be seen as authentic group members. This relationship is much like the idea of identity or what it means to be a “certain kind of person” (Gee, 2001, p. 100) in terms of how to think, act and speak as a member of a group. The focus on relationships an individual has with other group members and how this relationship affords individual learning is at the heart of social presence. Looking at an online student sense of belonging at school from an identity perspective, Garrison et al. (2004) described several expectations beyond those that are more typically a part of being an effective online learner. In addition to technological ability, distance learners need to be comfortable with new modes of communication and have increased levels of self-direction, self-regulation, and self-motivation. Taking role identity adjustment as being “acquired in, and facilitated by, the online community” (Garrison et al., 2004, p. 65), the iterative comparison of one’s own behavior to others is core to role identity adjustment.

In the main, literature around an online sense of belonging at school has focused on extending the social presence construct. As related as they are, a sense of belonging and a social presence are fundamentally different. An important distinction between a sense of belonging and social presence centers on what is at the root of each. A sense of belonging is all about finding a place in a community where one feels both a fully accepted member of a community as well as being supported and valued by that community. It is this *Reciprocity* element, or how the individual and the community are intertwined, that forms the basis for developing important social skills and social capital, where actions on the part of the individual elicit responses from the community that in turn guide and inform future member actions. This iterative action/reaction cycle creates a pathway for community membership building reciprocal trust and a sense of intimacy that provide meaning and perceptions of value.

This focus is in contrast with social presence, where the desired endpoint is having group members recognize the ‘realness’ of an individual in a computer mediated context in such a way that relationships

supporting a community of inquiry are made possible. In social presence, the focus is not so much on developing deep relationships where community members find an enhanced meaning in life, as it is on transcending the inherent limits of technology mediated communications. In the social presence construct, trust, value, and support all have importance, but if one is not seen as a *real person*, these relationship elements are very difficult to foster. This focus can be seen in how researchers view social presence as presented earlier. Three of the five defining elements are based on one's ability to be seen as real and the ability to project that realness in a community of inquiry.

Another distinction between the two constructs is in how they are developed. For the most part, a sense of belonging has its formative roots in unstructured peer group activities, situated in informally found or created spaces. A sense of belonging grows out of individually driven interactions where relationships are negotiated, behaviors are trialed, and bonds are made and broken. As people engage with others in this context, they are finding their place in a group where they share common experiences, thinking, and beliefs (Healy & Richardson, 2017; Mahar et al., 2013; Sedgwick & Yonge, 2008). The process of developing a sense of belonging is most effectively driven by participants. In children, this sense of belonging is most often and most effectively developed when children are in self-constructed spaces and are engaged in self-constructed activities. Adult interaction shifts the locus of control from child participant to outside facilitator, resulting in a feeling of losing ownership and relevance on the part of the children (Ballam & Cosgriff, 2018; Harrison, 2018; Pellegrini & Bohn, 2005). The overarching theme from this line of research is that a sense of belonging comes from iterative group/individual interactions where the difficult social cognitive work necessary to sustain peer interaction is done.

In comparison, social presence is developed through targeted actions on the part of instructors who guide students through activities where the students have opportunities to meaningfully engage with each other and with course content. The dominant theme from best practices literature is that social presence development is primarily the result of purposeful instructor actions, designed to help students see others as real people and to develop useful student-student, student-instructor, and student-content relationships (Aldheleai et al., 2020; Dikkers et al., 2013; Garrison et al., 2010; Lowenthal & Snelson, 2017; Oh et al., 2018; Whiteside, 2015). Setting role identity adjustment as part of online community membership, Garrison and Cleveland-Innes (2005) place deliberate actions on the part of instructors as an essential component for students to transition into effective distance learners. Effective instructor actions that lead to student social presence center on managing student expectations, asking for feedback, and being friendly and empathic (Aldheleai et al., 2020; Valenzuela et al., 2013).

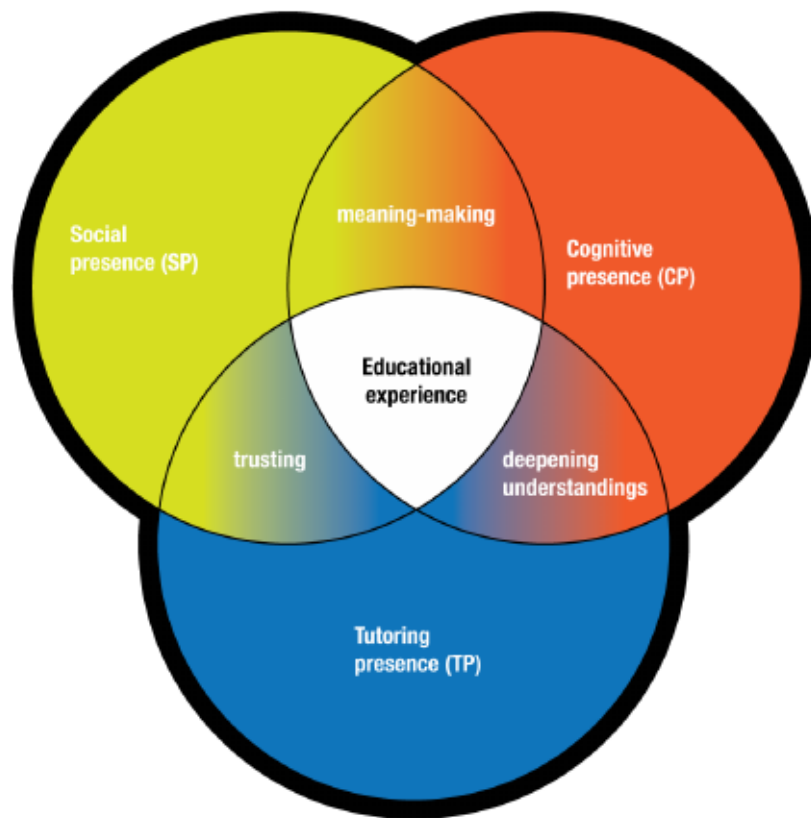
In spite of these fundamental differences, there are similarities between an online sense of belonging at school and social presence. In general, both have elements of group membership development and identity construction. Additionally, just as in developing a social presence, developing an online sense of belonging at school revolves around the actions of the instructor and the relationships with students these actions foster (Peacock et al., 2020). Discussing the importance of the actions of instructors in supporting an online sense of belonging at school (Chiu et al., 2016) suggest that while classmate relationships are linked to students' sense of belonging, instructor elements such as teacher-student relationships and teacher support have the greatest mediating impact.

This tension between an online sense of belonging at school and social presence described the uncomfortable Ernie felt as his teachers tried so hard to make school fun and engaging. It seemed to him like even though he had lots of group engagement, it did not fill the loneliness he was feeling. In every interaction there seemed like there was a right answer for everything he did. He did not have a chance to just try and do things with the same kind of freedom he had when he was able to have recess.

A SENSE OF BELONGING AT SCHOOL AND ONLINE LEARNING SUCCESS

To investigate the importance of a sense of belonging at school has for successful online learning, Peacock and Cowan (2016) re-envisioned the three presences of the CoI construct; social, cognitive, and teaching, to better represent elements of a sense of belonging at school and the relationships between the elements. In their conception, Peacock and Cowan rename teaching presence as tutoring presence to be more compatible with student-centered learning (see Figure 1).

Figure 1. An adapted version of the CoI framework (Peacock & Cowan, 2016)



Here, they define *tutor* as “a staff member appointed to both support the creating planning of a course before learning commences, and in the facilitation of learning during the course” (Peacock & Cowan, 2019, p.68). The role of the tutor is to facilitate student engagement without directing specific actions taken by learners. This focus on student engagement without active direction is the primary realignment of the CoI construct that reflects an essential element of sense of belonging development understanding.

Retaining the underlying elements of social and cognitive presence that are part of the CoI construct, Peacock and Cowan (2019) describe tutoring presences as the support given by a “caring, trusted and engaged tutor” (p. 71). In their version, the goal of a tutor is to help create and enhance the development

of interpersonal relationships and a sense of belonging through the design and facilitation of social and cognitive presences. Their work suggests that it is the trusting relationship between students and tutors that is at the heart of promoting a sense of belonging in an online learning environment. Further work by Peacock et al., (2020) identified tutors as being pivotal to the development of students' sense of belonging, where tutors were thought of as "the glue that brings it together" (p. 25).

Just as in the CoI construct, a sense of belonging at school has been shown to be an important component to online learning success. In an exploration of the importance of a sense of belonging at school for online learners, Peacock et al. (2020) identified three overarching themes:

- interaction/engagement - learner involvement and interaction;
- a culture of learning - sharing the challenges and anxieties as learners;
- and support - peer interaction assisting in resolving learning difficulties.

They found that when these themes were attended to, students felt a stronger sense of belonging that translated to more meaningful group and peer interactions, and hence greater student academic achievement. This result was in alignment with earlier studies showing that an online environment where participants share common goals and feel that their ideas and views are welcomed brings about high quality online education (Chiu et al., 2016; Hagerty et al., 2002; Heinisch, 2018; O'Keefe, 2013; Post et al., 2006). Much like social presence in a CoI, developing a sense of belonging at school supports online learning primarily through creating a structured space where students and tutors are able to collectively and collaboratively negotiate successful pathways leading to deep understanding.

DISCUSSION

This section presents a discussion of the challenges facing developing a sense of belonging for younger children in an online environment. Like putting together a jigsaw puzzle, the authors assembled concepts and ideas from a variety of areas of research to build a picture of a children's sense of belonging. This construct illustrates how shifting to online learning creates challenges for children and their social development that may not be sufficiently negotiated by applying current understanding.

Elementary Students and an Online Sense of Belonging

When Ernie ended up on what felt like Mars, he lost access to his referent group as well as to the children's places he and his friend had constructed. This loss made it all but impossible for Ernie to feel connected with his peers in the same ways as when they were all together in their familiar environment. Online classes gave him access to help, but not always when or from whom he needed it. Additionally, he almost never got to have his teacher's full attention. With a class of 30 students, Ernie's teacher could not individually check in with each student the way he did in the classroom. Although the teacher used the breakout room feature of Zoom, Ernie often did not know what he was supposed to be doing or how to ask for help. The other students in the breakout room were usually not very helpful and Ernie did not know them well enough to ask them for help without feeling stupid for not knowing.

When Ernie and all his friends felt like they were teleported to Mars, the teachers were under extraordinary pressure to make the transition to fully online teaching. Responding to the sense of urgency in the

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process, the focus was rightly put on content delivery, in which research has created a significant body of knowledge. While not forgotten, the more affective elements of an elementary level classroom, such as social development, were back-grounded to make space for meeting academic performance goals. Attempts to reconfigure social presence development understanding to serve as a beginning construct in developing a sense of belonging left out critical aspects of what it means to feel like one belongs to a community. The need for children to be together to develop social skills did not change when they could no longer be in a physical school setting.

Through the previous sections, the authors have established the nature of a sense of belonging, how younger children create and nurture their sense of belonging, and the nature of the world in which children live. Additionally, the authors have described current literature around a sense of belonging in an online learning environment and the importance of fostering a sense of belonging at school. Synthesizing these ideas, it becomes apparent that the importance of a sense of belonging in both personal development and online academic success, combined with the relocation of classrooms from a face-to-face to a virtual environment creates challenges for younger students such as those in K-12 grades.

With few exceptions, research into the importance of developing a sense of belonging in an online learning context leverages ideas and concepts coming from some form of the CoI construct and is situated in college or adult learning. In particular, the thinking that a sense of belonging at school is fostered by purposeful, directive actions on the part of the instructor or tutor who drives most best practices recommendations. Additionally, and just as important for the thrust of this chapter, the majority of this research in question has been situated in a post-secondary context, with college level or adult learners as study populations.

The focus on more mature learners comes with a subtle assumption of a sufficient level of self-regulation and motivation to navigate online learning. These assumptions hide the challenges younger children face when they are put into cognitively challenging situations without their accustomed support groups. Additionally, this focus on older students assumes a certain developmental level of social skills and a personal sense of belonging. From this perspective, with already having a referent group membership, the online sense of belonging at school construct is sufficient for older students to feel connected with their peers and the tutor. However, when applied to younger K-12 children, this perspective omits the fact that this group is still learning the necessary social skills for building a personal sense of belonging.

The Open Question

Without reducing the importance of that research, the authors suggest that an important question has been overlooked. Namely, is there enough underlying commonality between a sense of belonging in the general sense and an online sense of belonging at school for younger children to develop important social skills that come from free-form, play-based interactions? A sense of belonging has, at its root, an element of an individually constructed set of relationships and world view. Transitioning the environment to a virtual space, controlled by others, removes a significant portion of that individuality and shifts the locus of control to the instructor. If one accepts the importance of children developing a sense of belonging through self-directed peer interactions, then the way a sense of belonging at school in online learning is described presents challenges. Namely, how can the self-directed, free-from play experiences be replicated in an online environment, the experiences that are critical for younger students in developing a sense of belonging, both in general and at school?

When K-12 education transitioned to being fully online, quite a bit of the learning experience was forced to take a different form. Some of the face-to-face elements of these experiences had online analogues that retained the essential components. Other elements were enhanced by the integration of technologies. Finally, some elements had no online representations and were lost all together. This chapter presents the idea that recess is an element of the learning experience that has no online representation and thus was a casualty of the pandemic. The trend to marginalize recess as important in the face of increasing budget reductions and community demand for higher academic standards meant that losing recess was not much of a concern (Bauml et al., 2020).

The importance of child-directed free play in social development, combined with the apparent impossibility of creating these play experiences in online education begs the question of where to go from here. How do educators create online experiences where children can create their own spaces and interactions in such ways as to support their developing social skills and a true sense of belonging? Emerging technologies might prove useful, but the underlying constraints of digitally mediated interactions put up large roadblocks.

Possible Best Practices for Developing an Online Sense of Belonging at School

St-Amand et al. (2017) presented a series of recommendations for building a sense of belonging that leads to student academic success. These recommendations suggest that teachers learn to decode and give importance to student's emotional well-being, make certain that each student has a role in a team and feels accepted, and give students opportunities to find and develop common interests with their team/group members in the classroom. A distinguishing element of the work of St-Amand et al. (2017) lay in the recommendations that focus on student interactions outside the classroom or in ways that are not strictly academically focused. For example, they suggest that students be encouraged to participate in extra-curricular activities where they can find common interests outside the classroom. More to the focus of this chapter, St-Amand et al. recommends social competence programs early in a students' school career. These programs would include learning cooperative play skills, language and communication skills, emotional regulation, and aggression control. Recalling the self-directed play activities discussed previously concerning recess, social competence programs promote the same kinds of social development learning that happens organically during unstructured recess play time.

There is little room in the online school day for a virtual recess analogue, making outside of school time an important resource where students and their families might work to build social confidence and interpersonal relationship skills. Similar to Peacock and Cowan's *tutor*, other people in a child's life can play an important part in helping develop a sense of belonging. Through acting as a mentor, or someone in the capacity of a confidant, guide, or counselor, family members can actively provide support to help the child develop social skills and learn how to navigate social interactions. When the mentor really cares for and looks out for the well-being of the child, the latter is more inclined to open up and accept a relationship based on trust (Drolet & Arcand, 2013). This trust relationship is similar to that formed in peer groups through processes discussed earlier and serves a similar purpose. It is in these trust relationships where children can experiment with behaviors with minimal consequences.

In all cases, best practices for helping children develop the social skills necessary for building a sense of belonging recognize that every interaction with adults and peers is contributive. Teachers, parents, and

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peers are the referent groups with which a child forms close relationships. These relationships are shaping factors in how children learn to interact with and form groups with other people (Uslu & Gizir, 2017).

Ernie really missed his friends. He missed being able to be his authentic self and he missed doing what he wanted instead of what others wanted. For all that he was longing for, he did find happiness in the extra attention he was receiving from his family. He knew it was because of being stuck on Mars, but that did not matter to him. His dad spent time with him doing stuff his dad liked and he included him in new activities, like baking cookies. He seemed happy to have Ernie's help and did not get mad with spilling the flour. He just helped clean it up and laughed at the flour in his hair. Additionally, his dad joined Ernie in activities he liked. Playing ball, exploring outside, building forts and riding bikes with his dad helped Ernie see his dad as a trusted companion, with whom he could discuss important matters. His mom was doing the same things, having Ernie help with the things she was doing, like fixing the car and spending time doing what Ernie liked. Ernie did not know much about how cars worked, but he really liked how his mom spent time teaching him and did not get mad when he got bored and wanted to go do something else. She also helped him when he was having trouble putting together a model of the Millennium Falcon. She did not take over; she just did what he asked her to do. These interactions with his parents made Ernie feel supported, valued, and confident, much like how he felt when he was with his friends. While being with his family would never replace being with his friends, it did help him feel less isolated and alone.

FUTURE RESEARCH

At the time this chapter was written, there has been some relief in the impacts of the pandemic. People are getting vaccinated, businesses are finding ways to re-open, and most importantly, schools are moving back to in-class learning. This return to a new normal does not make the discussion around an online sense of belonging moot. Even though students are returning to the classroom and the playground, there remains a need for enhancing and extending understanding of the importance of a sense of belonging and the need for children to feel like they are part of a caring, supportive community, where their thoughts matter and they have value. The ideas and constructs presented in this chapter provide a foundational understanding of how children grow and learn, both socially and academically. This underpinning can provide a base upon which future research might build knowledge around ways to construct virtual spaces where children have the freedom to do the work necessary to create social skills that help them be successful and find meaning throughout their lives.

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KEY TERMS AND DEFINITIONS

Community of Inquiry: A group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding.

Deepening Understandings: The influence linking tutor presence and cognitive presence. The worthwhile deepening of the accumulating understandings that are developing in Social Presence and Cognitive Presence. Such deepening covers the subject matter in hand, and also the ongoing use and development of the abilities, cognitive and interpersonal, that facilitate such learning, individually and within the community.

Influences: The interwoven areas in the modified Community of Inquiry model that serve to combine presences in a community's purposeful pursuit of the desired educational experience.

Meaning-Making: The influence linking social presence and cognitive presence, the monitoring of co-cognition, and learners' joint management of opportunities for and impediments to cognition, supported through social communications online.

Referent Group: The group to which a person belongs when developing a sense of belonging. In education, referent groups might include schools or institutes of higher learning, peer groups, classrooms or an entire campus community.

Sense of Belonging: The psychological feeling of belonging or connectedness to a social, spatial, cultural, professional, or other type of group or a community.

Trusting: The influence linking tutor presence and social presence. The foundation upon which the key behaviors are founded is trust among the community and with the tutor.

Tutor Presence: The support given by a caring, trusted and engaged tutor in an online learning environment.