# Peer Relationships in the Online Classroom:

# An Investigation of Strategies for Supporting K-12 ELLs Online

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## Introduction

The fact that peer relationships in the classroom positively affect learning outcomes is well known to educational researchers (Barr, 2016). As online education becomes an increasingly available and attractive option for learners, there is a growing body of research on the impact of positive peer relationships in the online setting. However, the majority of this research is with adults, with a dearth of research into the effects of peer relationships on K-12 online learners, let alone the most effective strategies for fostering those relationships. Even less is known about the benefits and challenges associated with building peer relationships for English language learners (ELLs) online.

This topic is especially relevant in the wake of the COVID-19 pandemic, which the World Economic Forum says has had a "staggering impact" on global education, resulting in the largest online movement in the history of education (Li & Lalani, 2020). With such a sudden surge in online education, it is crucial that educators are equipped to help their students transition to and succeed in the online setting, and this includes knowing how to build a sense of community by fostering student-to-student relationships. English language learners may especially need support in the online setting, and yet little is known about how to support them in building relationships with their peers.

I became interested in this topic in my work with an online English as a Foreign Language (EFL) company that strongly encourages teachers to facilitate peer-to-peer interactions. While the company claims that peer-to-peer interactions allow learners to take control of their learning and converse in a natural manner, some of my colleagues questioned these claims, suggesting that communicating with a native-speaking teacher would be a more beneficial use of valuable class time. Curious about what the research says on this topic, I set out to investigate the value of peer interactions and formulated the following research questions:

1. How do peer relationships affect learning for K-12 ELL students in an online setting?

2. What instructional strategies are effective for fostering peer relationships for K-12 ELL students in an online setting?

This paper seeks to answer these questions and add to the small body of research on this topic. I will first examine the literature that already exists and then explain my own methodology and analysis of results, ending with recommendations for further research.

**Definitions**

Students' relationships with their peers have been studied in multiple contexts. They are a facet of classroom climate (Barr, 2016), cooperative learning (Troncale, 2002 and Dendup & Onthanee, 2020), a sense of belonging (Peacock et al., 2020), collaboration (Milheim, 2012), community (Rovai, 2003 and Sadera et al., 2009), and social-emotional learning (Durlak et al., 2011). Since peer relationships can be studied from a variety of different angles, it is important to define what they are before discussing them further. Roseth, Johnson, and Johnson helpfully define relationships in terms of "patterns of behavioural interaction occurring over time," which emphasises the history of those interactions over their quality (2008). Thus, friendship is one type of positive peer relationship, but peer relationships may also be understood simply as a sense of belonging to a peer group (Osterman, 2000).

## Literature Review

**The Importance of Peer Relationships**

There is a wealth of research on the benefits of positive peer relationships in the classroom. Most fundamentally, they satisfy the basic psychological need to feel a sense of belonging, which influences multiple dimensions of student behaviour (Osterman, 2000). Peer relationships are an essential step in Maslow's hierarchy of needs model, and Johnson & Johnson (1996) say that a strong community of learning and collaboration leads to greater self-esteem (as cited in Curtis and Lawson, 2001). This alone would be reason enough to promote relationships among students, but there is a plethora of other benefits as well.

Peer relationships are associated with increased learning outcomes (Sadera et al., 2009) in the areas of affective, cognitive, and self-regulated learning (Barr, 2016). They increase learner motivation (Borup et al., 2020), receptiveness to feedback (Milheim, 2012 and Rovai, 2003), and participation in class (Frisby & Martin, 2010, as cited in Barr, 2016). In fact, Fassinger found that undergraduate students' perceptions of peer friendliness are a greater influence on their decision to participate in class than their perceptions of the instructor (2000); we can assume that the same holds true for younger learners as well, but I hope that future research will investigate this further. Peer interactions promote the development of the "4Cs": communication, collaboration, creativity, and critical thinking (Borup et al., 2020) and of communicative competence (Han, 2015) and are therefore essential for preparing students for the 21st century. Peer relationships are associated with higher rates of course completion for adults (Sadera et al., 2009, and Tinto, 1993, as cited in Rovai, 2003) and probably lower drop-out rates for younger students (Rice, 2006), which may be useful information for EFL companies in their attempts to retain students. Similarly, peer relationships are associated with increased school satisfaction (Rosenfeld, Richman, & Bowman, 2000).

Peer relationships provide even greater benefits when they are fostered through cooperative learning techniques. Findings from a large number of studies show that cooperative learning strategies are more effective than traditional ones for student achievement (Slavin, 1981). This holds true for all types of learners: according to Kagan, "More than 500 researchers have concluded that CL produces gains across all content areas, all grade levels, and among all types of students including special needs, high achieving, gifted, urban, rural, and all ethnic and racial groups" (1999).

***The Importance of Peer Relationships for ELLs***

One might assume that peer interactions are less useful for English language learners and that class time would be better spent with the native-speaking instructor as the focus of interactions, but the benefits hold true for ELLs as well. Slavin states that "Higher achievement in

students who learn through cooperative learning is found across ability levels, grade levels and subject areas, including second language learning" (1986, as cited in Troncale, 2002). Echevarria, Vogt, and Short state that cooperative learning groups allow students to apply new linguistic knowledge, which is particularly important for ELLs (1999, as cited in Troncale, 2002). Han found a significant increase in learning outcomes in listening and speaking for adult EFL students using cooperative learning strategies (2015). Okyar & Ekşi found that undergraduate EFL students could be trained to give each other corrective feedback, which contributed significantly to learners' achievement (2019), and adult studies demonstrate that peer assistance can lead to learners using more target-like grammar in interactive tasks (Pinter, 2007). Pinter found some evidence that this may hold true for younger learners as well and that peer-to-peer interactive activities produced various benefits for 10-year-old ELLs with very low levels of English competence (2007). A study of 4th-grade ELLs in Bhutan found that extensive peer interaction improved the quality of their oral communication (Dendup & Onthanee, 2020).

However, Pinter notes that there is little research on peer-to-peer interactions in different age groups, especially in the EFL context - in other words, what specific strategies students can cope with and benefit from at different ages (Pinter, 2007). Her own peer learning study with 10-year-old EFL students in Hungary was very small (only two students), and while she found many benefits for these particular students, she notes that younger children may be less able to collaborate and may therefore receive less benefit from such activities (2007). A study by Li et al. of 1,676 Grade 6-8 students supports this assumption, finding that when students in the study were older, the positive influences of positive peer support on emotional engagement appeared stronger (2011). While the study did not target ELLs specifically, we may conclude that the same holds true of ELLs as well.

While peer-to-peer interactions come with many benefits for ELLs, interactions with the teacher must not be downplayed. In Li's *Principles of Effective English Language Learner Pedagogy*, Principle 8 includes the injunction "ELLs should communicate with teachers rather than solely with their English-speaking peers" (2013). Li underlines the importance of having a native-speaking

teacher act as a model. That this modelling should come from a teacher and not exclusively from native-speaking peers is explained by Krashen, who says that teachers and caretakers subconsciously modify their speech to make it comprehensible for ELLs (2009), which is especially important for those who are less proficient (Genesee et al., 2005, as cited by Li, 2013). Krashen also explains that output contributes to language learning only indirectly and that it is through comprehensible input that true language learning occurs (2009). Output, therefore, may be viewed as a by-product of peer-to-peer interactions for ELLs rather than a goal in-and-of-itself. A balance between teacher interactions and peer interactions is necessary, but exactly how to achieve this balance is not yet clear from the literature.

### *The Importance of Peer Relationships Online*

Distance education has been in use for over a century, but the vast majority of these courses relied on a one-way transmission of knowledge until the advent of the World Wide Web (Bates, 2005, and Sumner, 2000, as cited by Milheim, 2012). The Internet and new technologies have allowed distance education to become an interactive and collaborative experience (Milheim, 2012). Within this context, the importance of peer relationships in the online setting has been recognised (Milheim, 2012; Peacock et al., 2020; and Garrison & Cleveland-Innes, 2005, as cited in Sadera et al., 2009). In fact, peer relationships may be even more crucial in the online setting than in physical classrooms because of the potential alienation online students may feel (Peacock et al., 2020; Rice, 2006; Garrison & Cleveland-Innes, 2005; and McInnerney & Roberts, 2004, as cited in Sadera et al., 2009).

With this in mind, online instructors must educate themselves on how to facilitate positive peer relationships in the online setting. However, the majority of research in this area has been conducted with adult learners, with a significant lack of research on K-12 online learners. This is lamentable because, as Moore suggests, student-to-student interactions may be even more important for adolescents than adults (1989, cited by Borup et al., 2014). In their investigation of adolescent online learning environments, Borup et al. developed the Adolescent Community of

Engagement framework with the three components of teacher engagement, parent engagement, and peer engagement; they hypothesise that as all three types of engagement increase, students will become more engaged in their learning (2014). A study by Frid (2001) with online learners aged 7-12 found that when evidence of peer interaction was apparent, learners were more likely to persist with challenging problems (as cited in Rice, 2006). The Collaborative for Academic, Social, and Emotional Learning (CASEL), which produces evidence-based social-emotional learning resources, describes relationships as "a key to engagement and learning, and especially so at a time when young people may be feeling isolated [in a virtual environment]" (2020). The importance of peer relationships for K-12 students is also recognised in standards such as iNACOL's "National Standards for Quality Online Teaching" (2011b). In addition, the need for connection with their peers is something that students themselves recognise and want, as PDK International found in a recent poll of online high school students. (CASEL, 2020).

**Challenges of Fostering Peer Relationships Online**

While the importance of peer relationships for K-12 learners online is recognised, K-12 educators may lack the information and support necessary for fostering them. Jochems et al. describe two pitfalls teachers may experience in the online setting: first, teachers have a tendency to assume that social interactions will organically happen just because the environment makes them possible, and second, teachers tend to forget that social interaction encompasses all interactivity among group members, including off-task interactions (2002, as cited in Cruz and Kwinta, 2013). Teachers may also be unaware of how to create effective collaborative activities in the online setting. Stephens and Roberts found that university instructors most often attempted to modify assignments that were successful in traditional classroom settings, even though such assignments may not be as successful at engaging students with the content or with their peers when implemented online (2017). Cho and Cho cite seven sources to support their claim that not all online instructors are aware of how to promote interactions among students (2016). When Hughes, McLeod, Brown, Maeda, & Choi (2005) examined perceptions of students in an online high school

algebra class and of those in a face-to-face class, they found that students in the face-to-face class reported significantly higher cooperation, student cohesiveness, and involvement than the online students, while the online students perceived significantly higher teacher support (as cited in Rice, 2006). Recognising the challenges associated with fostering peer relationships virtually is necessary in order to overcome them.

Aside from limitations in teachers' knowledge, online learning environments come with some inherent challenges for implementing peer interactions. Curtis and Lawson point out that online interactions lack many of the non-verbal cues that we rely on in face-to-face communication (2001). Cruz and Kwinta also point out that the delays in asynchronous communication, which is where much online conversation occurs, may have disadvantages (2013). Cavanaugh et al. highlight an issue for children, who have fewer life experiences to help them construct meaning than adults have; scaffolding is, therefore, an essential component of virtual learning experiences for children (2004).

Even less is known about the challenges and benefits associated with fostering peer relationships online for English language learners. Researchers have found that ELLs of all ages in the K-12 range may experience a sense of isolation, which could affect their academic success (Loayza, 2017). We can assume that this holds true in the online setting as well, if not more so, and therefore it is especially important for online instructors to recognise and support the social-emotional needs of their ELL students.

## Strategies for Fostering Peer Relationships Online

We can now examine what the literature says about strategies for fostering peer relationships in the online setting. I will first discuss general principles that apply to all such strategies and then delve into some specific strategies that researchers have found effective.

### *Provide Clear Expectations*

Providing clear expectations for all aspects of peer interactions is critical for the success of the interactions. Quality Matters, a global organisation leading quality assurance in online learning

environments, recommends that teachers provide K-12 students with clear expectations for communicating with peers as well as which activities will be synchronous or asynchronous (2020). Stephens and Roberts say that establishing expectations for group activities will help university instructors to engage their students online, as well as providing choices in communication tools (2017), and we can assume that this is even more critical for K-12 students than adults. Milheim says that instructors must set goals and expectations for students' online presence (2012), which Borup et al. define as "the ability to convey oneself as real in computer mediated communication" (2014). Borup et al. say that in order to nurture a safe online environment for K-12 students, teachers should express specific behavioural requirements about how students communicate, including anti-cyber-bullying policies (2014). iNACOL recognises the need for establishing clear expectations for student participation, discussion posts (2011a), and appropriate online behaviour (2011b). Regardless of the type of interaction, clear guidelines on communication and expected outcomes will improve the interaction.

***Model Positive Interactions***

The second principle is that instructors play an important role not only as facilitators but as models of positive interactions. In Barr's discussion on creating a positive classroom climate, he underlines the importance of instructors modelling positive interactions and supportive behaviours (2016). Vonderwell & Zachariah say that it is crucial for instructors to encourage students to take part through monitoring patterns of participation (2005). Garrison et al. say that social presence will enhance teacher and peer modelling (2000, as cited in Borup et al., 2014), and Palloff and Pratt (2005) suggest that the instructor participate as an equal member of the learning community (as cited in Milheim, 2012). When instructors model desired behaviours, students will be more likely to follow their lead.

***Favour Synchronous over Asynchronous Interactions***

While online courses seem to use asynchronous discussion board activities as the default method of promoting peer interactions, the research shows that synchronous interactions are much

more effective. This holds true whether the synchronous interactions occur in or out of specific class times. Peterson et al. found that undergraduate students in asynchronous discussion groups reported higher levels of individualism, competition, and negative affect compared to students in the synchronous groups, who reported higher levels of cooperative perceptions, belonging, and positive emotions (2018). Interestingly, both the synchronous and asynchronous interactions that Peterson et al. analysed were chat log discussions, which suggests that visual or verbal cues are not vital to receive the relational benefits of synchronous interactions. In interviews conducted with students at a cyber high school, Borup et al. found that students preferred synchronous communication and described discussion board activities negatively, if at all (2020). PDK International's survey of American high school students also shows a desire for synchronous communication: in response to the open-ended question "What can your teachers and administrators do to make sure you feel connected to your classmates while you are not physically at school?" 21% of surveyees mentioned video chats in their responses, while only 6% said that video chats were an example of something their teachers were doing well (2020).

While there is a gap in the research on younger students, we can assume that the desirability of synchronous interactions grows for younger learners, particularly for those who have not yet developed writing and typing skills. This may be especially true for ELL students, who may be more developed in one strand of English than another (for example, an ELL may have stronger speaking than writing skills). It is therefore important for instructors to consider not only the age of their ELL students but the particular communicative skills that they possess and design interactive strategies that play to their strengths.

Many of the following strategies could be carried out either synchronously, such as through online breakout rooms, or asynchronously, such as through discussion forums. While synchronous activities may be more effective for fostering peer relationships, asynchronous interactions can still prove useful when synchronous interaction is not possible.

***Personal Sharing***

Research suggests that sharing about one's self can strengthen relationships with peers. Rovai recommends that university instructors encourage self-disclosure, which encourages reciprocation and can strengthen classroom community (2002). Barr says that sharing personal stories or experiences is an element of building student-to-student connectedness in higher education classrooms (2016). CASEL recommends that K-12 instructors build in time for their students to share experiences during virtual classes (2020). WIDA, an organisation that provides language development resources to support the academic success of multilingual learners, recommends that online students "Represent themselves with icons, avatars, flags or other symbols; share family images, videos or stories to help peers understand their unique linguistic and cultural perspective" (*Teaching Multilingual Learners Online,* 2020). Instructors can strengthen peer relationships by modelling and facilitating personal sharing amongst students.

***Collaborative Group Work***

Small group work (including paired work) is a technique favoured by researchers for fostering peer relationships online. Rovai recommends small group activities as a means of promoting a sense of community in the online higher education classroom, saying "Augmenting individual learning activities with small group activities promotes a sense of community by helping students make connections with each other" (2003). Chiang et al. say that when group activities are used, the quantity of peer interactions increases, and the quality of these interactions increases when higher-order thinking skills are used (2013, as cited in Jacobs & Seow, 2015). The value of group work online for K-12 learners is recognised by national standards as well. The International Society for Technology in Education (ISTE) emphasises the value of group work in its Global Collaborator standard: "Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints" (*ISTE Standards for Students*, n.d.). iNACOL includes collaborative group work in its standards for both online courses and online teaching (2011a and 2011b).

Of course, group work is a large concept that can encompass a vast number of activities. I will list some activities recommended by the literature, but first, it is worth noting a word of caution from Garrison et al, who say that "Regardless of the setting, collaboration requires a high level of student commitment and is best done once students have formed a sense of community with their peers" (2000, as cited in Borup et al., 2014). Jacobs and Seow support this claim by noting the importance of positive interdependence in cooperative learning groups: when students feel positively interdependent with their group mates, they are more likely to support each other and be motivated to learn (2015). Teachers may therefore want to focus on building a sense of community through other peer relationship-building strategies before diving into collaborative group work, otherwise, the benefits of the group work may be diminished.

Jacobs and Seow offer further considerations when implementing collaborative group work. They outline eight principles for utilising cooperative learning techniques online, including the need for each group member to have equal opportunities to participate while also remaining individually accountable (2015). They also caution that group work that does not align with cooperative learning principles will likely lead to less meaningful collaboration (2015). This becomes especially important in the online setting, as teachers may be less able to monitor group work to ensure quality interactions. In addition, when implementing communicative activities for ELLs, Courtney recommends that such activities be fun, meaningful, interactive, and routine (2020).

**Wikis**. Research into online higher education supports the use of wikis to foster peer relationships. Milheim recommends them as a means of encouraging student collaboration and a sense of community in the online classroom (2012). Numerous studies show that wikis may enhance student interactions as well as improve group collaboration and work quality (Chu et al., 2013; Donne, 2012; Nicole et al., 2015; Wei-Tsong & Zu-Hao, 2011; as cited in Stephens & Roberts, n.d.) and improve students' motivation, self-direction, and social skills (Chan et al., 2012, as cited in Stephens & Roberts, n.d.). While the research on wikis was conducted with adult learners, the same principle may apply for adolescents. Jacobs and Seow recommend Google Docs and similar cloud-

based tools, which can function similarly to wikis for collaborative projects (2015), and the relative simplicity may make such tools preferable for K-12 students.

**Blogs.** Research on peer relationships in higher education also supports the use of blogs. Agosto et al. found strong support for using them for peer-to-peer learning, saying that they help to support collaboration and community building (2013). Ellison and Wu found that when students compared their blog posts to those of their peers, their understanding of course concepts increased (2008). Further research should be conducted on the effectiveness of blogs for online K-12 students, especially ELLs.

### *Games*

There is a growing body of literature on the use of games and gamification in education (Ofosu-Ampong, 2020). Marzano notes that the "light competition" games stimulate is effective in increasing student engagement (2010). iNACOL recommends games as a means of engaging K-12 students online (2011a). While research should be done on effective strategies for implementing games in the online setting, we can assume that games will be as effective in the online classroom as they are in traditional classrooms.

### *Discussions*

iNACOL also recommends discussions as a means of actively engaging online K-12 students (2011a). Marzano supports the use of discussions and debates in the classroom as well, saying that "friendly controversy" can increase student engagement (2010). Perhaps more importantly, this seems to be something students themselves want: according to PDK International's recent survey of online high school students, 21% mentioned video chats and 19% mentioned group chats in response to the question "What can your teachers and administrators do to make sure you feel connected to your classmates while you are not physically at school?" (2020). In answer to the question "What do you feel you can do to make sure the students you work with feel connected to their classmates while they are not physically at school?" 43% of high school students (compared to 34% of teachers) mentioned guided group interaction (2020).

### *Peer Feedback*

Studies suggest that peer feedback is useful both for promoting peer relationships and improving academic outcomes. Jacobs and Seow say that involving peers in assessment can improve the effectiveness of cooperative learning groups (2015). Okyar and Ekşi recommend training learners to be corrective feedback providers, which allows them to take a more active role in the learning process rather than being passive receivers of instructor corrective feedback (2019); however, their work was conducted with university students. Pinter's study with two 10-year-old ELLs found that the students' grammar and vocabulary improved with verbal peer feedback throughout communicative activities (2007), but more research should be done on how to effectively structure peer feedback for K-12 ELLs in the online setting.

### Drawbacks of Peer Interactions Online

Of course, despite their many benefits, peer interactions are not without drawbacks that teachers should consider. High school cyber students interviewed by Borup et al. reported drawbacks that fell under the themes of distracting/discouraging, difficult communication, negative collaborative experiences, and (less so) bullying (2020). Rice points out that the text-based nature of cyberbullying may be especially harmful to students because they are able to reread the comments (2006, cited by Borup et al., 2014). Dawley et al. found a "high need" for training on cyber-bullying in their review of online teacher professional development (2010).

## Conclusions

Regardless of the specific strategies that instructors use, the literature shows that positive peer relationships are essential to the success of learners in the online classroom. That instructors play a pivotal role in supporting these relationships is also clear. Peer relationships may be especially important for the success of English language learners, although there is a gap in the research on how they affect online ELL students. More research should also be conducted on specific strategies for fostering peer relationships for online K-12 students and which strategies are effective for different ages.

# Methodology

## Introduction

This project has been undertaken in the form of action research. Action research is "a disciplined process of inquiry conducted *by* and *for* those taking the action," according to Richard Sagor, author of the book *Guiding School Improvement with Action Research* (2000). The ultimate goal of such a project is to take informed action based on research findings. Since the researchers are also the primary consumers of the findings, the relevance of action research is guaranteed, making it fitting for this project.

Action research for this project was conducted by means of a teacher survey consisting of both closed response and open response questions. This allows for the collection and analysis of both quantitative and qualitative data. An analysis of the results will reveal teacher attitudes towards peer relationships in the online classroom as well as strategies for fostering them.

## Setting and Participants

Participants are online teachers of students aged 4-18 who have at least one ELL in their classroom(s). Any teachers who met these criteria were invited to participate, and the invitation was posted to various online teaching groups as well as sent out by email. A total of 51 teachers responded. One response was removed because the participant responded "No" to the qualifying question "Do you have at least one non-native English speaking student?"; another response was removed because the participant wrote "I do not teach online classes" after responding "Yes" to the qualifying question "Do you currently teach students within the 4-18 age range online?"

The remaining 49 participants come from a wide variety of contexts. 49% teach at EFL companies, 22% at international schools, 20% at public schools, 6% at private schools, and 4% at universities. The two university responses were kept because the respondents' students were aged 18 and younger. Schools were based in at least 15 countries across five continents. A wide range of teaching experience and credentials were represented. The purpose of the survey, including the research questions, was explained to the participants, as well as the anonymity of their responses.

**Data Collection**

The survey was created using Google Forms and a link was posted to various teaching groups on social media as well as sent by email. Google Forms allows for the anonymous collection of data, which it automatically represents in charts. It also displays responses in a Google Sheet, which allows the data to be analysed from multiple angles.

The survey included a total of 26 questions. The first three were qualifying questions to determine if the surveyee was in the target population; if a surveyee responded “No” to any of these questions, they were asked not to continue the survey. The next 8 questions gathered data about the school, teacher, and class background. These questions were closed response and requested information about the type of school, the teacher’s credentials and experience, the ages and number of students per class, and the percentage of ELLs per class. The following 5 closed-response questions gauged teachers’ attitudes toward peer relationships and the types of peer-to-peer activities they use. The next 4 questions were open-response and asked about challenges and positive impacts associated with peer-to-peer activities online. Teachers whose classes had recently switched from in-person to online learning were also asked how they thought this change had affected peer relationships amongst their students. The next 3 questions used a Likert-type scale to measure school attitudes and support for peer relationships in their online classrooms. Finally, the last question asked respondents what kind of support they felt would be most helpful to them in fostering peer-to-peer relationships online.

***Limitations***

The purposes of this study would have been best served by surveying student populations and correlating the responses with student assessment data. The survey could measure the strengths of students’ peer relationships using the Classroom Community Scale, developed by Rovai (2002), and collect information about peer-to-peer activities used in surveyees’ classrooms. Responses could then be matched to assessment data to determine the relationship between peer-to-peer interactions and learning outcomes.

While student participants would have been more desirable, collecting responses from them comes with certain difficulties. Firstly, student populations are more difficult to access because of the necessity of obtaining relevant permissions. Secondly, the level of an ELL's English proficiency will affect their ability to understand and answer questions, which means that the results will likely be unreliable unless the survey is created using the surveyees' home language(s). A survey of teachers is, therefore, more likely to return reliable results, and valuable insights may still be obtained from such data.

**Analysis of Results**

***Qualitative Data***

I first coded the open-ended responses, looking for emergent themes. According to Saldaña, "a code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (2016). I took an emic approach, allowing themes to emerge from the responses themselves rather than fitting them into pre-existing categories.

**Challenges of implementing peer-to-peer activities online.** Many themes emerged in response to the questions "What challenges have you encountered when implementing peer-to-peer activities online?" and "What challenges have you encountered when implementing peer-to-peer activities online specifically for your ELL students?" These can be seen in the table below.

Table 1
*Themes Highlighting Perceived Challenges of Implementing Peer Activities Online*

| Challenges | # of respondents | % of respondents | Example quote |
|---|---|---|---|
| Lack of language ability/understanding | 19 | 38.8% | "[G]etting the [ELL] students to understand each other. For example if I am having the students create questions to ask each other they can be grammatically incorrect and this can confuse the other student in class. It means I have to at times come in to clarify as it can lead to frustration between them and breakdown of communication |

| | | | |
|---|---|---|---|
| | | | or the activity." |
| Student reluctance/Lack of motivation | 18 | 36.7% | "Many times students are too shy to share their thoughts with others in an online setting." |
| Course/platform limitations | 12 | 24.5% | "It has been really difficult with 3rd graders to create space where they can work together successfully - I utilize breakout rooms, but monitoring and ensure [*sic*] conversation and classwork occurs is very difficult. Slowly, we are getting better, but it is certainly a challenge in online learning!" |
| Technical difficulties | 11 | 22.4% | "I find there can be an issue in terms of internet connection. It can happen it is choppy or there is an issue in which you cannot see or hear the other student. This can mean they are unable to fully communicate and there is a lag and this means the[y] are not able to work in real time and it can slow up the activity." |
| Students' lack of social skills | 9 | 18.4% | "Students wanting to answer their own questions, talking over each other, competing" |
| Student distraction | 6 | 12.2% | "[A]s they are not physically in class together they can get distracted by other activities e.g. one student is in a car or they have to go to the toilet and take the screen with them. This can disrupt the communication if the screen has to be turned off" |
| Different competency levels/personalities | 5 | 10.2% | "Other [ELL students] are reluctant because they feel their peer has a lower or higher level than they do." |
| Parent interference | 3 | 6.1% | "Interfering parents who answer for children or translate so child is not required to listen or participate" |
| Cheating | 1 | 2% | "Cheating" |

Before drawing conclusions from this data, it is worth noting that another researcher may code responses and identify themes differently. Saldaña acknowledges this inherent limitation, saying "Coding is not a precise science; it is primarily an interpretive act" (2016).

***Lack of language ability/understanding.*** 38.8% of respondents said that language ability negatively affected their ELLs' ability to participate in peer-to-peer activities. Many responses discussed difficulties in understanding instructions for peer activities, while others talked about low output that made communication difficult. We can note that these difficulties are present for ELLs in face-to-face learning environments as well, and we cannot determine from this study whether the online environment presents more difficulties for ELLs in this area.

***Student reluctance/Lack of motivation.*** One-third of respondents mentioned reluctance and/or a lack of motivation to participate. Some responses in this category mentioned student shyness, with some elaborating that ELLs may feel reluctant to engage with their peers for fear of making mistakes. Others identified a lack of motivation as the cause of a reluctance to participate, with one saying that students are "typically in the comfort of their homes and less motivated to engage." Since students may feel reluctant to participate in face-to-face environments as well, the impact of the online environment on student reluctance is difficult to determine.

***Course/platform limitations.*** A quarter of respondents mentioned limitations specific to the course or platform that they use. Some said that they do not have access to breakout rooms, which makes small group interactions difficult; others who use breakout rooms said that it was difficult to monitor students while using them. A variety of other difficulties were mentioned, such as delays in muting and unmuting microphones, limited synchronous time in the school schedule, and the course curriculum allowing little time for discussions.

***Technical difficulties.*** 22.4% of respondents mentioned technical difficulties as a challenge in implementing peer-to-peer activities. As technology can fail in many ways, 22.4% seems low, but we must remember that this is not the percentage of teachers who experienced technical difficulties--only the percentage who chose to report it. The majority of those who reported technical difficulties

talked specifically about internet connections, with some elaborating that the delay caused by a weak connection leads students to talk over each other accidentally, repeat themselves, and/or wait for a response, which disrupts communication. Two responses mentioned difficulties in students' use of technology: one that students could choose to turn off the camera and thereby disengage, and another that the camera angle may not be ideal for viewing the students.

***Students' lack of social skills.*** 18.4% of respondents mentioned behaviours that indicate a lack of social skills on the part of their students. Behaviours such as unhealthy competition, talking over their peers, impatience in waiting for a peer to respond, or simply being "unused to peer interaction" were described as challenges to implementing peer-to-peer activities. It is possible that the online environment exacerbates this issue because nonverbal cues are more limited than in face-to-face environments, but this is impossible to determine from this study.

***Student distraction.*** 12.2% of respondents described student distractions as a challenge, with different causes. One talked about the difficulty of keeping students' attention in large online groups, while another talked about distractions in students' home environments.

***Different competency levels/personalities.*** 10.2% of respondents talked about challenges related to different levels of language ability and/or different personalities. None of the responses mentioned the online environment or technology specifically, and it is likely that the same challenges would exist in a face-to-face environment as well.

***Parent interference.*** Three respondents mentioned the negative impact of parent interference on online learning. All three described parents feeding their child answers or prompting their child to talk over another student. While the number of respondents who mentioned this issue is low, it is worth noting that the issue is specific to the online environment, which suggests that parents may need to be trained on how to effectively support their child in online learning.

***Cheating.*** Only one respondent mentioned cheating and did not elaborate on it, so we can determine less from the one response and more from the fact that no other respondent reported an issue with cheating. This suggests that cheating is no more an issue in online environments than in

face-to-face environments, although we cannot determine this for certain from this study. We can also note that bullying was not mentioned by a single respondent.

**Positive impacts of implementing peer-to-peer activities online.** Responses to the questions "What positive impacts have peer-to-peer activities had in your classroom?" and "What positive impacts have peer-to-peer activities had specifically on the ELL students in your classroom?" fell into a few broad themes, which can be seen in the table below.

Table 2
*Themes Highlighting Perceived Positive Impacts of Implementing Peer Activities Online*

| **Positive impacts** | **# of respondents** | **% of respondents** | **Example quote** |
|---|---|---|---|
| Learning outcomes | 26 | 53% | "[P]eer to peer discussion provides opportunities for realistic, unpredictable language use that gives students practice quickly coming up with the forms and vocabulary they need." |
| Benefits to SEL | 23 | 46.9% | "I have found it has been an excellent way to boost confidence in the class for students who many [*sic*] initially struggle to generate full sentences or have confidence issue[s] when speaking English. Having a peer help them who is on their level gives them a boost and shows a great level of communication as well as bond which can help outside of a physical classroom." |
| Student engagement | 16 | 32.7% | "[I]ncreased engagement in whole group discussion, willingness to try, even when they might get things wrong" |

***Learning outcomes.*** More than half (53%) of respondents noted the positive impact of peer-to-peer interactions on learning outcomes. The effects fell into a variety of categories, such as increased vocabulary retention, improved conversation skills, faster response times, greater critical

thinking ability, and a better understanding of content. This is hardly surprising, considering the well-researched benefits of cooperative learning discussed above.

***Benefits to SEL.*** According to CASEL, social-emotional learning (SEL) is "the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" ("Overview of SEL," n.d.). The majority of responses in this category described benefits to a sense of community while others mentioned a boost to confidence, and many talked about both. Since peer relationships are a facet of SEL, it is unsurprising that peer-to-peer activities would boost students' SEL.

***Student engagement.*** One third (32.7%) of respondents described evidence of an increase in student engagement. Many reported that peer-to-peer activities increased student enjoyment in lessons, willingness to participate, and/or student talking time.

These positive impacts are consistent with findings in the literature. We can also note that the literature shows a strong connection between all three of these themes. In a meta-analysis of school-based, universal SEL programs involving a total of 135,396 students, Durlak et al. found an 11-percentile gain in academic performance (2011), showing a strong correlation between SEL and learning outcomes. Other studies, such as that by Delfino, show a positive correlation between student engagement and learning outcomes (2019). We can therefore assume that if peer interactions positively impact one of these three categories, the other two are likely to be positively impacted as well.

However, we can also note that benefits in these areas are likely to be true of face-to-face as well as online environments. That peer relationships are even more important in the online setting is suggested by the literature, but more research should be done to determine the exact relationship between peer interactions and learning outcomes, SEL, and student engagement in the online learning environment.

**Effects of switching from offline to online learning environments.** 21 respondents (43% of the total) reported that they had recently switched from in-person to online learning. The final open-ended question asked these respondents how they thought this change has affected peer relationships amongst their students. Themes emerging from these responses can be seen below.

Table 3
*Themes Highlighting Perceived Impacts of Switching from In-Person to Online Learning*

| Impacts on peer relationships | # of respondents | % of respondents | Example quote |
|---|---|---|---|
| Negative impacts to SEL | 12 | 57.1% | "We switched to online learning in March, students felt isolated, their emotional well being suffered." |
| Negative impacts to engagement | 4 | 19% | "Children are very frustrated and it makes them less happy to participate." |
| Little to no impact | 3 | 14.3% | "They all play video games together outside of class, so they are okay I think." |
| Positive impacts | 3 | 14.3% | "It has made students more willing to work together" |

***Negative impacts.*** A total of 16 respondents (76.2% of those who reported recently switching to online learning) described negative impacts on peer relationships since their class moved online. 75% of these 16 described negative impacts to SEL specifically, while the other 25% described negative effects to engagement.

***Little to no impact.*** Three respondents reported that switching to online learning had little to no effect on peer relationships. One of these said that this was true for students who had started in-person and switched online, while "the cohort that started online has much weaker peer-to-peer relationships."

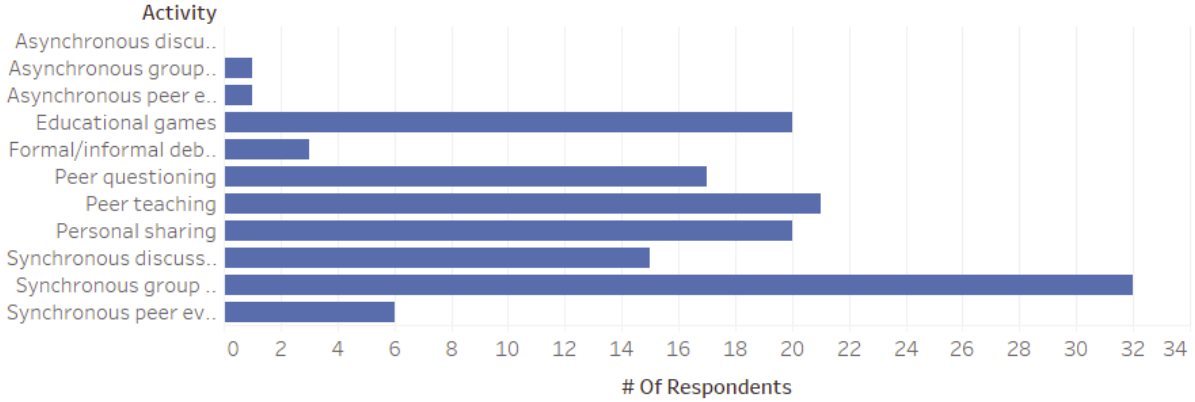
***Positive impacts.*** Two of the three respondents who reported positive impacts said that students were more willing to work together. One said that the online environment positively affected a student who had been previously bullied.

***Quantitative Data***

**Peer interaction strategies.** Respondents were asked to select activities from a list in response to the question "Of the peer-to-peer activities that you use, which 2-3 activities do you believe are the most important for learning?" The number of respondents who selected each activity can be seen in Chart 1 below. Synchronous group work was favoured by 32 respondents, significantly more than any other activity. Peer teaching, educational games, and personal sharing follow, with 21, 20, and 20 respondents, respectively. This chart does not show which activities have been proven to be effective for learning, but it reveals what teachers believe to be effective based on their own experience teaching in the online setting.

Chart 1

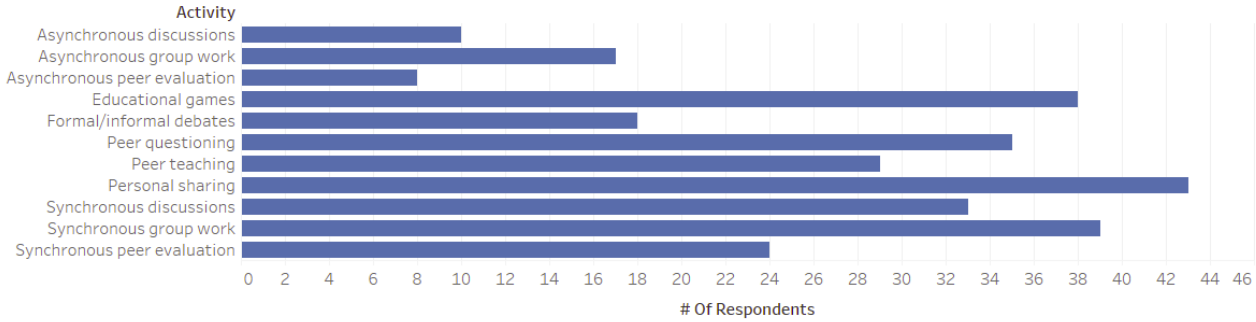
*Peer-to-Peer Activities Perceived as Most Important*




We can also note that the activities believed to be most important for learning are not always the strategies used by teachers. Responses to the question "Which of the following peer-to-peer activities do you use?" can be seen in Chart 2 below. We can assume that teaching platforms and curricula affect the activities which teachers are able to utilise.

Chart 2

*Peer-to-Peer Activities Used*



When the data in Chart 2 above is correlated with respondents' teaching experience, we can notice that the variety of activities used tends to go up with the amount of teaching experience respondents have. Teachers with less than a year of experience used an average of 4.5 different types of peer-to-peer activities, while the greatest variety of activities used, 6.8, was reported by teachers with 5-10 years of experience, followed closely by the over 10 years group at 6.4.

Chart 3

*Teaching Experience and Number of Peer-to-Peer Activities Used*

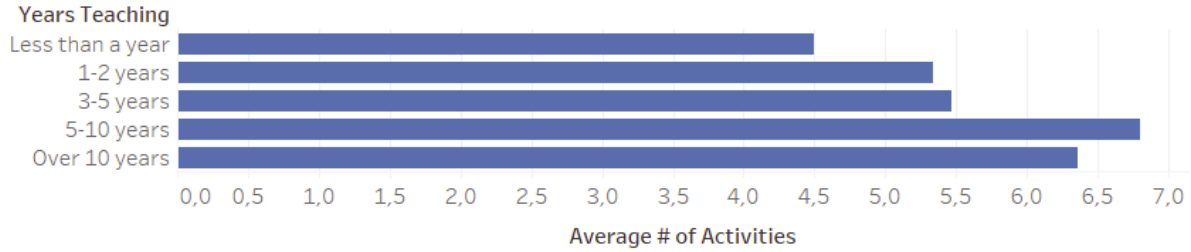
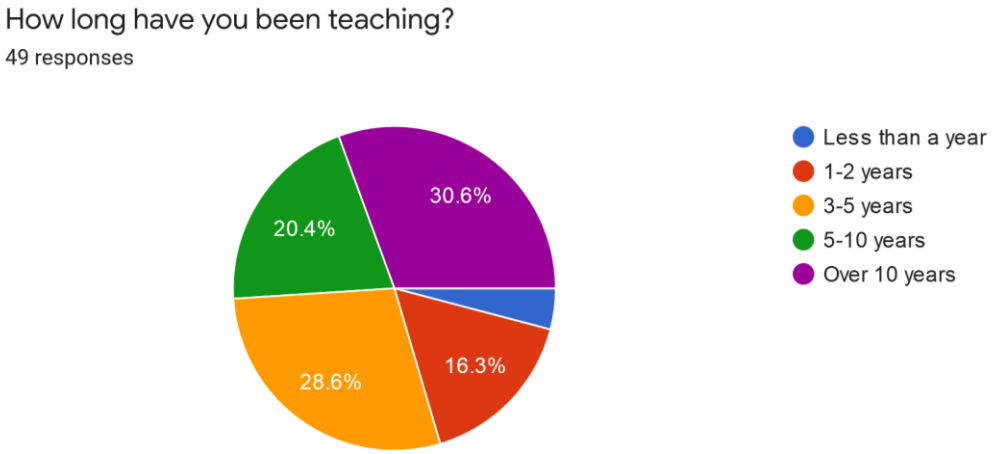



Chart 4

*Years of Teaching Experience*




**Attitudes toward peer relationships.** Respondents were asked two questions to gauge their attitudes toward peer relationships in the classroom. In response to the question "How important do you believe peer relationships are for learning?" 40.8% believed that peer relationships are "extremely important for learning," 42.9% "very important," 14.3% "somewhat important," and 2% "not so important." Interestingly, the numbers changed in response to the question "How important do you believe peer relationships are specifically for ELLs' learning?" with 53.1% believing them to be "extremely important," 34.7% "very important," 8.2% "somewhat important," and 4.1% "not so important." The number of respondents who believed peer relationships are extremely important increased 12.3% when asked specifically about ELLs. We can notice that teachers generally believe

that peer relationships are important for learning in the online setting, and especially so for ELLs. No correlation could be found between teaching experience and attitudes toward peer relationships.

Chart 5

*Perceived Importance of Peer Relationships*

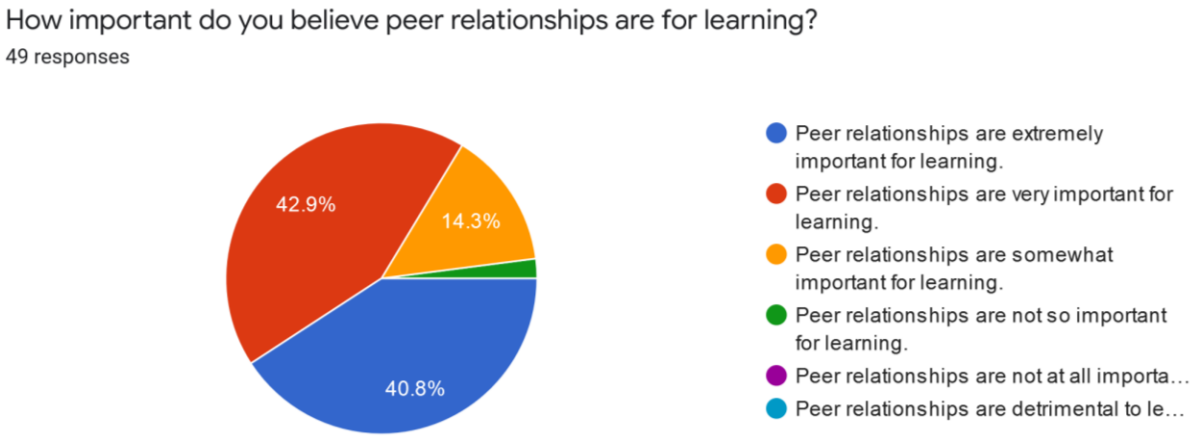
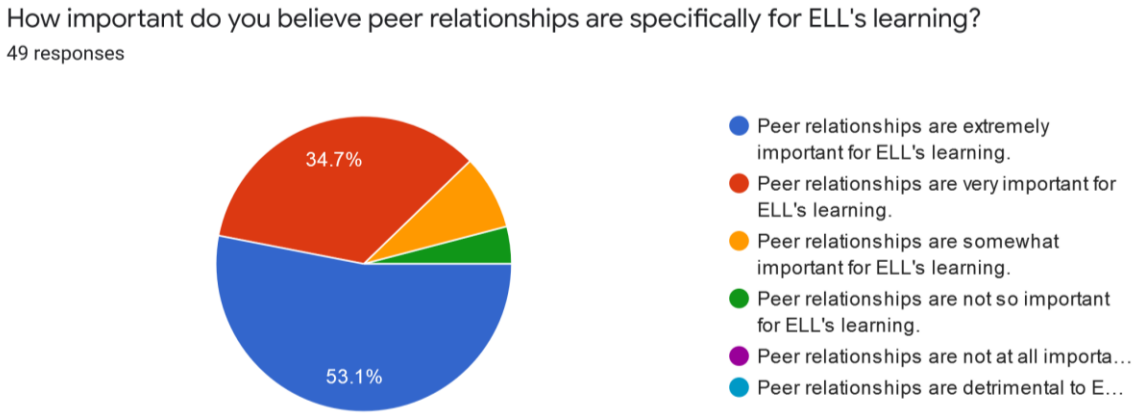



Chart 6

*Perceived Importance of Peer Relationships for ELLs*




**School training in peer-to-peer interactions.** In the final section of the survey, respondents were asked questions relating to school encouragement of the use of peer-to-peer learning activities, school training in implementing peer-to-peer learning activities, and how equipped respondents felt to foster peer-to-peer relationships in the online setting for ELL students. The following three charts were automatically generated by Google Forms from the responses.

Chart 7

*Perceived School Encouragement of the Use of Peer-to-Peer Learning Activities*

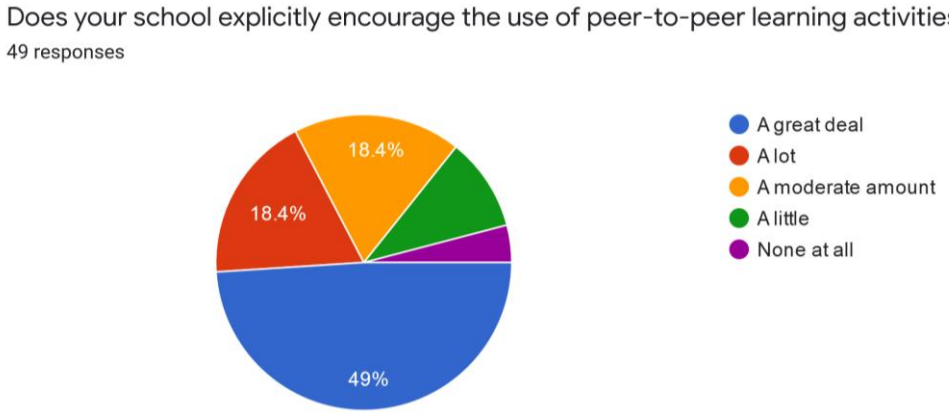



Chart 8

*Perceived Amount of Training in Implementing Peer-to-Peer Learning Activities*

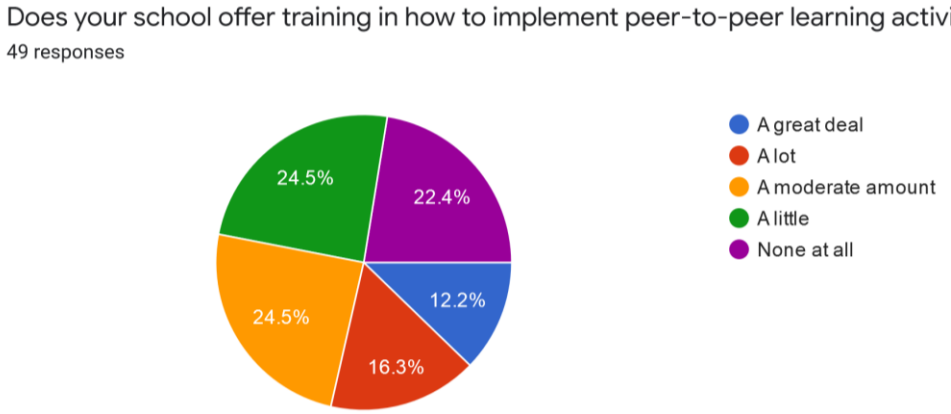
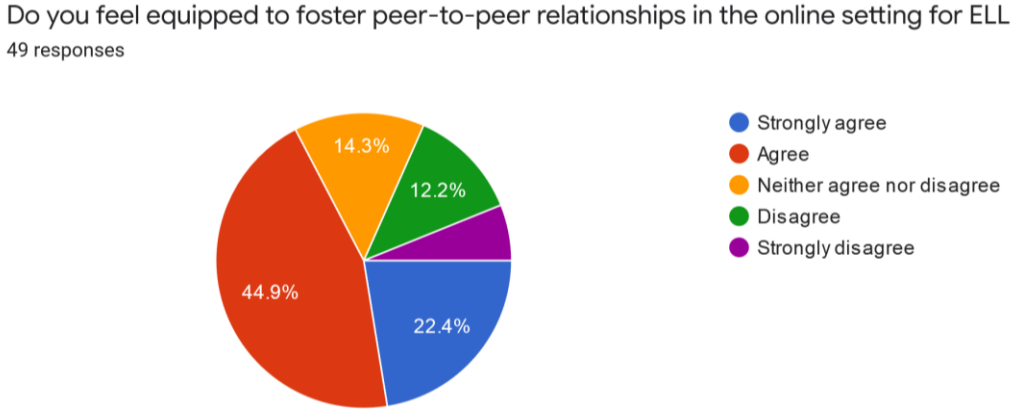



Chart 9

*Perceived Confidence in Fostering Peer-to-Peer Relationships Online for ELLs*




We can conclude from these charts that while schools tend to encourage the use of peer-to-peer learning activities, training in how to implement such activities may be lacking. However, as the majority of respondents agreed or strongly agreed that they felt equipped to foster peer-to-peer relationships, a great deal of training may not be necessary unless requested by teachers.

However, the numbers change when we look specifically at teachers who recently switched to online learning versus those who did not. Of the 21 respondents who reported a recent switch, the majority said that their school offered no training at all (40%) or a little training (30%) in implementing peer-to-peer learning activities, as can be seen in Chart 10 below. Of the 28 respondents who did not recently switch to online learning, the majority of respondents said that their school offers a moderate amount of training (30%) or a little training (26.7%), as can be seen in Chart 11 below. Since teachers within the same school may have differing perceptions of how much training is offered, we can assume that these charts reflect the degree to which teachers feel supported by their schools in implementing peer-to-peer activities rather than the amount of training which is actually offered. The data suggests that teachers who recently switched from in-person to online learning feel less supported by their schools in implementing peer-to-peer activities.

Chart 10

*Perceived Amount of Training in Implementing Peer-to-Peer Learning Activities for Schools that Recently Switched to Online Learning*

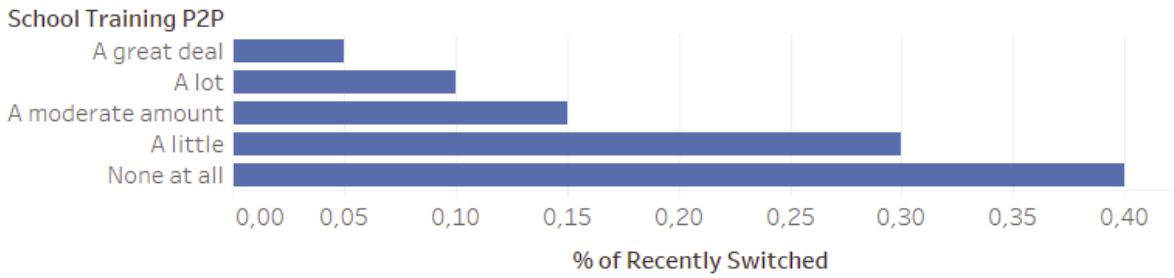
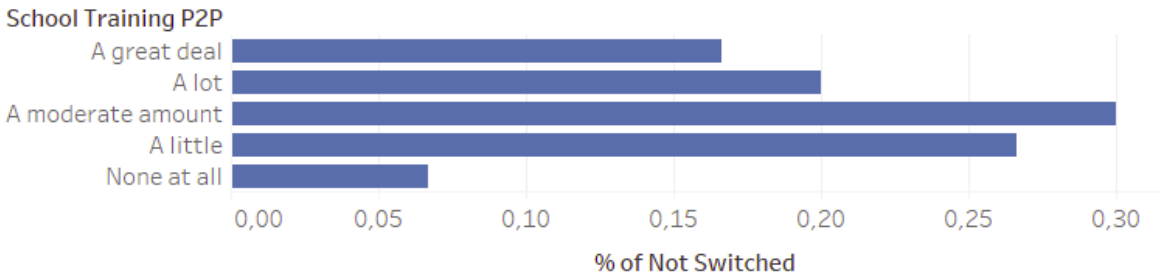



Chart 11

*Perceived Amount of Training in Implementing Peer-to-Peer Learning Activities for Schools that Did Not Recently Switch to Online Learning*




We can also see that teachers who recently switched to online learning feel less equipped to foster peer-to-peer learning activities in the online setting for ELLs, although the difference is not

significantly large. Of the 21 respondents who reported a recent switch to online learning, 15% strongly agreed that they felt equipped, compared to 26.7% of the 28 respondents who reported not switching. 45% of respondents who recently switched said they agreed, compared to 40% who had not recently switched.

Chart 12

*Perceived Confidence in Fostering Peer-to-Peer Relationships Online for ELLs for Teachers Who Recently Switched to Online Learning*

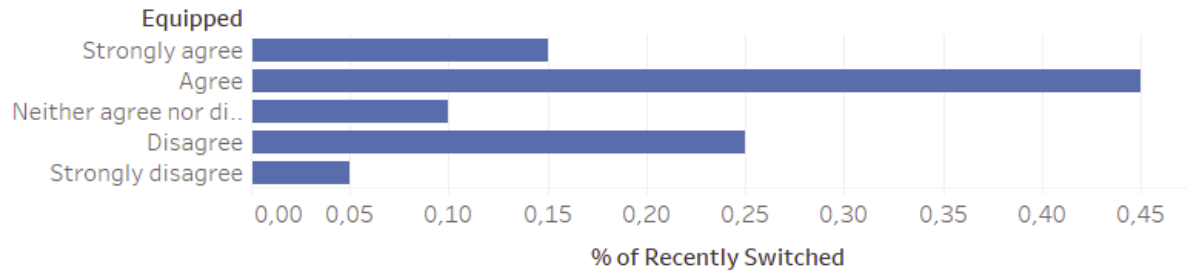
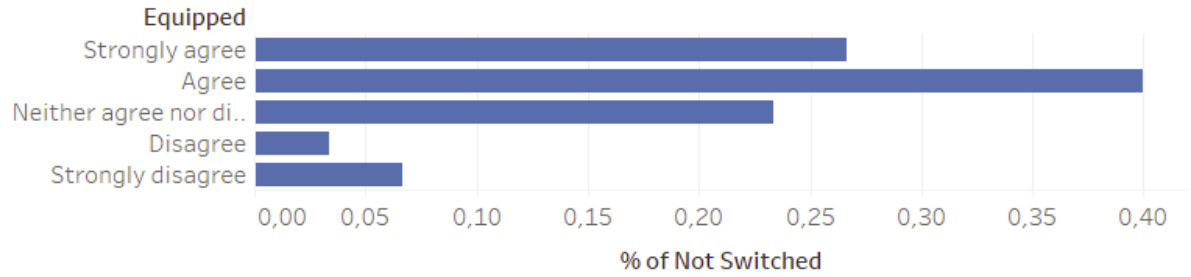



Chart 13

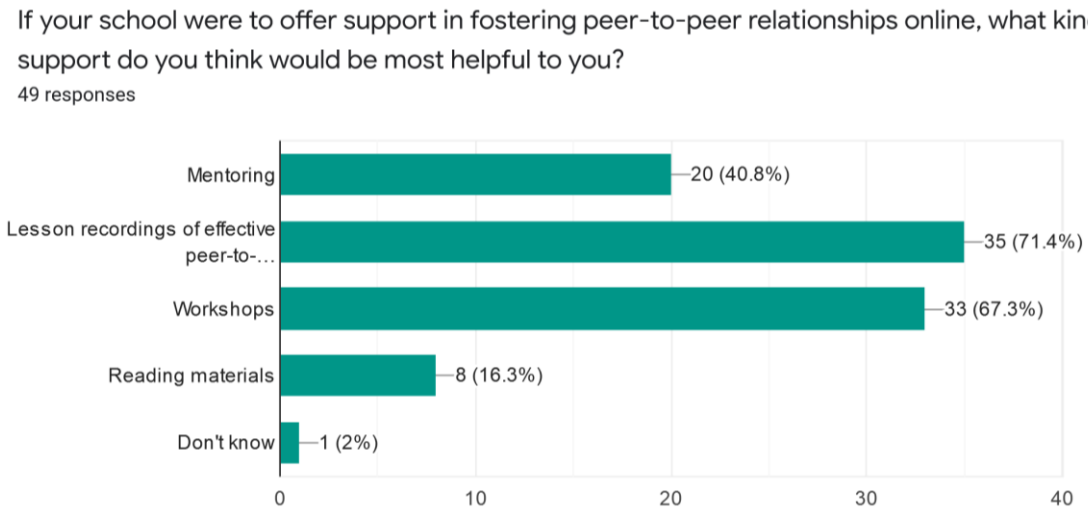
*Perceived Confidence in Fostering Peer-to-Peer Relationships Online for ELLs for Teachers Who Did Not Recently Switch to Online Learning*




**Desired support.** The final survey question asked "If your school were to offer support in fostering peer-to-peer relationships online, what kind of support do you think would be most helpful to you?" and provided four options as well as a write-in option. The majority of teachers (71.4%) said that lesson recordings of effective peer-to-peer activities would be the most helpful to them, followed closely by workshops (67.3%), as can be seen in chart 14 below, which Google Forms automatically generated.

Chart 14

*Support Perceived to Be Most Helpful for Fostering Peer-to-Peer Relationships Online*




**Discussion**

This study investigated the strategies used by online teachers to foster peer relationships for students aged 4-18, as well as the teachers' attitudes toward and experiences of peer-to-peer activities. While the study was not able to correlate teacher perceptions with those of students or with student assessment data, it still yielded some useful insights.

The challenges associated with peer interactions that teachers reported in the survey were different than those reported by the cyber high school students interviewed by Borup et al., with the exception of the theme "distracting." The fact that this survey asked specifically about ELLs as well as peer relationships in general can account for some of these differences. On the other hand, the benefits reported by the cyber high school students (instructing, befriending, collaborating, and motivating support) were very similar to those reported by survey respondents (learning outcomes, benefits to SEL, and student engagement), which suggests that the benefits hold true for ELL students as well as lower age levels. These positive impacts are supported by other research as well. The majority of these who recently switched from in-person to online learning reported negative impacts on SEL and/or student engagement, which suggests that peer relationships are more difficult to sustain in the online setting, and this is corroborated by the literature.

The survey also revealed that teachers generally believe peer relationships to be important for learning, especially for ELLs. As the literature resoundingly supports the importance of peer

relationships for learning, especially in the online setting, it is encouraging that online teachers are generally in agreement with this. Of the peer-to-peer interaction strategies used by online teachers, synchronous group/partner work was the most believed to be effective. Since cooperative learning techniques are generally built around small group work and cooperative learning has been proven effective in a plethora of studies, we can conclude that teachers' perceptions of activity effectiveness line up with the literature. Jacobs and Seow recommend that cooperative learning groups be small, heterogeneous, and require the use of higher order thinking skills to increase their effectiveness (2015). However, the fact that the variety of peer-to-peer activities teachers use online tends to go up with experience suggests that teachers should use multiple strategies rather than focusing on synchronous group work alone.

Survey responses indicate that while the majority of online schools may encourage the use of peer-to-peer interactions, most teachers perceive that their schools do not provide much training in how to do so, especially for teachers who recently switched from in-person to online learning. However, the degree to which teachers felt equipped to foster peer-to-peer relationships online did not correlate with the amount of training they perceived schools to offer, which suggests that the quality rather than quantity of training schools offer should increase. Of possible supports for how to foster peer relationships online, video recordings of effective peer-to-peer activities in action was most believed to be helpful, followed closely by workshops. We can conclude that if schools want to increase the effectiveness of teachers' peer-to-peer interaction strategies, or at least the amount of school support teachers perceive, they can best do so by providing lesson recordings and workshops.

**Consideration of Next Steps**

This study was able to gauge teachers' subjective perceptions and experiences of peer-to-peer interactions online. Further research should be conducted into which peer-to-peer interaction strategies are the most effective in the online setting and how strategies should be adjusted to meet the needs of ELL students and of different age groups. Comparing teachers' perceptions to those of students as well as to student assessment data would yield more reliable results.

**Acknowledgements**

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**Appendix**

*Survey questions*

# Background

This survey is part of an action research project undertaken to fulfill the requirements of a Master's in Education program. The research project seeks to answer the following questions:
1. How do peer relationships affect learning for aged 4-18 ELL (English language learner) students in an online setting?
2. What strategies are effective for fostering peer relationships for aged 4-18 ELL students in an online setting?

In the context of this study, peer relationships are defined as "patterns of behavioural interaction occurring over time." This definition emphasizes the history of those interactions over their quality, and thus friendships are just one type of peer relationship. This survey will therefore focus on questions relating to peer interactions in the online classroom context.

* Required

Do you currently teach students within the 4-18 age range online? (If your answer is "No," please do not continue the survey.) *

- ◯ Yes
- ◯ No

Do your lessons include more than one student per class? (If your answer is "No," please do not continue the survey.) *

- ◯ Yes
- ◯ No

Do you have at least one non-native English speaking student? (If your answer is "No," please do not continue the survey.) *

- ◯ Yes
- ◯ No

## Teacher/School Background

(Optional) In which country is your school based?

Your answer

What type of school do you teach for? *

- ◯ Public school
- ◯ International school
- ◯ EFL (English as a Foreign Language) company
- ◯ Private school
- ◯ Other:

How long have you been teaching? *

- ◯ Less than a year
- ◯ 1-2 years
- ◯ 3-5 years
- ◯ 5-10 years
- ◯ Over 10 years

Which of the following credentials do you hold? *

- ☐ A bachelor's degree in education
- ☐ A teaching certification
- ☐ A TEFL certification
- ☐ A master's degree in education
- ☐ A Ph.D. in education
- ☐ None of the above
- ☐ Other: _____

Do you teach more than one class? *

- ◯ Yes
- ◯ No

**If some of your classes do not include ELL (English language learner) students, please answer the following questions only for your classes that do include ELL students.**

How many total students are in your class(es)? (If you teach more than one class, choose all that apply.) *

- [ ] 2
- [ ] 3-5
- [ ] 6-10
- [ ] 10-15
- [ ] 15-20
- [ ] 20-25
- [ ] 25-30
- [ ] 30-35
- [ ] 35-40
- [ ] 40+

How many ELL students are in your class(es)? (If you teach more than one class, choose all that apply.) *

- [ ] All of my students are ELLs.
- [ ] The majority of my students are ELLs.
- [ ] About half of my students are ELLs.
- [ ] A minority of my students are ELLs.
- [ ] A very small percentage of my students are ELLs.

What age(s) are your students? (Choose all that apply.) *

- [ ] 4
- [ ] 5
- [ ] 6
- [ ] 7
- [ ] 8
- [ ] 9
- [ ] 10
- [ ] 11
- [ ] 12
- [ ] 13
- [ ] 14
- [ ] 15
- [ ] 16
- [ ] 17
- [ ] 18

## Strategies for Fostering Peer-to-Peer Relationships

How important do you believe peer relationships are for learning? *

- ◯ Peer relationships are extremely important for learning.
- ◯ Peer relationships are very important for learning.
- ◯ Peer relationships are somewhat important for learning.
- ◯ Peer relationships are not so important for learning.
- ◯ Peer relationships are not at all important for learning
- ◯ Peer relationships are detrimental to learning.

How important do you believe peer relationships are specifically for ELL's learning? *

- ◯ Peer relationships are extremely important for ELL's learning.
- ◯ Peer relationships are very important for ELL's learning.
- ◯ Peer relationships are somewhat important for ELL's learning.
- ◯ Peer relationships are not so important for ELL's learning.
- ◯ Peer relationships are not at all important for ELL's learning.
- ◯ Peer relationships are detrimental to ELL's learning.

Which of the following peer-to-peer activities do you use? *

- [ ] Synchronous group/partner work (i.e. students work together during class to complete projects or exercises)
- [ ] Asynchronous group/partner work (i.e. students work together outside of class time to complete projects or exercises)
- [ ] Peer teaching (i.e. students teach each other lesson concepts or help each other with difficult content)
- [ ] Educational games (i.e. students compete in teams or pairs)
- [ ] Synchronous discussions
- [ ] Asynchronous discussions (e.g. discussion forum posts)
- [ ] Formal/informal debates
- [ ] Peer questioning (i.e. students ask each other questions related to lesson content)
- [ ] Synchronous peer evaluation (e.g. students provide feedback on each other's work during class)
- [ ] Asynchronous peer evaluation (e.g. written comments on a classmate's work)
- [ ] Personal sharing (i.e. students share information with each other about their backgrounds, interests, etc.)
- [ ] Other: _____

Of the peer-to-peer activities that you use, which 2-3 activities do you believe are the most important for learning? (Choose up to 3) *

- [ ] Synchronous group/partner work (i.e. students work together during class to complete projects or exercises
- [ ] Asynchronous group/partner work (i.e. students work together outside of class time to complete projects or exercises)
- [ ] Peer teaching (i.e. students teach each other lesson concepts or help each other with difficult content)
- [ ] Educational games (i.e. students compete in teams or pairs)
- [ ] Synchronous discussions
- [ ] Asynchronous discussions (e.g. discussion forum posts)
- [ ] Formal/informal debates
- [ ] Peer questioning (i.e. students ask each other questions related to lesson content)
- [ ] Synchronous peer evaluation (i.e. students provide feedback on each other's work during class)
- [ ] Asynchronous peer evaluation (e.g. written comments on a classmate's work)
- [ ] Personal sharing (i.e. students share information about their backgrounds, interests, etc.)
- [ ] Other: _____

How often do you use peer-to-peer activities? *

- ○ Multiple times per lesson
- ○ At least once per lesson
- ○ Once every few lessons
- ○ Rarely
- ○ Almost Never
- ○ Never

What challenges have you encountered when implementing peer-to-peer activities online? (Mention specific activities, where relevant.) *

Your answer

What challenges have you encountered when implementing peer-to-peer activities online specifically for your ELL students? (Answer only if different than previous answer.)

Your answer

What positive impacts have peer-to-peer activities had in your classroom? (Mention specific activities, where relevant.) *

Your answer

What positive impacts have peer-to-peer activities had specifically on the ELL students in your classroom? (Answer only if different from previous answer.)

Your answer

Has your class recently switched from in-person learning to online learning? *

- ◯ Yes
- ◯ No

If you answered "Yes" to the previous question, how do you think this change has affected peer relationships amongst your students?

Your answer

## School Support

Does your school explicitly encourage the use of peer-to-peer learning activities? *

- ◯ A great deal
- ◯ A lot
- ◯ A moderate amount
- ◯ A little
- ◯ None at all

Does your school offer training in how to implement peer-to-peer learning activities? *

- ◯ A great deal
- ◯ A lot
- ◯ A moderate amount
- ◯ A little
- ◯ None at all

Do you feel equipped to foster peer-to-peer relationships in the online setting for ELL students? *

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

If your school were to offer support in fostering peer-to-peer relationships online, what kind of support do you think would be most helpful to you?

- [ ] Mentoring
- [ ] Lesson recordings of effective peer-to-peer activities in action
- [ ] Workshops
- [ ] Reading materials
- [ ] Other: _____