

The Electronic Journal for English as a Second Language

Infusing Cooperative Learning in Distance Education

May 2020 - Volume 24, Number 1

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Abstract

Providing students with opportunities for peer interaction is considered best practice in classroom teaching. However, facilitating peer interaction as part of distance education represents a new challenge for some teachers. The present article raises eleven questions for teachers to consider when infusing cooperative learning (thoughtfully organized peer interaction opportunities) as part of distance learning. These questions concern group size (with pairs also considered to be groups), group membership, whether to teach collaborative skills, the difficulty level of the tasks the groups undertake, how often group activities are done as opposed to individual activities and teacher input, encouraging everyone in the group to contribute their fair share to the learning of all group members, assessment of students when they learn in groups, whether to include thinking skills when students do cooperative learning via distance, how to convince students of the benefits of learning together, reaching out to stakeholders other than students, and helping other teachers learn to use ICT tools. The authors encourage teachers to develop their own answers to these eleven questions, based on their own teaching contexts and, at the same time, to keep an open mind as they accumulate more experience and continue to learn from colleagues and students.

Keywords: cooperative learning, distance education, collaborative learning, ICT (information and communication technology),

A perspective on student-student and student-teacher interaction

When we consider doing something different, it may be useful to begin by considering the similarities between what is different and what we have already been doing. In the present article, we have two elements that are different from the traditional in education: students

sometimes learning with peers instead of only learning alone, listening to teachers, participating in teacher-led discussion, or reading materials; and modern distance education instead of students and their teachers all together in the same classroom.

"Cooperative learning" refers to a tradition of principles and techniques that aid teachers in facilitating interaction among students. An example of a cooperative learning principle is individual accountability (Johnson, Johnson, & Holubec, 2007) which encourages each student to do their fair share toward the success of all their groupmates. One of the many flexible cooperative learning techniques is Everyone Can Explain (Jacobs & Renandya, 2019), in which groups do tasks or respond to questions, they check that all group members can explain what they have done and why, and then one group member is chosen at random to present their group's explanation. "Modern distance education" refers to students learning outside of a normal classroom with the help of online tools, rather than relying on the postal service as was done when distance education was also called correspondence courses. Of course, cooperative learning can combine with other modes of learning, including teacher-led activities, as most cooperative learning activities involve teacher input at various stages. Furthermore, distance education and face-to-face education are combined in blended learning (Thompson, Jowallah, & Cavanagh, 2019).

Table 1 compares the four elements listed above - teacher-led learning, cooperative learning, face-to-face learning, and modern distance education - on seven variables in education. The ideas in the table represent the authors' current thoughts, but may not be in complete alignment with the views and experiences of the readers of this article. The first four variables in the rows in Table 1 – student motivation, well-planned curriculum, teacher knowledge and skill, and community support for education – are all crucial regardless of which element is in use. Community support for education includes financial support but goes beyond that to include families and the larger community valuing education and encouraging people of all ages to pursue formal education. Degrees and grades mean more than sports trophies and being prom king and queen.

However, Table 1 highlights possible differences in the final three variables. Well-functioning technology is crucial in modern distance education, but the other three elements can, at least in the short-term, carry on even without technology. As to the variable of students' willingness and ability to cooperate, that is definitional to cooperative learning, but not to the other three elements. and students' ability to access their common classroom. Finally, the last variable in Table 1 – all students able to access a common class is definitional only to the element of face-to-face learning, as both teacher-led and cooperative learning can go on via modern distance education.

Table 1. Comparison of four modes of learning on selected variables

	Teacher- Led Learning	Cooperative Learning	Face-to- Face Learning	Modern Distance Education
Student Motivation Crucial	Yes	Yes	Yes	Yes
Well-Planned Curriculum Crucial	Yes	Yes	Yes	Yes
Teacher Knowledge and Skill Crucial	Yes	Yes	Yes	Yes
Community Support for Education Crucial	Yes	Yes	Yes	Yes
Presence and Working Condition of Technology Crucial	No	No	No	Yes
Students' Willingness and Ability to Cooperate Crucial	No	Yes	No	No
Crucial That Students Can Access the Common Classroom	No	No	Yes	No

The specific focus of the present article is on the distinction between distance education infused with cooperative learning and distance education in which students seldom interact with their fellow learners. However, first some possible terminological issues need to be addressed.

- 1. Group activities: One, Johnson, Johnson, and Holubec (2020), whose work in the practice, research, and theory of education, in particular education focusing on peer interaction, goes back about fifty years, strongly believe that just because students are invited to learn in a group does not mean that they are in fact collaborating effectively or even collaborating at all. Thus, group activities do not necessarily equal cooperative learning.
- 2. Some educators make a distinction between collaborative learning and cooperative learning. However, in this paper, the terms are treated as equivalent (Jacobs, 2015; Jacobs & Renandya, 2019).

This article reaches into the education literature to examine eleven questions regarding facilitating student-student collaboration, in particular how these issues apply in distance learning contexts. Of course, the infrastructure, hardware, and software available in each distance education situation differ. Thus, not all the advice provided here will be relevant to every situation. On a happy note, as technology progresses and perhaps becomes more accessible, students and teachers doing distance education may enjoy resources in excess of what this article's authors are aware.

One point to emphasize is that these eleven questions are just that: questions. They are not some sort of purity test, some certification standard. In life, we just do what works in each situation.

Questions on Facilitating Cooperative Learning in Distance Education

This part of the article explains eleven questions that often arise when facilitating student-student interaction, including the application of these questions when students cooperate while doing distance education. No consensus exists in the education literature as to the answers to these questions. Readers are encouraged to answer the questions as best seems to suit their contexts, colleagues, and students, at the same time, keeping an open mind. Readers of this article who wish to go beyond the brief treatment of these questions provided here are recommended to consult the more thorough expositions found in such books as Gillies (2007), Johnson, Johnson, and Holubec (2007), Joliffe (2007), and Slavin (1995).

1. What size should groups be?

Different sizes for groups each have different pluses and minuses. Larger groups, from 5-10 members, have at least two advantages: more people to contribute ideas and share in the labor, and fewer groups for teachers to monitor and fewer group products for teachers to access. On the other hand, smaller groups, including groups of two members, offer such advantages as less likelihood that anyone is left out of the group, more opportunities for each member to participate, more roles for each to learn, and fewer logistical difficulties in managing group collaboration. Of course, larger groups can be divided into smaller groups, e.g., a group of six can sometimes work in subgroups of two, and smaller groups can sometimes combine to learn from each other, e.g., two groups of two can combine into a foursome. Johnson, Johnson, and Holubec (2020) recommended groups of two or three.

In the case of distance education, group size might also be impacted by the software or learning platform used. Fortunately, popular software, such as Skype, Zoom, and Whatsapp, have been enhanced to allow for communication beyond pairs. Currently, Course Management Systems (CMS), e.g., Moodle, Edmodo, Google Classroom, and Canvas allow group communication and collaboration to be conducted in a more structured manner using grouping and discussion forum features. A grouping within a class feature is also supported in video conference applications, such as Zoom. Other apps, such as Skype, Google Hangouts, and Whatsapp, support group communication, but separate meetings will need to be created for each group communication. When synchronous communication is not an option, the use of virtual wall or bulletin board, such as Padlet, Noteapp, and Popplet, can support cooperative learning. Applications within this category are useful for displaying information contributed by all group members in the form of texts, audios, videos, links, and files. Different software allows different modes of communication, synchronous – asynchronous, and voice – text – video chats, all of which support cooperative learning. Furthermore, while communication in a large group is already cumbersome in a face-to-face mode, it might be even more difficult to manage in a distance mode, not to mention the difficulty of managing time schedules for synchronous communication.

2. Which students should join which group?

Group composition represents one of the most controversial questions in cooperative learning, generating strongly held views among both educators and students. The question comes down to whether groups should be homogeneous or heterogenous on a range of variables often beginning with past achievement and, depending on the context, including gender, race, religion, nationality, friendship groups, social class, special needs, motivation level, and age. Many students prefer to choose their own groupmates, and when students do choose, the

tendency is toward homogeneity of group members. Also, some educators and other education stakeholders believe it to be unfair and unproductive for high achievers to be grouped with lower achievers (Matthews, 1992). Will this turn higher achievers into bored, unpaid, unchallenged assistant teachers, at the same time, stressing lower achievers who feel embarrassed to have to try to keep up with their higher achieving peers?

Advocates of heterogeneous grouping offer a number of counterarguments. First, higher achievers learn by teaching their lower achieving peers, as long as their teaching focuses on explaining, rather than just supplying answers (Webb et al., 2009). Second, in addition to learning course content in their classes, by learning in heterogenous groups, students can learn about people different from themselves, e.g., from different social classes, and learn to collaborate with such people. Third, building on the second argument about preparing students to cope with an increasingly heterogenous world, those who have more (whether in terms of financial resources or knowledge/skill resources) should be willing to share, and, in the long term, everyone benefits from such sharing. Fourth, curriculum practices, such as Differentiated Instruction, accommodate learning by students of different achievement levels (Tomlinson & McTighe, 2006).

Also, we should remember that in some distance education contexts, students will have never met. Thus, no friendship groups will have developed in the class. Is this lack of friendship or even acquaintance among students good or bad? Many guides to cooperative learning suggest that students spend time to become acquainted by doing teambuilding activities and urging students to exchange background information and contact information. These cooperative learning experts believe that personal ties will lead to stronger bonds and more cooperation. However, teachers and other stakeholders might worry that students coming to know each other in personal, rather than strictly academic ways, might put students at risk of stereotyping, bullying, and harassment.

We can make grouping more manageable in modern distance education with the use of a Course Management System (CMS), such as Blackboard, Moodle, Google Classroom, and Edmodo, that provide synchronous and asynchronous learning platforms. However, distance education brings to the fore at least three other variables related to group composition. Just as it may be wise to mix students as to past achievement, peer interaction may also benefit if students form groups that are mixed as to ICT skills, so that the less proficient can receive help from others than the teacher. Heterogeneity may also be useful if some class members have access to tools, such as Photoshop, while others do not, or some are more adept at Internet searches. In contrast, access to hardware and software may be another variable where homogeneity is advisable, e.g., at the time of the writing of this article, Google, Whatsapp, and other products are not available in some countries. Thus, difficulties may arise if, for example, one group member has Google Docs, while the other(s) is not able to access it.

3. Should time be spent teaching collaborative skills?

One of the arguments for homogeneous groups arises from the view that students who are similar to one another will be able to collaborate more easily and effectively. Helping students create such well-functioning groups regardless of who their groupmates might be is one reason that advocates of heterogenous groups highlight the need to provide students time to develop

their collaborative skills. Many such skills exist, including asking for help, checking that groupmates understand, praising others, disagreeing politely, and thanking others. The authors' experience is that many students, regardless of whether they are learning in a first or second language, lack proficiency in these skills, and even when students possess collaborative skills, e.g., everyone knows how to say "thank you," students often, for whatever reason, neglect to use them. Additionally, how to implement these skills sometimes differ across cultures.

The ICT tools available in modern distance education may facilitate using collaborative skills, as well as provide new contexts for applying them (Khalil & Ebner, 2017). Here are some examples. One, ICT offers access to emojis and similar visuals, such as memes, as ways to apply collaborative skills, such as praising others, but does universal agreement exist on what each emoji means and how often and in which situations emojis are appropriate?

Another example of a collaborative skill potentially enhanced in modern distance education involves how to provide each group member with equal opportunity to participate (Jacobs & Renandya, 2019) in their group. The asynchronous communication that takes place via some ICT affordances might be useful here, as it provides more time for those group members who favor a more reflective, rather than impulsive, interaction style (Motallebzadeh & Samadi, 2017). In a face-to-face classroom, it might be more difficult for students to use the collaborative skill of providing each other with this extra time.

A third way that ICT might facilitate student development of collaborative skills in distance education is that ICT makes it easier to record students' oral and written interaction which can then be analysed, e.g., which group member took the most and longest turns? How many times did students express gratitude to each other? Johnson, Johnson, and Holubec (2020) recommend setting aside time for students and teachers to consider how well groups are functioning. The data collected via ICT may aid this consideration.

4. Are tasks at the right difficulty level?

Yes, two (or more) heads assembled when students do cooperative learning are better than one; students can work together to figure out how to learn what they need. However, this assemblage of heads is not magic. Teachers still need to assist students in operating within Vygotsky's (1978) Zone of Proximal Development, i.e., tasks need to be challenging but also doable. Distance education introduces new elements of do-ability. First, students, not to mention teachers, need to be proficient in the ICT tools they have at their disposal. Second, unlike in traditional classrooms, in distance education, teachers and peers are not within easy reach for teachers and students to provide assistance. Ways to remedy this include providing video tutorials and using technology, such as *Skype*, that allows more skillful others to "take over" someone's screens and show them how to use particular tools, just as if the helper were in the room with them.

Students taking on group roles (Johnson, Johnson, & Smith, 2006) offers yet another idea for adjusting the difficulty level of cooperative learning tasks in distance education. Rotating roles (so that everyone develops a range of skills) include facilitator (who keeps the group on task, monitors progress, and seeks everyone's engagement), questioner (who checks that everyone

understands what the group is doing and why, as well as being able to explain the group's answers), recorder (who keeps track of what the group has done, including members' progress on the individuals tasks they have volunteered for), timekeeper (who tracks how the group is doing with time constraints), and collaborative skills monitor (who encourages everyone to use the collaborative skill(s) designated by the group). In groups in distance education, another role to add might be "technology enabler," who is available to help any members with technology troubles. This technology help can also be extended to the teacher, as students' tech skills may often exceed those of their teachers.

5. How often should cooperative learning activities be done?

Many students and teachers worry that cooperative learning is too time consuming. In one way, they are right – for content coverage, it is faster to just deliver lectures or ask students to read something. Of course, our role as educators – whether we work face-to-face or via distance – lies not in covering material but in uncovering material, i.e., facilitating students' construction of their own unique understanding related to that material (Palincsar, 1998). Multiple research reviews (e.g., Johnson, Johnson, & Stanne, 2004), as well as theories in education and related fields (e.g., Maslow, 1970) suggest that cooperative learning can lead to gains in both cognitive and affective variables. Indeed, ample evidence exists to suggest that the time used to do cooperative learning is time well-spent.

Thus, perhaps cooperative learning is best used not as an occasional change of part of distance education, but as a standard part of how modern distance learning is done. Regular use of cooperative learning helps cooperative groups function more effectively, e.g., it assists students in mastering various cooperative learning techniques, such as those as simple as Circle of Writers – in which students take turns to write their ideas and then report to others about the ideas that they and their partner(s) have developed – or as relatively complicated as Jigsaw (Aronson, 2020) and Group Investigation (Sharan & Sharan, 1992). Sustained and frequent use of cooperative learning also gives students time to build their collaborative skills in distance education contexts, to learn how to use the relevant technology, and to build ties with classmates. For synchronous communication, some of the relevant technology includes videoconferencing applications such as *Zoom*, *Adobe Connect*, *BigBlueButton*, and *Skype*.

Frequent use of cooperative learning in modern distance education builds community (Moore, 2014; Phirangee, 2016). A community can be defined as "a specific group of people with a common interest" (vocabulary.com, 2020). Social Interdependence Theory (Deutsch, 1949) attempts to increase the power of communities by encouraging members to feel positively interdependent with one another, i.e., to feel as though their outcomes are positively correlated. Cooperative learning techniques and principles were specifically designed to foster feelings of positive interdependence among group members, and the principle of Positive Interdependence as a Value (Jacobs, Power, & Loh (2002) seeks to expand that feeling beyond the small group to the entire class, school, town/city, country, and world, even to other species.

The hope is that as a result of frequent participation in cooperative learning activities, students will turn to their groupmates not just when assigned to do so by their distance education teachers but that peer interaction will become a kind of natural reflex, as students come to see

learning as something that is often done in collaboration with others, although individual effort still plays a crucial role, and the individual learning of all group members constitutes the main goal. One way that students exercise this reflex for collaboration is via what in the face-to-face learning space has been called Out-of-Class Academic Collaboration (OCAC) (Crookall et al., 2000). In other words, without any prompting from their teachers, students collaborate to learn more and to enjoy their learning more. This OCAC has a natural distance education equivalent, because at any stage in the learning process, at any time in the term calendar and even after a course ends and students graduate, they potentially benefit from interacting with classmates or former classmates, even without prompting from teachers, not to mention ongoing collaboration with teachers and others in broader learning communities (Callaghan & Fribbance, 2016).

6. How to encourage students to do their fair share in their groups?

Perhaps students' most frequent complaint against group activities flows from the fact that too often one or more group members does not do their fair share in the group. In the terminology of cooperative learning, such situations demonstrate a deficit of individual accountability. However, please note that the first sentence of this paragraph used "fair share," not "equal share." As mentioned in the Question 2 about heterogenous grouping, cooperative learning groups will often have members who vary by more than a little in terms of past achievement, and those with lower past achievement may not be able to contribute an equal share, at least not at the present time. From a different perspective, as groups' goals should focus on the learning of the individual group members (see Question 7), those who are lower in past achievement have a great amount to contribute, even if that contribution is not prominently reflected in the products the group produces.

Some specific suggestions for fostering individual accountability:

- a. Keep group size small (see Question 1) to make it easier for everyone to know what everyone in the group is doing.
- b. Before doing synchronous communication, allow everyone time to write, think about, or rehearse what they will say. Sometimes people do want to do their fair share but they need a bit more time or help to prepare before doing it.
- c. Use turn taking. While some group members may have a tendency to do less than their fair share, others may do more. Turn taking, maybe even using tech tools to measure the length of turns in words or time, makes that less likely.
- d. Make a roster stating what everyone will do and by when they will do it. These rosters can be shared with the teacher. Of course, rosters need to be flexible.
- e. Collaboration apps, such *as Padlet* and *Trello*, can be used by groups to share ideas and files at any time. *Dropbox* and *Google Drive* can also be very useful for facilitating the sharing of files.

- f. Have regular discussions about how well the groups are functioning. ICT tools can provide evidence to use in these discussions.
- g. Divide roles and resources (see Question 5) to make it more obvious that everyone needs to contribute.
- h. Conduct self-reflection and peer-assessment. Learners are encouraged to think about their contribution to the success of collaborative work. They can also assess their peers' contribution to their group work.

7. How should students be assessed?

Assessment is a necessary element of education, as it provides feedback to guide the curriculum process (Chetwynd & Dobbyn, 2011). However, too often, assessment is painful and punitive, a way that students are segregated from each other and pitted against each other. Cooperative learning seeks to lend a friendlier tone to assessment. For example, cooperative tests and quizzes can be used (Jensen, Moore, & Hatch, 2002).

Cooperative learning also adds another piece to the assessment puzzle in distance education by raising the question of whether students should be assessed completely separately from groupmates, i.e., every group member receives a separate grade; whether there should be link between each student's grade and the grade(s) of their groupmate(s), e.g., in a writing class, each student's grade is based 50% on the score of their own essay and based 50% on a combination of the scores of their groupmates; whether all group member should receive the same grade; or whether assessment might even be independent of grades.

Johnson and Johnson (2003) argued that norm-referenced assessment, in which students' final grades are based on a comparison of their individual grade and the grades of everyone else in the cohort, may promote competitive feelings among students, i.e., negative interdependence, rather than positive interdependence. In contrast, Johnson and Johnson favoured criterion-referenced grading in which students' grades are based on a comparison of each student's individual grade against a standard. Thus, in criterion-referenced assessment, everyone can receive an A grade or everyone can receive an F grade, whereas in norm-referenced assessment, grades are spread across a curve, with some students receiving As, some Bs, etc., including Fs, regardless of how well or poorly students performed. Ipsative assessment offers a third alternative (Jacobs & Greliche, 2017). Here, students are assessed based on their own individual past performance, not in comparison with peers or a standard.

One important point to remember when cooperative learning is infused into distance education arises from the fact that education seeks to make each student a more capable person. Therefore, even if a group has done an excellent project, has answered every question correctly, or has given a top-notch presentation, the group's task remains incomplete until each group member could do equally well on their own, i.e., groups' ultimate goals lies in strengthening each group member. Fortunately, ICT provides multiple assessment means, although it is true that assessing each group member, rather than only assessing each group, adds to the work of already overburdened distance education teachers (Travers, 2016).

One assessment practice (Suen, 2014) in modern distance education is peer- and self-assessment. Moving away from 100% reliance on teacher assessment becomes particularly important in distance education, as teacher observation of students becomes so much more difficult with students so far away from teachers. Of course, peers often are also not in the same physical space. Nonetheless, peers can engage with each other much more often than can teachers. Furthermore, rather than relying solely on teachers to motivate students, in cooperative learning, peers can motivate each other, and being part of the assessment process enables students to be better informed motivators. Online tools for peer- and self-feedback are available from ForAllRubrics, Peergrade, and Teammates. Plus, learning management (LMS) systems, such as Blackboard, also have been self- and peer-assessment tools. Not to be forgotten is that peer interaction forms a common work mode in many companies, government organizations, etc. A great deal of software and other affordances have been developed for work contexts can also be used in education contexts.

Assessment by teachers can also benefit from technology. One criticism of cooperative learning is that teachers could not know what was going on in every group, because when teachers are with one group, they do not know what is happening in the other groups. Of course, even when whole-class discussion is used and teachers hear everything said by the one student who speaks at any one time, more crucially, teachers cannot hear what is going on inside each student's mind. The above notwithstanding, technology provides ways for students to share their discussions, oral and written, with their teachers, although there may also be a legitimate place for student-only discussion channels.

8. Do thinking skills need to be a part of cooperative learning?

Technology works very well with rote learning, e.g., teachers can program machines to score a classful of multiple-choice tests in just a few minutes (plus, the machines can make fun noises while doing the scoring). However, in education, we have long tried to move toward development of students' thinking skills. These skills have always been important but seem to be even more crucial, as we are now in what some call the Fourth Industrial Revolution (Schwab, 2017). Technology has made rote knowledge less important; almost any information can be found online. Furthermore, while cooperative learning seems able to aid students even on rote learning tasks, the power of peer interaction can be seen most clearly on tasks that involve higher order thinking (Tan, Gallo, & Jacobs, 1999). Thus, to really convince students that collaboration is the main way to learn via distance, they need to engage in tasks that call on them to deploy a range of thinking skills, and just as students will often benefit from teacher guidance in developing their collaborative skills (see Question 3), so too may teacher guidance often be useful in developing thinking skills.

9. Do we need to explain to students why we are asking them to work together?

Cooperative learning is by no means a new idea. Philosophers from thousands of years ago have argued for collaboration in education and other areas of life. In the past 20 years and more, ministries of education and university teacher education programs worldwide have advocated cooperative learning and similar approaches for students of every age, learning every subject area. Nonetheless, many students are unfamiliar with learning in groups or at least unfamiliar with successful, thoughtfully organized cooperative learning. Thus, as mentioned above, students in modern distance education may lack the cooperative skills and attitudes necessary to student-student collaboration. Worse, they may have had negative experiences that lead them to resist participation in cooperative learning.

To encourage distance education students to be open and even enthusiastic toward cooperative learning, teachers might wish to begin the course (with possible mid-course refreshers) using the following tactics.

- a. Teaching sharing of their own successful experiences with collaboration in and outside of education. Similarly, we can recount the fruitful collaborative experiences, either real-life or from well-known fiction, of others, and then ask students to recount theirs.
- b. Teachers can lead discussions of the benefits of collaboration in various areas of life, including professions, sports, entertainment, and family.
- c. Examples of cooperation among nonhuman animals, even among plants, can be cited.
- d. A brief cooperative learning activity can be done and then debriefed to encourage students to decide for themselves. This debriefing about cooperative learning and its place in modern distance education needs to continue periodically, rather than being a one-time event.

10. How should other stakeholders be involved?

Students and teachers are not the only ones who have a stake in the outcomes of education. Depending on students' ages, other people who have a stake in their education include parents, employers (future or present), governments, and educational administrators. In the case of both distance education (Wickersham & McElhany, 2010) and of cooperative learning (Slavin, 1987), these other stakeholders may have concerns. At the same time, these stakeholders play an important role in students' success and in the success of our efforts to promote distance education and to promote cooperative learning as a part of distance education. This is particularly the case with children who may depend of their families and others for devices, internet, and provision of a conducive learning space. Therefore, just as we need to discuss learning methodology with students, as noted in Question 9, so too should we educate other stakeholders on a regular basis.

11. Do teachers need help to use cooperative learning in distance education?

Most teachers can benefit from assistance in infusing cooperative learning in distance education. Firstly, change is not easy. As a saying in teacher education puts it, "We teachers tend to teach the way that we were taught." Unfortunately, most teachers were not taught using cooperative learning. Secondly, as the literature on cooperative learning and related approaches makes clear, doing cooperative learning, especially in distance education, entails much more than just asking students to collaborate. Guidance and patience are needed, just as guidance and patience are needed for teachers. Distance education is a rapidly developing field. Even more so than is already the case in other areas of education, in distance education, we are all learners, we are all experimenting, we are all taking chances and learning from our mistakes. Therefore, we in cooperative learning and distance education are all one large positively interdependent community. One for all and all for one!

Conclusion

The purpose of this article has been to provide ideas for teachers who wish to infuse cooperative learning when they teach via distance. Distance learning can be a major adjustment for both students and teachers, and including peer interaction in that distance learning presents yet another adventure for students and teachers. Fortunately, it can be a rewarding adventure, as cooperative learning provides students with more communication opportunities, more opportunities to give and receive assistance, and more opportunities to add a social element to their learning.

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Acknowledgements

The authors wish to thank Thomas Robb and a TESL-EJ reviewer for their very useful insights in the preparation of this paper.

References

Aronson, E. (2020). The jigsaw classroom. https://www.jigsaw.org.

Bellanca, J., & Fogarty, R. (1991). *Blueprints for thinking in the cooperative classroom*. IRI/Skylight Publishing.

Callaghan, G., & Fribbance, I. (2016). The use of Facebook to build a community for distance learning students: a case study from the Open University. *Open Learning: The Journal of Open, Distance and e-Learning*, 31(3), 260-272.

Chetwynd, F., & Dobbyn, C. (2011). Assessment, feedback and marking guides in distance education. *Open Learning: The Journal of Open, Distance and e-Learning*, 26(1), 67-78.

Crookall, D., Lopez-Nerney, S., Teng, S. M. J., Wu, S. M., Toh, L. S. J. E., Norhayati, M. I., Meyer, L., & Jacobs, G. M. (2000). Student-initiated out-of-class academic collaboration at a Singapore university. *The Asia-Pacific Education Researcher*, *9*(1), 64-82. [Also available as ERIC Document Reproduction Service No. ED 443 293.]

Deutsch, M. (1949) A theory of cooperation and competition, Human Relations, 2, 129-152. Gillies, R. M. (2007). Cooperative learning: Integrating theory and practice. Sage.

Jacobs, G. M., & Greliche, N. (2017). Convincing students that their groupmates' success can increase, not diminish, their own success. *Insight: A Journal of Scholarly Teaching*, 12, 145-157.

Jacobs, G. M., Power, M. A., & Loh, W. I. (2002). The teacher's sourcebook for cooperative learning: Practical techniques, basic principles, and frequently asked questions. Corwin Press.

Jacobs, G. M., & Renandya, W. A. (2019). Student centered cooperative learning: Linking concepts in education to promote student learning. Springer Nature.

Jensen, M., Moore, R., & Hatch, J. (2002). Cooperative learning: Part 3: Electronic cooperative quizzes. *The American Biology Teacher*, 64(3), 169-174.

Johnson, D. W., & Johnson, R. T. (2003). Assessing students in groups: Promoting group responsibility and individual accountability. Corwin Press.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (2007). *Nuts & bolts of cooperative learning* (2nd ed.). Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Holubec, E. (2020). Common mistakes in using cooperative learning – and what to do about them? *The newsletter of the Cooperative Learning Institute*, 34(1), 3-4.

Johnson, D. W., Johnson, R. T., & Smith, K.A. (2006). *Active learning: Cooperation in the university classroom*. Interaction.

Johnson, D. W., Johnson, R. T., & Stanne, M. B. (2000). *Cooperative learning methods: A meta-analysis*. Cooperative Learning Center, University of Minnesota. http://www.cooperation.org/pages/cl-methods.html.

Jolliffe, W. (2007). Cooperative learning in the classroom: Putting it into practice. Sage.

Khalil, H., & Ebner, M. (2017). Using electronic communication tools in online group activities to develop collaborative learning skills. *Universal Journal of Educational Research*, *5*(4), 529-536.

Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). Harper & Row.

Matthews, M. (1992). Gifted students talk about cooperative learning. Educational Leadership, 50(2), 48-50.

Moore, R. L. (2014). Importance of developing community in distance education courses. TechTrends, 58(2), 20-24.

Motallebzadeh, K., & Samadi, F. (2017). The effect of using online collaborative tasks on incidental vocabulary learning of impulsive vs. reflective Iranian EFL learners. *International Journal of Applied Linguistics and English Literature*, 6(6), 127-133.

Palincsar, A. S. (1998). Social constructivist perspectives on teaching and learning. *Annual Review of Psychology*, 49, 345–375.

Pásztor, A., Molnár, G., & Csapó, B. (2015). Technology-based assessment of creativity in educational context: the case of divergent thinking and its relation to mathematical achievement. *Thinking Skills and Creativity*, 18, 32-42.

Phirangee, K. (2016). Students' perceptions of learner-learner interactions that weaken a sense of community in an online learning environment. *Online Learning*, 20(4), 13-33.

Schwab, K. (2017). The fourth industrial revolution. Currency.

Sharan, Y., & Sharan, S. (1992) Expanding cooperative learning through Group Investigation. Teachers College Press.

Slavin, R. E. (1987). Cooperative learning and the cooperative school. *Educational leadership*, 45(3), 7-13.

Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice* (2nd ed.). Prentice Hall.

Suen, H. K. (2014). Peer assessment for massive open online courses (MOOCs). *International Review of Research in Open and Distributed Learning*, 15(3), 312-327.

Tan, G., Gallo, P. B., Jacobs, G. M., & Lee, C. (1999). Using cooperative learning to integrate thinking and information technology in a content-based writing lesson. *The Internet TESL Journal*, *5*(8), 13-21.

Thompson, K., Jowallah, R., & Cavanagh, T. B. (2019). "Solve the big problems": Leading through strategic innovation in blended teaching and learning. In Y. F. Qian & G. Y. Huang (Eds). *Technology leadership for innovation in higher education* (pp. 26-48). IGI Global.

Tomlinson, C. A., & McTighe, J. (2006). *Integrating differentiated instruction & understanding by design: Connecting content and kids*. Association for Supervision and Curriculum Development.

Travers, S. (2016). Supporting online student retention in community colleges: What data is most relevant? *Quarterly Review of Distance Education*, 17(4), 49-61.

Vocabulary.com. (n.d.). Community. In *Vocabulary.com dictionary*. Retrieved March 23, 2020 from https://www.vocabulary.com/dictionary/community

Vygotsky, L. S. (1978). *Mind in society* (ed. by M. Cole, V. John-Steiner, S. Scribner, & E. Souberman). Harvard University Press.

Webb, N. M., Franke, M. L., De, T., Chan, A. G., Freund, D., Shein, P., & Melkonian, D. K. (2009). 'Explain to your partner': Teachers' instructional practices and students' dialogue in small groups. *Cambridge Journal of Education*, *39*(1), 49-70. DOI: 10.1080/03057640802701986

Wickersham, L. E., & McElhany, J. A. (2010). Bridging the divide: Reconciling administrator and faculty concerns regarding online education. *Quarterly Review of Distance Education*, 11(1), 1-12.