International Association for the Study of Cooperation in Education

IASCE

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Table of Contents

Dear Colleagues,

As I sit down to write the opening letter for this final newsletter from IASCE, I feel somewhat sad and distracted. In the past seven months, the coronavirus pandemic has brought with it increasing confusion, fear, hunger, poverty, illness, and death. (2019 estimates were that approximately 1 billion people world-wide experienced food insecurity—and that has increased significantly in the past months.) In the United States, recent events have highlighted the institutional racism that has tainted the country since it was founded while, around the world, the disparities in pandemic responses and demographics have likewise highlighted long-term inequities.

It is against this backdrop that I reflect on IASCE. It is not an exaggeration to say that IASCE, and cooperative learning itself, was founded with a primary purpose of improving the life-chances of children and their families, through (a) greater equity and access in their day-to-day experiences and (b) a consistent focus on positive interdependence and pro-social values and skills.

For 40 years, IASCE supported, disseminated, and highlighted a wide-array of research related to the study of cooperation in education. From small beginnings in July 1979, the organization grew in the early 1990s, as measured by size and number of conferences, to both support and mirror the financial resources educational systems were then committing to teacher professional development in general and cooperative learning in particular. Teachers, administrators, and staff-development specialists participated in IASCE conferences alongside well-known and novice researchers. When schools in the United States and Europe slowed their commitments to ongoing-professional development, IASCE was invited to co-sponsor conferences in both Singapore and Japan where interest and support were strong and continue to be sustained. Over the past two decades, IASCE has maintained its values and expanded its focus through support for (a) a variety of outreach projects--including work with other organizations and co-sponsored conferences; (b) the IASCE website; (c) an award-winning edited book focused on cooperative learning and teacher education; and (d) multiple cooperative-learning themed issues of respected journals. In 2008, IASCE announced the IASCE Awards. These Awards have both recognized the outstanding work of new researchers and the contributions of those whose work have been significant and long-term.

IASCE's last three conferences--in England, Denmark, and Taiwan—are recent examples of IASCE's commitment to outreach, access, and equity. Each required IASCE to work with regional groups in cultural settings that were typically unfamiliar to the majority of IASCE board members. Each fostered access and equity by (a) providing proposal-writing assistance to those new to the proposal writing process; (b) utilizing a proposal review process that ensured that reviewers did not know identifying characteristics of those who had submitted proposals; (c) communicating with presenters in the months before the conference with accommodation and travel tips plus ideas to ensure that their own presentations modeled interaction among participants; (d) not providing honoraria for keynote speakers or well-known presenters; and (e) awarding bursary funds to support conference participation for emerging researchers and practitioners.

LETTER FROM THE CO-PRESIDENT

Our conference efforts have been one important way IASCE has connected people interested in cooperative learning and has modeled its organizational values. We are grateful to our partners, participants, and friends who over the years have supported and joined us in these efforts. Many of the reflective pieces individuals submitted for this Commemorative Edition of the IASCE Newsletter suggest that the nurturing spaces that characterize these conferences have had powerful effects.

In addition to reflective pieces, this newsletter includes several additional features. Yael Sharan has been a faithful contributor of book and journal reviews, plus descriptions of CL related conferences she has attended. Through Yael, I was pleased to learn about Pasi Sahlberg's recent coauthored book that focuses on the importance of play. It's been over 35 years since John Goodlad asked "Why are schools not places of joy?" in *A Place Called School* (1984). Surely time to play is one such joy yet, in the seemingly endless, mad scramble for "efficiency" and high rankings, it is one of those joys so often denied. George Jacobs has contributed a brief article in which he, once again, invites us to consider the "bigger picture." Thank you George for your frequent and often provocative reminders. *From the Journals* section, a long-time feature of our newsletter, is as varied as we have come to expect and I noticed several authors whom we recently met at our conferences.

Reflecting on her own conference experience in Taiwan, Celine Buchs reminds us about the challenges of multilanguage groups and asks us to rethink the value of *Jigsaw*, which many may take for granted. How ironic that a strategy designed to bring diverse students together, might highlight differences in ways that are uncomfortable and unproductive. I have often been unsatisfied with *Jigsaw* and its variants, both as a student and as a teacher, and tend to approach it with caution, if at all. I found Celine's descriptions of her experience and review of literature helpful. Wendy Jolliffe provides us with a view of a different type of conference learning and reflection through her description of two teachers' work, whom she met at two separate events. Beathe Liebech-Lien, from Norway, was a Bursary recipient for the Taiwan conference. Beathe's work, which she shared in Taiwan, was notable for its honesty, originality, and insights into teacher development. Wendy also describes her meeting Selma Dzemidzic Kristiansen who, now living in Norway, has done fascinating work in Sarajevo. It is hard to imagine a more compelling story of adversity and diversity coupled with the power of cooperation. Thank you Wendy, Beathe, and Selma for your work and insights.

IASCE first met Lalita Agashe, Trish Baker, and David Duran in 2008 at our co-sponsored conference in Torino Italy. It was a pleasure to read their descriptions of the journeys that brought them to Torino and their subsequent work. Lalita Agashe's work is a wonderful example of how context and the integrity of personal beliefs inform cooperative-learning practice. Trish Baker and her colleague Jill Clark—challenged with an explosion of cultural/language diversity in tertiary-education student populations in in New Zealand—began an intense investigation into cooperative learning that lead them to innovative research, publications, staff-development work with tertiary faculty, and IASCE. David Duran's journey is also one of challenges, context, and tenacity. He and his colleagues have built a careful model that weaves collaboration among (a) university faculty and school professionals, (b) teachers across regions and languages in Spain, (c) schools and parents, and of course (d) students.

You can learn more about Celine, Wendy, Lalita, Trish, David and their colleagues by visiting back issues of IASCE newsletters. These include article abstracts plus book, journal, and conference reviews where their work has been featured.

Neil Davidson and Yael Sharan, both IASCE "originals," have shared their reflections. Neil describes both the "early days" and those energizing years of the early 1990s. In this issue he announces the upcoming book *Pioneering Perspectives in Cooperative Learning* and a second anticipated cooperative-learning-related volume to which our members and readers are encouraged to consider submitting a proposal. It is clear that Neil has appreciated and maintained his connections to individuals, cooperative learning, and IASCE!

Yael's ongoing commitment to IASCE and cooperative learning is truly remarkable. Yael is hardworking and energetic but, if I could use just one word to describe both my observations of her, as well as my own experiences with her since I first met her in 1990, I would say that she is curious (and, if I can add one more word, I would say welcoming). In 1992, when I travelled to Utrecht to present for the first time at an IASCE conference, I was nervous. My apprehension was augmented by the somber conference surroundings and some openly expressed disagreements among some of the veterans. What were they going to think of me—who had been an elementary music teacher for over a decade and was new to University teaching? I was offering a highly experiential

workshop—when so many of the sessions were scholarly papers. Thanks to Yael and Celeste Brody's willingness to just "jump in" and participate, a large circle of people were soon very engaged and noisy participants. This group's enthusiasm and questions gave me the courage to pursue my ideas and, by the time I left Utrecht two days later, I knew I had found a home. For over 25 years, I have watched both Yael and Celeste welcome and encourage so many people. Their commitment to the values that exemplify IASCE has a practical "real-time" quality that has benefitted so many.

There is one more reflection that I must mention; it exemplifies her values so well. When IASCE met Maureen, her background was intriguing and we soon learned that her integrity, knowledge, skills, and willingness to commit to hard work were boundless. Maureen first brought IASCE to the UK in 2002 and was instrumental to our return in 2012. She has served as Co-president, Secretary, and Membership Coordinator. She has edited multiple volumes focused on cooperative learning and values and she, and her friends at Dynamix and CLADA, helped IASCE to change and grow in many ways. I have learned so much from both Maureen Breeze and Celeste Brody in my years of working with them as an IASCE Co- president.

Now it is time to say goodbye with some practical announcements.

1. The IASCE website will remain in place until late 2020. JASCE: The Japan Association for the Study of Co operation in Education has graciously offered to host the IASCE newsletters. These will soon be available at https://protect-us.mimecast.com/s/K-npCM86lgT2O9LKuJ_IYg?domain=jasce.jp Thank you JASCE!
2. IASCE will soon deactivate board members' IASCE email accounts. This issue of the newsletter includes longer-term email addresses for (former) Board Members.
3. **Consider the proposal for a new cooperative learning network *NICLEE: Network of International Cooperative Learning Educators and Enthusiasts.* Your feedback, ideas, and participation will be important to the success of this new venture. As we all work to stay healthy, it is important to stay connected. NICLEE might help.**
4. **Consider the Call for Proposals for a possible new book about perspectives on cooperative learning.**

We wish to thank everyone who has contributed to this Commemorative Edition of the IASCE Newsletter, with special thanks to Jill Clark, our Newsletter Editor. IASCE is thankful for each of our members, colleagues, conference participants, and website readers—for the work you have done and for the friendships and journeys we have shared. Each of us has had meaningful experiences that have helped us understand the power of cooperation for learning and living. Currently, conferences, travel, and even a group-hug-circle seem unattainable. Still, we are confident that each of us can draw on our past experiences and understandings, plus stay connected to people and ideas electronically, to nourish ourselves, our families, students, colleagues, and communities as we navigate these changing and challenging times.

With sincere gratitude,

(former) IASCE Co-president

Let the Children Play

Why More Play Will Save Our Schools and Help Children Thrive

Pasi Sahlberg* and William Doyle*

Reviewed by Yael Sharan

If you or anyone you know may have any doubts about the value of play in a child's life, reading Let the Children Play, co-authored by Pasi Sahlberg and William Doyle, will obliterate these doubts from your mind. Over 400 pages are devoted to explaining and documenting the indisputable contribution of play to the spiritual, psychological, and intellectual life of children. Like assiduous lawyers, the authors back up their belief by citing innumerable 'witnesses for the defense': their personal and others' experience as children and as parents, what they learned from countless visits to schools around the world, from interviews with numerous educators at all levels, as well as from pediatricians and researchers. Towards the end of the book they offer additional testimonies to the value of play in school from an international panel of experts.

What do the authors mean by "play?" They offer their own multiple definitions and descriptions of play, in addition to those by countless educators, philosophers, psychologists, and parents. To remind readers that play is not a new idea they cite Friedrich Frobel, the 19th century German educator whom we have to thank for the concept of "kindergarten". He understood play as "the highest expression of…what is in a child's soul (p.49)". The authors offer a more concrete definition:

“We define play in school as both "free play" by children, and "guided play" by adults for children, as both physical and intellectual, and as both indoor and outdoor (p. 50).”

As you can see by this definition, the authors stress the importance of play in school. Sahlberg describes the way schools in Finland structure the day so that after each 45 minute lesson children have 15 minutes to play, indoors or outdoors. There is no dichotomy here: play, in its broadest sense, is also a part of what takes place in those 45 minute lessons. Designing, building, play-acting, hands-on experiments, self-directed projects, and even running around are but some examples of how the varied extensions of play can be embedded in learning, and are described in various chapters in the book.

The value of play does not lie in predictable and measurable outcomes; neither, claim the authors, should the value of scholastic efforts. Chapter 4 is devoted to what the authors call GERM – the Global Education Reform Movement, which they see as a "virus spreading around the world" and killing play, creativity, and physical activity in schools. They adamantly denounce the "Darwinian race for higher standardized test scores," the policies that punish schools and teachers based on testing scores, and the pressure on young children to prematurely absorb academic material (p. 101). The authors describe in detail the five main manifestations of the GERM "virus:" increased competition between schools, the standardization of teaching and learning, the de-professionalization of the teaching profession and school leadership, large-scale high-stakes standardized testing, and last, market-based privatization of public education. Each of these factors is supported by examples from research and practice (at home and at school).

The three chapters that follow (5, 6, and 7) continue the detailed argument against the demise of play in school and the emphasis on standardization. In Chapter 6, titled "An American Tragedy: The Death of Recess," Doyle describes one example of this development in a new type of recess that he witnessed in a New York public elementary school. The school hired 'recess coaches,' whose job was to organize games so that each student could participate in an activity of his or her choice. One coach explained that "a lot of children don't know how to play anymore"(p.192), and by creating teams, each for a different activity and with specific rules, no child is left out and there is no bullying. The author sees this as another form of a structured gym class, where children do not have the freedom to "independently negotiate and collaborate"(p.193) with one another. Earlier we learn of the many skills sharpened in play, in addition to negotiating and collaborating, such as emotional intelligence, judgment, and decision making (p.73).

In Chapter 7 the authors report on the growing trend in China, Singapore, South Korea, England, and other countries, to join "The Global War on Play," where free play is vanishing from schools and from time after school. It is systematically replaced by private tutoring and classes geared to meeting standardized testing demands, causing undue stress and anxiety, in children as well as in their parents.

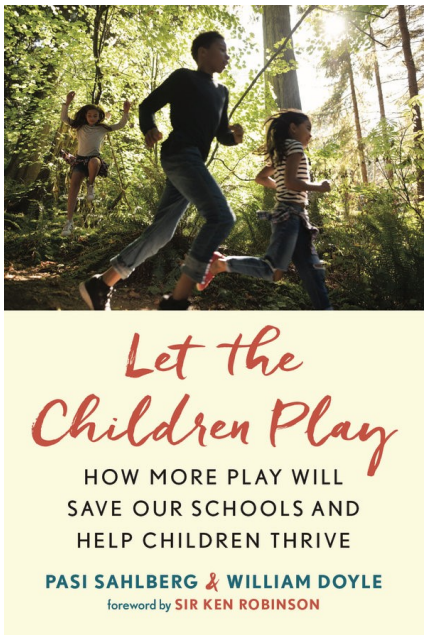
"And Now the Good News!" Finally, from Chapter 8 through 10, the authors bear witness to "play champions" around the world, even in countries in which some schools have abandoned play as part of the curriculum. Not surprisingly, Doyle describes his 7 year old son's positive experience in Finland, a country known for the central role of various forms of play in "children's lives, both in and out of school" (p.220). It is particularly inspiring to read about Finland's reaction to the country's recent slip in PISA tests. Instead of increasing academic pressure, educators and government officials interviewed children of all ages and decided to increase students' involvement in school. The result was "more outdoor play and physical activity, more interdisciplinary learning… more real-life classroom exercises, all with the goal of making school more engaging and interesting to students" (p. 236). Doyle also mentions the influence of female parliament members on the implementation of these educational goals.

The concluding chapters go on to feature examples of the successful integration of play in schools in Texas, New Zealand, and Croatia. As mentioned above, the book ends with a "Global Play Summit," in which a worldwide panel of experts in education was interviewed, in person or digitally, about their views of the role of play in school. The reader cannot help but be convinced that play is, indeed, a necessary and effective part of school, and that teachers and parents must learn to value it and enable it.

Sahlberg, P., & Doyle, W. (2019). *Let the children play: Why more play will save our schools and help children thrive.* Oxford University Press.

* Pasi Sahlberg is an authority on educational improvement, currently a professor of education policy at the University of New South Wales Sydney in Australia. He has participated in several IASCE conferences, most recently at the University of Hull in Scarborough.

*William Doyle is a bestselling author and TV producer. Since 2015 he has served as a Fulbright Scholar in Residence at the University of Eastern Finland and advisor to the Ministry of Education and Culture in Finland.



It Takes A Village to Develop Cooperative Students

George Jacobs

I teach courses and workshops for in-service teachers on cooperative learning (CL) and other forms of student-centered learning (SCL). Not infrequently, I sense a disquiet among my fellow teachers. They have tried various ways to make CL work, but regardless of the fact that these teachers have implemented research-based, theory -supported CL practices, their path to CL nirvana continues to confront such obstacles as low student motivation, students who are reluctant to grapple with higher-order thinking, a belief in the role of teachers as sages on stages rather than guides on the side, and lack of cooperation among classmates.

When this cloud of disquiet threatens to fog my class' further consideration of CL, I sometimes do a sidetrack, as follows. I ask the teachers in groups of two to come up with a list of factors that might impact student learning, such as genes, family income, societal attitudes towards education, the amount of money the school spends on each student, and the teacher factor. This is just an informal survey, not a scientific instrument, to be compiled by the two teachers taking turns to nominate factors.

Next, as a class, we discuss the factors nominated in the pairs and arrive at a list of ten factors impacting student learning. The most interesting part of the activity occurs when the teachers work alone to put those ten factors into a pie chart with different sized pie slices and then take turns to explain the relative sizes of each slice to their partner and the other two members of their foursome. In the many times I have done this activity, the share of the pie consumed by the teacher factor has ranged from 5% to 50%, but is usually around 20 or 25%.

To me, the moral of the pie chart activity is that yes, we teachers should, in collaboration with colleagues and students, do our best and strive to make our best continually better, but we should not beat ourselves up when obstacles appear to be temporarily insurmountable. The purpose of this brief article is to suggest that when looking for paths toward successful CL implementation, we should also look at and attempt to address societal factors that impact student learning overall and the success of CL in particular.

Social Forces Affecting the Success of Cooperative Learning

Countervailing social forces seem to be at work both plaguing and promoting the possibility of student cooperation. Two forces problematizing student-student cooperation are: (1) a political trend away from democracy, and (2) a view of humans as innately selfish.

1. CL and Democracy – Dewey (1938) advocated group activities in education as a means of promoting democracy in the wider society. The power dynamics in classrooms tend toward teachers exercising control, whereas the "power in numbers" aspect of CL encourages students to share power and responsibility with students (Jacobs & Power, 2016). Unfortunately, in recent years, a view of democracy as messy and inefficient seems to have gained strength (Forrest, 2019).

2. Human Nature Stinks - One of the main reasons why students prefer to work alone rather than in groups stems from their belief and experience that if they help their peers, their peers will not reciprocate. Students often say, "It's just human nature" when discussing their classmates' unreliability. Parents and others may reinforce this perspective (Debate.org, 2019).

Two forces promoting cooperation are: (1) scientific discoveries about how the brain works, and (2) a trend toward community.

1. Our Social Brain – With the benefit of new technology that allows researchers to see in real time what occurs in people's brains, a new field, sometimes called social cognitive neuroscience, has emerged. At least some scholars in this field take a more positive view of human nature, providing evidence that humans have a propensity to favor fairness and cooperation (Tabibnia, & Lieberman, 2007).

2. Building Community – "Community" has become a popular term, e.g., PlantPure Communities (2019).

Perhaps, people are seeking social connection at a time when loneliness seems to be on the rise (Kristof, 2019).

Towards a More Cooperative Society

What the remainder of this article does is to suggest what we teachers can do outside our own classrooms to contribute our few cents toward catalyzing a wider world conducive to classrooms of cooperation. Part of this involves the view that everyone is a teacher, e.g., we teach others by example via our daily public actions. Examples will be used from Singapore, where I live.

1. Kindness – Evidence suggests that acts of kindness, planned or random, provide benefits to both the recipients and the givers of kindness (Rowland, 2018). For example, Singapore has a Kindness Movement, which regularly enters the public space in order to promote cooperative views.

2. Positive Interdependence – This central tenet of CL (Johnson & Johnson, 1992) has implications throughout life. For instance, forest fires in neighboring Indonesia can cause major air pollution in Singapore. In response, some people here become angry with Indonesians and their government. Alternatively, a response informed by positive interdependence would encourage people in Singapore to help Indonesia deal with this joint problem.

3. The Media – Media, both traditional and new media, offer a way to send a cooperative message to many people. For example, recently, I helped a friend write an article urging people to take a less anthropocentric attitude toward the tigers living in nearby Malaysia (D'Rozario, 2019).

4. Helping the Less Fortunate – Just as academic proficiency differs in classrooms and just as CL guides students to see that their group only succeeds if all group members learn and otherwise succeed, society has those who might need additional help. In the Singapore case, many blue collar workers come here from other countries to work for salaries and conditions substantially below those of Singapore citizens. Fortunately, some NGOs have arisen to look out for these people's welfare, with a goal of increasing overall social harmony and well-being e.g. HOME (Humanitarian Organization for Migration Economics).

References

Debate.org. (2019). *Are humans innately selfish*. https://www.debate.org/opinions/are-humans-innately-selfish

Dewey, J. (1938). *Experience and education*. Macmillan.

D'Rozario, V. (2019, August 3). Commentary: Tigers belong in the wild, not in our homes, the streets or farms. *Channel News Asia*. https://www.channelnewsasia.com/news/commentary/tiger-population-in-asia-conservation-malaysia-road-walking-11766004

Forrest, A. (2019, February, 5). Democracy undergoing 'alarming' decline around the world, study finds. *Independent.* https://www.independent.co.uk/news/world/democracy-freedom-house-annual-report-civil-liberties-authoritarian-donald-trump-us-a8763196.html

Jacobs, G. M., & Power, M. A. (2016). Student centered learning: An approach to fostering democracy in schools. *Beyond Words, 4*(2), 79-87. https://doi.org/10.33508/bw.v4i2.940 http://journal.wima.ac.id/index.php/BW/article/view/884/pdf

Johnson, D. W., & Johnson, R. T. (1992). *Positive interdependence: The heart of cooperative learning*. Interaction Book Company.

Kristof, N. (2019, November 9). Let's wage war on loneliness. *New York Times*. https://www.nytimes.com/2019/11/09/opinion/sunday/britain-loneliness-epidemic.html

PlantPure Communities. (2019). *The role and mission of PlantPure Communities*. https://plantpurecommunities.org/about-plantpure-communities/

Rowland, L. (2018, February). Kindness: Society's golden chain? *The Psychologist, 31*, 30-35. https://thepsychologist.bps.org.uk/volume-31/february-2018/kindness-societys-golden-chain

Tabibnia, G., & Lieberman, M. D. (2007). Fairness and cooperation are rewarding: Evidence from social cognitive neuroscience. *Annals of the New York Academy of Sciences*, *1118*(1), 90-101. https://doi.org/10.1196/annals.1412.001

Reflection on the Jigsaw method

Celine Buchs[1]

University of Geneva

Attending the IASCE cooperative learning strand at the recent IAIE conference, I noticed that several CL workshops engaged participants in various applications of the jigsaw method. I would like to share my reflections on jigsaw because it represents a type of cooperation but may raise some questions regarding learning. It reminded me of a personal experience when I was a young French PhD student participating in a jigsaw exercise during a CL workshop in the U.S. on a very American topic. I did not know anything about the topic and I was the only non-English speaker in the room. I was somewhat embarrassed to have to read a text (in a very short time) and to have to explain it properly to my partners who relied on me. This experience led me to reflect on the choice of jigsaw activities in some workshops at the IASCE strand where international participants have to explain texts to some experts in the field who are also participating in the workshop. As a researcher, I can't help connecting personal reflection and research.

Jigsaw (Aronson & Patnoe, 2011; Blaney, Stephan, Rosenfield, Aronson, & Sikes, 1977) is a very popular cooperative method that relies on positive goal and resource interdependence. The website https://www.jigsaw.org/ sums up the different stages by which each student in a team is responsible for learning a part of the material and teaching it to other members of the team, so that finally each member learns all parts. Positive resource interdependence underlines the need to coordinate the different pieces of knowledge in order to get the whole picture. This method elicits cooperation as an appropriate way of interaction, and strengthens the relevance of the relationships with the partners (Aronson & Patnoe, 2011; Cohen & Cohen, 1991). The website emphasizes that most teachers find jigsaw easy to learn and enjoy working with it.

Jigsaw was introduced in the United States at the time of desegregation, with the hope that cooperation and interdependence would ease tensions and inter-group hostility. Indeed, research indicates that jigsaw classrooms enhance several outcomes, including students' involvement and interest in the material, self-esteem, school and groupmates' appreciation (Aronson & Patnoe, 2011; Blaney et al., 1977), as well as experience of competence, autonomy, and social relatedness (Hänze & Berger, 2007), self-regulated learning and academic motivation (Sanaie, Vasli, Sedighi, & Sadeghi, 2019), perceived educational value and enjoyment (Oakes, Hegedus, Ollerenshaw, Drury, & Ritchie, 2019).

However, the picture may be more ambivalent regarding learning. On the one hand, numerous studies have documented positive effects of resource interdependence on learning (Johnson, Johnson, & Stanne, 1989; Lambiotte et al., 1987; Tarhan, Ayyıldız, Ogunc, & Sesen, 2013; Tarhan & Sesen, 2012; Walker & Crogan, 1998), especially for the part where students become "experts" (Hänze & Berger, 2007; Souvignier & Kronenberger, 2007). On the other hand, alternative results may question this positive view. The benefits of jigsaw may vary for different kinds of students, with positive effects documented only for certain students, namely minority students (Blaney et al., 1977, see also Aronson & Patnoe, 2011) or students with low academic self-concept (Hänze & Berger, 2007). Slavin's review (1990) underlined that the effects of jigsaw on learning remained unclear, as a great variability can be noted (effect size from -0.51 to +1.41, median = +0.04, N = 9, Slavin, 1990) and Johnson and Johnson (2002) indicated that jigsaw failed to show a significant difference compared to individual learning (average effect = +0.13 and weighted effect size =+0.09, N = 5). Some studies failed to demonstrate any jigsaw benefits for learning (Box & Little, 2003; Lazarowitz, Baird, Hertz-Lararowitz, & Jenkins, 1985) and others emphasized that students' learning benefited less from jigsaw than from teacher-guided instruction (Souvignier & Kronenberger, 2007) or lectures, even if students appreciate the jigsaw experience (Wilson, Pegram, Battise, & Robinson, 2017).

Some arguments can help to understand difficulties learning with jigsaw. In line with Slavin (1995), we would like to stress that jigsaw is very demanding for students. First, they are required to play the teacher role for one stage, but they may experience difficulties in understanding the content in a limited time and find the way to teach it in a way other students may understand it. Resource interdependence may focus participants more on

transmitting and receiving information than on elaborating on the materials, which can explain poor learning gains (Moreno, 2009). Some students report a cognitive load and may feel pressure to perform as teachers, and experience uncertainty (Oakes et al., 2019).

Secondly, students are dependent on their partners' input to access all the material. Some research results underlined that students performed worse on the learning materials that they had learned from their partners (Souvignier & Kronenberge 2007). The difficulty of the material or texts (Buchs, Butera, & Mugny, 2004) and the quality of informational input is crucial for students' learning (Buchs, Pulfrey, Gabarrot, & Butera, 2010). It may be problematic whenever partners find it difficult to explain the material well, as it can be when people do not master the official language. In the case of poor informational input, learners can find it difficult to understand material their partners "teach," and positive interdependence can turn into negative interdependence. Roseth and colleagues underline that jigsaw elicits cooperative, competitive, and individualistic goals and simply distributing resources among jigsaw group members does not result in optimal outcomes (Roseth, Lee, & Saltarelli, 2019).

Keeping all these points in mind, it seems that some caution is needed when proposing jigsaw in order to sustain students' learning. Teachers may need to make sure that all students understand the content and succeed in teaching it in an appropriate way for their partners. This requires particular attention in elementary schools (Aronson & Patnoe, 2011; Souvignier & Kronenberger, 2007), but difficulties have been also reported in higher education. To conclude, as for many cooperative learning situations, students need to be prepared before jumping into jigsaw. Setting the stage for cooperative learning is important (Sharan, 2014).

[1]Thanks to Nicolas Margas, Yann Volpé and Yael Sharan for discussion about this reflection.

Aronson, E., & Patnoe, S. (2011). *Cooperation in the classroom. The Jigsaw method* (2nd ed.). Pinter & Martin.

Blaney, N. T., Stephan, C., Rosenfield, R., Aronson, E., & Sikes, J. (1977). Interdependence in the classroom: A field study. *Journal of Educational Psychology, 69*, 121-128.

Box, J. A., & Little, D. C. (2003). Cooperative small-group instruction combined with advanced organizers and their relationship to self-concept and social studies achievement of Elementary School students. *Journal of Instructional Psychology, 30*(4), 285-287.

Buchs, C., Butera, F., & Mugny, G. (2004). Resource interdependence, student interactions and performance in cooperative learning. *Educational Psychology, 24*, 291-314. https://doi.org/10.1080/0144341042000211661

Buchs, C., Pulfrey, C., Gabarrot, F., & Butera, F. (2010). Competitive conflict regulation and informational dependence in peer learning. *European Journal of Social Psychology, 40*, 418-435. https://doi.10.1002/ejsp.631

Cohen, B. P., & Cohen, E. G. (1991). From groupwork among children to r&d teams: Interdependence, interaction and productivity. *Advances in Group Processes, 8*, 205-225.

Hänze, M., & Berger, R. (2007). Cooperative learning, motivational effects, and student characteristics: An experimental study comparing cooperative learning and direct instruction in 12th grade physics classes. *Learning and Instruction, 17*(1), 29-41. https://doi.10.1016/j.learninstruc.2006.11.004

Johnson, D. W., & Johnson, R. T. (2002). Cooperative learning methods: A meta-analysis. *Journal of Research in Education, 12*(1), 5-24.

Johnson, D. W., Johnson, R. T., & Stanne, M. B. (1989). Impact of goal and resource interdependence on problem-solving success. *Journal of Social Psychology, 129*(5), 621-629.

Lambiotte, J. G., Dansereau, D. F., O'Donnell, A. M., Young, M. D., Skaggs, L. P., Hall, R. H., & Rocklin, T. R. (1987). Manipulating cooperative scripts for teaching and learning. *Journal of Educational Psychology, 79*(4), 424-430.

Lazarowitz, R., Baird, J. H., Hertz-Lararowitz, R., & Jenkins, J. (1985). The effects of modified jigsaw on achievement, classroom social climate, and self-esteem in high school science classes. In R. E. Slavin, S. Sharan, S. Kagan, R. Hertz-Lazarowitz, C. Webb, & R. Schmuk (Eds.), *Learning to cooperate, cooperating to learn* (pp. 231-253). Plenum Press.

Moreno, R. (2009). Constructing knowledge with an agent-based instructional program: A comparison of cooperative and individual meaning making. *Learning and Instruction, 19*(5), 433-444. https://doi.10.1016/j.learninstruc.2009.02.018

Oakes, D. J., Hegedus, E. M., Ollerenshaw, S. L., Drury, H., & Ritchie, H. E. (2019). Using the Jigsaw Method to teach abdominal anatomy. *Anatomical Sciences Education, 12*(3), 272-283. https://doi.0.1002/ase.1802

Roseth, C. J., Lee, Y. K., & Saltarelli, W. A. (2019). Reconsidering jigsaw social psychology: Longitudinal effects on social interdependence, sociocognitive conflict regulation, motivation, and achievement. *Journal of Educational Psychology, 111*(1), 149-169. https://doi.10.1037/edu0000257

Sanaie, N., Vasli, P., Sedighi, L., & Sadeghi, B. (2019). Comparing the effect of lecture and Jigsaw teaching strategies on the nursing students' self-regulated learning and academic motivation: A quasi-experimental study. *Nurse Education Today, 79*, 35-40. https://doi.10.1016/j.nedt.2019.05.022

Sharan, Y. (2014). Learning to cooperate for cooperative learning. *Anales de Psicologia, 30*(3), 802-807. https://doi.10.6018/analesps.30.3.201211

Slavin, R. E. (1990). *Cooperative learning: Theory and research and practice*. Prentice-Hall.

Souvignier, E., & Kronenberger, J. (2007). Cooperative learning in third graders' jigsaw groups for mathematics and science with and without questioning training. *British Journal of Educational Psychology, 77*(4), 755-771. http://dx.doi.org/10.1348/000709906X173297

Tarhan, L., Ayyıldız, Y., Ogunc, A., & Sesen, B. A. (2013). A jigsaw cooperative learning application in elementary science and technology lessons: Physical and chemical changes. *Research in Science & Technological Education, 31*(2), 184-203. https://doi.org/10.1080/02635143.2013.811404

Tarhan, L., & Sesen, B. A. (2012). Jigsaw Cooperative Learning: Acid-Base Theories. *Chemistry Education Research and Practice, 13*(3), 307-313. http://dx.doi.org/10.1039/C2RP90004A

Walker, I., & Crogan, M. (1998). Academic performance, prejudice, and the jigsaw classroom : New pieces to the puzzle. *Journal of community and applied social psychology, 8*(6), 381-393.

Wilson, J. A., Pegram, A. H., Battise, D. M., & Robinson, A. M. (2017). Traditional lecture versus jigsaw learning method for teaching Medication Therapy Management (MTM) core elements. *Currents in Pharmacy Teaching and Learning, 9*(6), 1151-1159. https://doi.org/10.1016/j.cptl.2017.07.028

Two stories from Norway

Wendy Jolliffe

One of the huge benefits from attending conferences is the opportunity to meet people from different countries and hear about their work. I have observed a growing interest in cooperative learning in Scandinavian countries and the following are two innovative examples from Norway.

At the IASCE conference in Taiwan in March 2019, I had the pleasure to get to know Beathe Liebech-Lien from Norway. Beathe was one of the first teachers in Norway to be funded by the Norwegian research council as a teacher-researcher to undertake a PhD in cooperative learning and at the same time work for her local municipality and school. At the completion of her studies, she will continue to work at the school with some teaching obligations, supporting and facilitating development work and practice-based research projects.

Beathe's interest in cooperative learning (CL) began as an early career teacher wanting to facilitate learning by students working together, but she found she did not have the competence to do this effectively. Project-based work was an important part of the curriculum and she realised she needed to know how to structure it and to teach the students how to collaborate. This led to Beathe experimenting with CL and beginning to inquire further. She saw the impact of this way of learning and her lessons became more active. She found she was not the one talking anymore: the students were supporting each other and her practice became more inclusive. Together with three colleagues she received some professional development on Kagan structures. This led to implementation in the school where she was then working and kick-started her research into CL which has now taken a more conceptual approach.

Beathe says that cooperative learning is gaining interest in Norway, but whilst there is frequent group work going on, it is not structured CL where teachers have a reflective relationship with the key elements. In addition to completing her PhD, she facilitates workshops around Norway in response to the gaining interest in CL. She has found that teachers are really interested in what this methodology can do for their teaching practice.

Beathe reflects that the opportunity to have a research and development project that she both facilitates and researches, helps the theory and practice become closely interwoven. She feels that she has learned a lot about how to facilitate teacher learning, as well as extending her own understanding. She finds there are two main challenges for teachers. First, teachers easily get very focused on the specific structures without adapting their way of thinking. She finds that continuous focus on the theory behind the structures, and time to reflect on the elements in relation to the structures and their students learning, can support this. Another challenge is to support teachers to sustain practice after professional development programmes, so they further develop their use of CL. She believes schools implementing CL need a good plan on how to sustain practice, because it can take a long time before teachers get comfortable with it. This is made more difficult due to the many demands for the teachers in Norway such as exams and a new curriculum and they need to see how CL can be integrated in to this, and not be in addition to it.

One successful way to support teachers, Beathe finds, is to give them first-hand experiences of CL by letting them work in structured cooperative learning groups during professional development sessions and reflect on their experiences. In this way, teachers realise the value of CL. Beathe's advice on the best start for teachers is to begin exploring CL with the teachers that are closest to you and that you share students with so you can plan together and discuss experiences and celebrate when it works, but also support each other when it doesn't. She also recommends networking with other teachers and always suggests teachers that attend her workshops exchange contacts so they can update each other on their use of CL. Social media can also help to connect and form online support groups.

At the completion of her PhD, Beathe hopes to continue to support teachers with CL. She would like to work more with networks of schools in her municipality. She would love to inquire further into CL and would be interested to collaborate with other CL researchers.

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At the IAIE Conference in Amsterdam in November 2019, I had the pleasure to meet Selma Dzemidzic Kristiansen who comes from Bosnia and Herzegovina and has been living in Norway for four years. Selma's story of learning about cooperative learning in Sarajevo and her current PhD study in Norway is particularly enlightening and her enthusiasm is infectious. Selma is a PhD candidate at PEDRES Program-Pedagogical resources and learning processes, and a teacher in the International Teacher Education for Primary Schools (ITEPS) at the University of South-Eastern Norway, at Drammen.

Selma's interest in cooperative learning started through working with children in small groups in the shelter of her building during the war period 1991-1995 in Sarajevo. Organising children to play and do things in small groups helped to overcome their fear of the bombing. They tried to keep things 'normal' and meanwhile, found they were discovering a lot about effective learning and becoming a strong small group. It was one way to provide basic 'emergency' learning. In 1997, after the war in Bosnia and Herzegovina, she was facing the post-war educational consequences and it motivated her to seek alternative ways of teaching and learning. Child-centred methodology was a key influence for Selma and a first step towards learning about cooperative learning. A number of international organizations supported her personal and professional development within the field of cooperative learning, especially the organisation, 'Step by Step' which helped lower primary school teachers to receive basic and advanced student-centred methodology training, including cooperative learning.

Her experience and knowledge of cooperative learning developed whilst she was in Bosnia and Herzegovina and she started to present to other colleagues positive examples of cooperation and cooperative learning activities. As a trainer and member of International Association for Initiatives in Education, (Step by Step) she conducted with colleagues many educational workshops for primary and secondary school teachers. A key motivator for her was the positive response of students and parents during implementation of cooperative learning.

Personal experiences from the classrooms and collective experiences of schools encouraged others in their implementation of cooperative learning. The inclusion of the Roma population of students and their parents in the school was one of the most positive examples in Bosnia and Herzegovina through the concept of cooperation and the cooperative learning approach. See the video clip: https://www.youtube.com/watch?v=FtW_1sMycv4 (Coming together).

In 2007, at the University of Oslo, she completed a Masters degree in Special Needs Education about cooperative learning at primary school level and her experiences in supporting teachers' preparation for cooperative and inclusive education in the context of social and cultural diversity in Bosnia and Herzegovina. She has participated in several international research projects with a focus on inclusion, peer cooperation and cooperative learning.

The cooperative learning approach in Bosnia and Herzegovina is still not common practice. However, there are increasing numbers of positive examples of classrooms and schools that are making progress in implementing cooperative learning according to essential principles. She has also found there are plenty of individual teachers with positive and innovative cooperative learning practices. Moreover, the concept of cooperation in all segments of school practices became part of the national and school curriculum. Despite the enormous challenges in the educational system of Bosnia and Herzegovina, teachers are working on cooperative learning implementation. However, they need strong and continuous support.

Selma has found in her work with teachers that the most challenging issue was to overcome a fear of failure. Despite teachers' willingness and professional curiosity about cooperative learning, a lack of internal support to teachers made this difficult, as well as continuity in the implementation of cooperative learning. As a way to overcome these challenges, she found it important to include school principals, pedagogues and representatives of the parents in seminars and workshops. She encouraged teachers to document their work with positive and challenging experiences and to be reflective practitioners. Moreover, enabling cross-school visiting and sharing experiences helped teachers to gain more personal and professional confidence. Her key advice is to establish learning communities of teachers at a school and municipality level. In Norway, Selma's experience of CL is limited, but she has found evidence of small projects, such as in her daughter's school, which involved parents.

On completion of her PhD, Selma, would like to work as an educator for students and teachers as well as a researcher. She is keen to support others in implementing cooperative learning using her personal trajectory and her knowledge and understanding.

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My personal thanks to Beathe and Selma for sharing their stories which I have found very inspiring. They have provided their email addresses for those wishing to find out more and for possible research links:

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My experience of cooperative learning with IASCE and my CL activities in India

Lalita Agashe

I would like to describe my cooperative learning activities in India, which were greatly enriched by my association with IASCE.

My engagement with IASCE

I have been using cooperative learning in my classroom teaching for many years. My cooperative learning practice in school, college and university classrooms and conducting studies helped me develop a better understanding of CL. I was fascinated by the warmth and genuine humanity of the IASCE board members when I first met them at an IASCE conference in Torino, Italy. I was very happy to meet the educators and researchers gathered there from all over the world. It was my first travel abroad. Talking to Yael Sharan and Celeste Brody, whom I knew through their writing, was something I had looked forward to. They took interest in knowing about my study of using CL for woman's empowerment. The board members greeted and talked informally with me and showed a genuine interest in knowing the kind of work I was doing in India. And it was so with all participants. It helped create a very nice atmosphere for sharing with each other, and it continued for every IASCE conference that I attended.

Later on, when I became a board member of IASCE, I became an active participant in conferences and other activities. When I was the IASCE newsletter editor, George, Yael, Lynda, Kathryn and others were always there to help me. I got the opportunity to learn CL in depth from the stalwarts by participating in the conferences. Planning, attending and conducting CL sessions with international participants made me realise the basics of not only CL but education and life in general. I observed closely various dimensions and contexts of CL. Since then, dedicated work of CL scholars has never failed to inspire me.

My CL Activities in India

In India I have been sharing CL with teachers and others for many years, through workshops and talks, mostly in my state of Maharashtra. There is so much fun each time to have a new plan with new ideas about CL activities. In addition, engaging participants at national level conferences and workshops has resulted in widening the reach to other Indian states. Sometimes my professors and I conduct joint workshops and each time I learn something deeper about 'cooperation' from them.

Organising Yael Sharan's CL workshops in 2012 in colleges in the state of Maharashtra began a chain reaction of in-service teacher training, especially in the Modern College of ASC, Shivajinagar, Pune, and it is spreading.

True inclusive education cannot happen without CL. I made ample use of CL in teacher training at an inclusive school for some years. Now these teachers in turn also use CL to teach children with varied disabilities.

Forming teachers' groups

Another interesting effort was creating CL focused teachers' face to face groups and groups on social media, especially WhatsApp. Some participants enthusiastically shared their own experiments and photos. Apart from short term CL activities, the group interactions also gave rise to some longer CL projects in a local urban context and two remote states of India. Creation of these group helped share CL among some enthusiastic teachers and educators from different parts of India, including the remote states of the north-east.

Use of Yoga in sustaining Cooperative learning

Teachers not sustaining CL is a problem in India too, and there are various causes. CL educators have often sought solutions to the problem of sustaining CL. I simplified it as teachers' as well as students' and parents' lack of faith in the power of cooperation in general and specifically CL. I started searching for some tool to touch the mind's deeper beliefs. It prompted me to look beyond typical social-psychological factors. The solution must be pervasive and simple, and so I understood that it lies in spirituality. My long practice of meditation and yoga led me to use this tool to sustain CL practice. My preliminary studies showed that meditation and meditation-based yogic practices can and did produce positive results. I presented my findings and published them, yet larger, rigorous and many more studies in this area are urgently required.

Writing and publishing

Apart from writing articles on CL, I wrote a book in the Marathi language, my mother tongue, and published its audio and e-version. Most probably it is the first book on CL in Marathi, and may be so in an Indian language. Till now, Indian educators have written about CL as chapters of a larger book. In India there are twenty-two regional languages. Millions of teachers teach using these languages. To reach out to some of those teachers, my CL book in Gujarati language and an e-book in Hindi language have been published recently.

With the help of two IASCE board members, Yael Sharan and Robyn Gillies, as guest editors a CL special issue of an Indian journal Experiments in Education was published in 2012, initiated by the editor, Prof. R Ganesan. We have begun work on a special edition of another Indian journal, based on the latest IASCE international conference held in Taiwan.

I am proud to contribute to spreading CL in India and am grateful for the inspiration and knowledge received from my colleagues at IASCE.

IASCE Personal Reflections

Neil Davidson

In 1979, Shlomo Sharan, after hearing of my work in small group learning in math, invited me to participate in the first International Convention on Cooperation in Education, held in Israel. Some participants were surprised to learn that small groups could be used in mathematics since, in their view, there was nothing to discuss in math. At the convention, people who had been instrumental in developing small group approaches for learning met one another for the first time, and some of us became long-term colleagues and friends. I was fortunate to be in the right place at the right time with the right people. Several of these scholars became the first-generation leaders of the cooperative learning movement. At that Convention in 1979, we founded the International Association for the Study of Cooperation in Education, which has now lasted for forty years.

The two major books published by the IASCE were entitled *Cooperation in Education* and *Learning to Cooperate, Cooperating to Learn*. I was fortunate to write chapters in both volumes.

For me, the IASCE has been a wonderful source of stimulation, new learning, keeping up with the field, and collegial support. Association members get to meet and work with varied contributors to CL, which stimulates fruitful dialogues and further scholarship.

IASCE Regional Associations

At the IASCE conference in 1985, we founded three regional associations to support teachers, staff developers, and administrators with professional development for cooperative learning. These were the California Association for Cooperation in Education (CACIE), the Great Lakes Association for Cooperation in Education (GLACIE), and the Mid-Atlantic Association for Cooperation in Education (MAACIE). Bob Slavin and I co-founded MAACIE, which Frank Lyman and I led for many years. [Three remarkable staff developers soon joined our leadership team: Pat Jones, Thelma DeLagrange, and Ellen Miller. The five of us were the leaders and officers for many years.]

Our leadership team expanded into an active, cross-functional board consisting of faculty, teachers, staff developers, and principals. MAACIE published a newsletter and offered a variety of CL workshops for thousands of teachers, as did its sister organizations CACIE and GLACIE. The first large conference held by MAACIE drew a couple of hundred participants in 1988. Then, MAACIE organized and hosted what was to become the largest international conference of the IASCE. It took place in 1990 in Baltimore, with over 200 participants in the pre-conference and 700 in the main conference in the huge Baltimore Convention Center.

The spread of cooperative learning around the globe was greatly enhanced by the original three regional associations and the many others that followed.

IASCE leadership

I served on the Board for ten years including one term as Secretary. Then I became the fourth President of the IASCE in 1990, following in the footsteps of three distinguished leaders: Richard Schmuck, Shlomo Sharan, and Robert Slavin. It was a favorable time to be President of the Association. Cooperative learning was riding on an ascending wave of popularity globally, due to its solid research base, well-developed theory, cadres of strong faculty/staff developers in varied models of CL, and the energetic, highly active regional associations. Membership in the IASCE was growing, largely due to the growth of the regional CL associations. And we held IASCE conferences almost every year from 1990-1995. These took place in Maryland, the Netherlands, Canada, Oregon, and Australia.

Our long-term Newsletter editors, Ted and Nancy Graves (later known as Liana Forrest), expanded their publication into the Cooperative Learning Magazine, which was colorful and appealing to teachers, not just to researchers.

For the first time, we held regular Board meetings of the IASCE, via telephone conference calls. The format with multiple people on the phone was somewhat difficult to manage, but Liz Cohen's "meeting tamer" approach was helpful in keeping the lines of communication more clear.

By 1992, I was ready to turn over the leadership of the Association over to the next person, but there was no next person. Elizabeth Cohen would have been the logical choice in terms of her stature in the field, but she was much too busy to do it. Everyone else on the Board refused to take on the role of President, and I agreed reluctantly to stay on for a second term – which was not as good as the first one because the Board was having difficulty facing certain tough problems. Fortunately, Richard Schmuck helped us out on two occasions with adept organization development consultations that helped us get on a good track. Finally, in 1995, I happily retired as President. There soon began a system of co-Presidents, which was a fine idea compatible with cooperative values and which still persisted until today.

In the mid to late 1990s, the Association went through challenging times. Membership had fallen, due in part to other professional organizations adopting cooperative learning foci and committees. Reduced revenues meant that the publication of a first-rate glossy magazine was impossible and so was paid staff. The board decided to become a "working board," which meant that members were expected to assume roles, such as newsletter editor, and membership secretary that were critical to the maintenance of the Association, with little clerical staff support. In that spirit, they adopted the idea of a co-presidency that would model effective collaboration and decision-making. Mara Sapon-Shevin and Bette Chambers shared this role initially. From 1998 through 2020 Celeste Brody, Lynda Baloche and Maureen Breeze each served in the co-presidency role at varied times. (Thanks to Celeste for providing these historical recollections.)

The IASCE has functioned like the “wind beneath my wings” cooperatively. At times when feeling lonely and isolated in my work with cooperative learning, I would think about my friends and colleagues around the world pursuing those same values. And several of my co-edited professional books were stimulated by events at IASCE conferences and included chapters by IASCE colleagues.

Reflections on IASCE

Trish Baker

Jill Clark and I became involved with IASCE by accident - a very fortuitous accident for us! I had been scanning for current literature on cooperative learning when a call for papers for the Turin Conference (2008) popped up on my computer. We talked about it and decided to send in an abstract not thinking for a moment that it would be accepted - who would want to hear from two unknown researchers from a tiny country at the bottom of the world? New Zealand is known overseas (if at all!) for our All Black rugby team and usually we're assumed to be a part of Australia! Sometimes world maps miss us out altogether so we couldn't see that we would be wanted at an international conference! To our amazement we received an immediate, enthusiastic reply from Celeste (who would later become a good friend) saying that she would welcome an abstract from us. The abstract was accepted and an important part of Jill's and my life was about to begin.

The conference in Turin opened a whole new world to us. We were immediately made to feel welcome by the IASCE committee members, other attendees were friendly and inclusive, the papers (and the informal discussions of course) were thought-provoking and stimulating, and it was incredible putting faces to people we had only read about before! The city was wonderful too; all I had known about Turin previously was that cars were made there so that soon changed! Jill and I immediately started working out how we could get to the next conference!

Friendships and connections begun in Turin were to remain an important part of Jill's and my lives and we were able to build on these relationships at the next IASCE conference in Nagoya, Japan. Again we were exposed to a myriad of ideas from leading cooperative learning researchers and practitioners and this, of course, meant that our own work was becoming revitalised and extended. We were keen to take these new ideas and techniques back to New Zealand where we were beginning to have some influence on the educational scene with our own training programmes and workshops. By this time, too, we were beginning to become more confident of our own ability to contribute something valuable on the international scene, an important step in personal development for both of us.

Jill has had a lot more exposure to different cultures than I have but my time in Japan taught me so much about a culture that was largely new to me. I loved it and couldn't wait to get back to Japan on a personal visit!

In Athens the following year IASCE was responsible for a strand on cooperative learning in the IAIE conference. The conference was much bigger than IASCE conferences but by then we had built up so many friendships and professional relationships in the cooperative learning world that we still felt included and valued and were able

to take advantage of even wider networking opportunities. I had visited Greece 45 years earlier (when you didn't need to buy a ticket to be able to wander around the Parthenon!) so I enjoyed revisiting my favourite spots! What a wonderful new museum!

Brisbane in 2010 was far more familiar to me of course! Meeting old and new friends and colleagues, taking part in inspiring workshops, maintaining the all-important network we had built up, sharing ideas and experiences, had all by now become a crucial part of Jill's and my work. We knew that we were taking back home the state-of-the-art educational ideas and techniques that New Zealand desperately needed, ideas and techniques that we were by now incorporating successfully into our own CL training workshops with tertiary teaching staff.

My last conference was in Scarborough in 2013. Getting there was such a mission that Jill and I both swore that we would never go through Heathrow airport again! Jill and I are both English literature graduates so the area's interesting literary links were in our minds along with the ideas of cooperative learning that we were absorbing! The conference was, as always, small and friendly with an emphasis on personal relationships carried out by the "glue" activities! And, also as always, it was all such fun as well as being so stimulating!

Sadly that was my last conference, but since then Jill has carried on working on the Executive Board and attending conferences so I keep up to date with everything and everyone through her! Jill presented at the IASCE conference in Odense, Denmark and facilitated a workshop for Taiwanese teachers at the conference in Taipei last year. She also facilitated workshops at the IASCE/CL strands at the IAIE conferences in Budapest and in Amsterdam last year.

When I look back on my 50 years in education one of the highlights - educationally, professionally and personally - has been our connection with IASCE. Both Jill and I are disappointed that it has been dissolved, of course, but we are convinced that it has played a crucial part in one of the most important educational developments so far this century. A big thank you IASCE, and a particular thank you to the people we have met and tried to live up to, those friends and colleagues who have given us so much friendship and encouragement over the years.

Thank you, IASCE, from Catalonia

David Duran

The Research Group on Peer Learning (GRAI, by its acronym in Catalan) gathers professionals –both university researchers and teachers of compulsory education– engaged in the study, practice and dissemination of peer learning (cooperative and collaborative learning, and peer tutoring). It was created in 2004 as a working group of ICE from Universitat Autònoma de Barcelona (UAB) and, currently, it is a research group from UAB. Some of its members take part in the Interuniversity Research Seminar on Teaching and Learning Strategies (SINTE, by its acronym in Catalan), a consolidated research group.

We understand that *peers* refer to people from a similar social status, none of them behaving as a professional teacher in relation to others. In this sense, we are engaged in cooperative learning among students, among teachers, among members of one same family, and among volunteers.

In order to help teachers and schools from Catalonia –and also from Spain and Latin America– implement peer learning, we designed educational programs based on peer tutoring for the development of reading fluency and comprehension in several languages (Catalan, Spanish, Basque and English as a foreign language) and for everyday life problem solving. *Reading in pairs* is one of these programs (Duran et al., 2016). Moreover, we designed a teacher training model –called *Peer Learning Network*– based on networks of schools where pairs of teachers participate, through face-to-face meetings and virtual support, to implement the programs in their classrooms and gather evidence of their effectiveness. In this way we foster peer learning among students, but also among pairs of teachers from the same school –who reflect and learn from each other– and among

schools –in the meetings and visits between them. From evidence, schools decide their continuity in the network, which we recommend for at least three years. The pairs of teachers who participate are changed from one year to another, to help make the innovation sustainable, becoming a common practice in the school. Results from these networks, which have allowed us to work with more than 400 schools until now, are very positive (Miquel & Duran, 2017).

Research on the implementation of these projects enabled us to identify a huge barrier for cooperative learning: the belief that only the student receiving the help has opportunities for learning, whereas the student offering help loses learning opportunities. This idea – based on the unidirectional approach to teaching and learning, where one teaches and the other learns– fosters the view that cooperative learning is only positive for those students with more difficulties. Recently, we have been trying to tackle this idea and help understand that in cooperative learning students learn among them –and thus teach one another– and that both activities –receiving and offering pedagogical help– can offer opportunities for learning. That is why we reviewed the evidence and limits of learning by teaching, offering an explanatory framework to back up how students who teach their peers can have learning opportunities (Duran & Topping, 2017).

In addition, from this broad approach to the concept of *peers*, GRAI is working on peer learning among teachers, fostering peer observation and co-teaching as tools for professional and teaching development (Duran & Miquel, 2019).

During these 16 years, since the creation of GRAI in 2004, we have encountered many difficulties. One of them comes from being a group in which both university researchers and primary and secondary school teachers participate. This is how we want to connect research and practice, and this model is actually praised by many in theory. However, in practice it might hinder the recognition as a research group and the access to research funds. But we have also found much help and support. First, the generosity and enthusiasm of schools and teachers who we have worked with.

Another of these priceless supports was found in IASCE. Not only from its members –people with recognized and valuable careers in research and dissemination of cooperative learning– but also as an organization itself. As a group we were linked to IASCE since our participation in the conference in Torino (Italy) in 2008. And later on, we met in Odense (Denmark) in 2015, in Budapest (Hungary) in 2016, and in Amsterdam (The Netherlands) in 2019. These two last occasions were within the cooperative learning strands lovingly encouraged by Yael Sharan in the context of the International Association for Intercultural Education. Recognizing ourselves as participants of an international movement towards the study and improvement of education through helping our educational systems introduce cooperation was a great help. Meetings in the conferences, as well as the bond created by the newsletter, enabled the building of a sense of community that we will miss so much. Without a doubt, such hard work will continue to bear fruit in the future. We do appreciate the thorough effort, dedication and valuable contribution of the people who have been leading IASCE during all these years. Thank you very much to each and every one.

References

Duran, D., Flores, M., Oller, M., Thomson-Garay, L., & Vera, I. (2016). *Reading in pairs: Peer tutoring for reading and speaking in English as a foreign language.* Horsori.

Duran, D., & Miquel, E. (2019). Preparing teachers for collaborative classrooms. In *Oxford Research Encyclopedia of Education*. Oxford University Press. https://doi.0.1093/acrefore/9780190264093.013.780

Duran, D., & Topping, K. J. (2017). *Learning by teaching: Evidence-based strategies to enhance learning in the classroom*. Routledge. Previously in Spanish (Narcea, 2014) and Catalan (Horsori, 2016).

Miquel, E., & Duran, D. (2017). Peer Learning Network: Implementing and sustaining cooperative learning by teacher collaboration. *Journal of Education for Teaching, 43*(3), 349-360. http://dx.doi.org/10.1080/02607476.2017.1319509

40 Years…personal reflections

Yael Sharan

The number reminds me of the Israelites' 40 year trek across the desert to the Promised Land. Similarly, IASCE has had a 40 year journey, across many borders, languages, and interests. Our conferences became "rest stops" on our journey, occasions for meeting veteran as well as new researchers and practitioners, from an increasingly diverse and growing number of countries.

Venerable companions on this 40 (+1) year journey have been the newsletters. The first typewritten issues of newsletters included articles by researchers from a variety of countries, as well as news of relevant publications. Over time they expanded to include articles and news of applications of CL, and, of course, reports of the contributions made at our conferences. Both conferences and newsletters have been concrete evidence of the significant inroad made by CL into almost every kind of educational setting, subject matter, and level. The newsletter column From the Journals offered further proof of CL's expansion, with abstracts of relevant research from all over the world. (Who could forget an abstract of a research study of CL in a soil mechanics undergraduate course in Portugal?!) The abstracts served as a voice for CL's journey across the globe and the various methods, models, applications, and research that continue to develop.

Of some comfort after the closing of IASCE is my collection of the original typewritten newsletters, the glossy magazines that followed, and the computer generated newsletters that have kept getting better and better. We don't really know how many people actually read the newsletter, but personally, writing for it has been a stimulating opportunity for me to document the variety of people involved in CL that I encountered in various countries and the ways they adapt CL to their specific cultures and constraints. (The detailed histories of the newsletters and of the Association are on the relevant entries on the IASCE Web site.)

The conferences have been an especially significant part of my life. The first conference, in Tel Aviv, in 1979, when IASCE was established, was an opportunity for several researchers from Israel, the U.S., the Philippines, Australia and England, to present their specific CL methods and research. At the time, many of them were also developers of new methods, models, and procedures, and were eager to present their "wares." Our conferences gave me the opportunity to facilitate workshops designed to have participants experience group investigation. The experiential core of my workshops continued, but, with time, and thanks to the exposure the conferences offered, it expanded to combine a variety of procedures. The conferences also offered opportunities to co-facilitate workshops with colleagues who were specialists in other CL procedures, enabling us to model cooperation, not only "teach" it.

Just recalling the number and variety of experiences over the years, in so many different locations that I would probably not have visited otherwise, and the many unexpected interactions with such a variety of people, especially with the wonderfully dedicated and creative people who have guided IASCE over the past 40 years – brings back the flavor of these experiences, their uniqueness, and the joy and enrichment they brought to my life. How else would I have met Lalita Agashe, a tireless promoter of CL in India, but at the conference in Torino? How else would I have imagined that Jack and the Beanstalk could be used to demonstrate the creative potential of CL, but for Lynda Baloche's workshop in Utrecht? Where else would I see the flags of all the countries represented at the conference, but at the auditorium in Brisbane and, again, fluttering on the walls of the buildings leading to the main hall in Scarborough? And how else would I learn firsthand about the way CL combines with elements of Chinese culture but at the conference in Singapore? Or "play" in all the cooperative activities led by the Dynamix guys at the conference in Manchester? Or learn how CL has developed in Latvia or in Denmark? Or have the opportunities, in Manchester and in Taiwan, to meet Ghazi Gaith from Lebanon? The list of memorable experiences and encounters, both personal and professional, is very long, and will surely remain with me for as long as I live.

As I wrote this I was looking forward to the IASCE/CL strand at an IAIE conference in Amsterdam in November (2019). There, again, I would meet several presenters who are veteran IASCE members and have attended many of our conferences, as well as a few "new" enthusiastic workshop facilitators, all of whom have contributed, and continue to contribute, to the ongoing flow of research and practice of CL.

Sadly, without any more IASCE conferences, I will never again meet many researchers, practitioners, and especially board members in person. But I will never forget them and the occasions that brought us together. I can't help wondering which will be CL's future contributions that we haven't yet dreamed of, and that IASCE will not be an official part of. Hopefully, the significant contribution IASCE has made will continue to inspire both all those who have attended the conferences over the years, and all those who have written for and read the newsletters, to carry on the legacy of this one-of-a-kind association.

Reflecting on IASCE

Maureen Breeze

I have so many lasting memories of the 22 years that I have been a member of IASCE, 21 of those as a Board member; however, I have decided to describe four that are very personal to me.

The Eureka moment – the discovery

Browsing along a library bookshelf at a former teacher training college in Bristol, England in 1997, at the time I was undertaking a Masters programme exploring Co-operative Learning, I discovered a fat tome, *Co-operating to Live, Co-operating to Learn*. It was a book produced by IASCE and had originated from the second conference of the association held in Utah, USA in 1982. I was working for the Co-operative Movement in the UK at the time and did not consider myself an academic but rather a former teacher. This role involved the promotion of co-operative principles and values in social and organizational contexts across the South West of England and took me extensively into schools. The work was firmly grounded in the worldwide Co-operative Movement and the application within education of the co-operative values and principles as articulated by the International Co-operative Alliance, held a great fascination for me. Unfortunately, I could find little published material about this to support my studies. The book transported me in a more meaningful way to the realm of pedagogy, and I recognised that there were others around the world, from very different backgrounds, that were being challenged to examine and promote co-operation within a learning context. I was hooked!

The OMG moment

Now a member and in awe of what more I was reading and discovering, I decided to self-fund and take time from my work to travel to Toronto to attend the 1999 IASCE conference. This was a great adventure for me, travelling alone such a distance and not knowing a soul! The style of the conference was to be unconventional, in using an 'Open Space' approach, where the content and focus of the conference was negotiated at the start. I was familiar with this methodology and recognised it to have a dynamic, unthreatening and democratic technique, so I knew that I would be able to contribute.

I remember arriving at the university accommodation at Ryerson University on a hot, humid Sunday afternoon. Being a little early for registration, I sat on a concrete bench amongst the campus buildings when another woman came and sat next to me. We chatted and quickly discovered that we were both attendees at the IASCE conference. I don't remember catching the other person's name, but we happily filled up half an hour speaking of the weather, our journeys, our accommodation and other superficial things. It was only later that I discovered that the woman I had been speaking to was Professor Elizabeth Cohen from Stanford University! I knew some of her work and held her in high esteem. It was the first time that I had met in person an academic who I was citing in my writing. Elizabeth was so gracious when considering my relative naivety, and we held a distant but amiable relationship for many years after that meeting. I am so grateful that IASCE provided the incredible opportunity for me to meet such phenomenal academics and practitioners, almost always mutually respectful and without hierarchical regard.

A proud moment

Presenting Alan Wilkins with an IASCE Achievement Award in 2010

This took place at a Co-operative Learning conference in England and for me represented the culmination of two decades of concerted work developing and promoting an understanding of co-operation in education in the UK, across a number of sectors. Alan was one of my peer group, the former Head of Learning at the UK International Co-operative College, who was significantly influential in providing a grounded influence on the growth of understanding and practice of others in the field. The award presentation was a moment of celebration for all of us involved at that time – a milestone reached and a greater recognition of how far we had come.

Co-operative Education, a term frequently used more broadly in the UK, held a range of unconnected interpretations and meanings linked to the use of the words, supporting a wide range of related activity. I summarise the interpretations as those being about learning ***through*** co-operation with others, ***for*** co-operation, the skills, behaviours and attitudes needed and ***about*** co-operation and the mechanisms and structures embodying co-operation united through a common set of values and principles. Alan pursued an understanding and articulation of the broader perspectives, interpretations and applications and proposed a contextual framework where he portrayed co-operative learning from a number of viewpoints: as a learning philosophy, as a form of experiential learning, as effective group working, as learning in a co-operative group, as pedagogy, as part of a social movement, as an expression of values and beliefs, as an agent for change, and as social capital and self-actualisation.

A moving moment

I was instrumental in bringing the IASCE conference to Scarborough, England in 2013 in partnership with Hull University, the second IASCE conference held in the UK.

“At this moment, this is the epicentre of understanding of co-operation in education in the world”

This was an awe-inspiring statement from one of the presenters on the opening day of the conference. There were academics and educationalists, those early in the careers as well as those more experienced, from all sectors of education, from 23 countries across 5 continents. All had made their way to Scarborough, all with a passion and commitment to co-operative approaches in educational settings. It felt humbling.

A time from the conference that still makes my spine tingle was the social occasion on the second evening. A group of us had chosen to walk from the cliff top conference campus down the coastal path to the old harbour. Here we went to the harbourside fish and chip shop and bought our supper and sat on the harbour wall, happily munching through the salty/vinegary deep-fried food out of a paper package with our fingers. We then went across to a typical seaside open-fronted Bingo hall and played a few games, learning the bingo number nicknames of ‘two fat ducks’, ‘legs eleven’ and ‘top of the shop’. It was a lovely evening as the sun set and we walked back up through the dunes to the campus. There were colleagues of several nationalities, of different ages and with different career roles, but that magical evening we were as one, unified by our common beliefs and passions, sharing the same cultural experience.

A personal legacy

It is difficult not to be sentimental as I look back over my time of knowing IASCE. I know that I grew and gained confidence, was intellectually challenged and stimulated, developed skills that stretched me further than I ever imagined; all that through meeting the most incredible human beings.

I recently came across a feedback summary from the Scarborough conference; here are some of the comments from participants:

- I am transformed by the community we formed, and its passion has inspired me
- I’m ‘here’, not ‘out there’

- I lost my separate identity and felt being part of the very large energy of people and beings around
- From national perspective to international perspective
- Little transformations from being challenged personally to asking deep questions about cooperative learning
- I feel that I have come back to life—like a second chance
- I imbibed the philosophy of cooperative learning

I am with them. I could have written each of these statements describing my relationship with IASCE.

I am no longer directly involved in a professional role where I can promote co-operative learning, but I can continue pursuing and promoting the philosophy of co-operation in my life and through my voluntary roles, drawing on the immense range of skills that I gained through IASCE.

Books

Pioneering Perspectives in Cooperative Learning
Theory, Research, and Classroom Practice for Diverse Approaches to CL

Neil Davidson (Editor), University of Maryland

This volume owes its existence to the IASCE. At the IASCE conferences in 1979 and 1982, Neil met the original developers and leaders of CL and became professional friends and colleagues with them.

The volume offers contributions by a dozen scholars who envisioned, introduced and developed the concept of Cooperative Learning. That is, the notion of students learning together actively in cooperative small groups – to enjoy learning with peers, to engage in discussions of challenging and meaningful ideas, to develop skills in cooperation and teamwork, to learn more effectively, and to master not only basic facts and skills but also more complex thinking processes.

The small group of invited authors consists of those who made major contributions to the development of cooperative learning in the US and Israel beginning in the 1960's or early1970's and continuing throughout their careers. Individually and collectively, these scholars have made a profound impact in the field of education in the latter half of the twentieth century and continuing through the present.

Their combined efforts in this volume provide a comprehensive description of cooperative learning as viewed by its major contributors – the originators, pioneers, developers, and leaders in the field. Chapters in the book therefore consider all of the major approaches and methods of cooperative learning, together with their theoretical foundations and research base.

A secondary purpose of this book is historical. The development of cooperative learning will emerge in part through the authors' reflections, and personal stories or anecdotes about their own work, starting from its beginnings. and moving forward from there. There has not been any prior book on the history of cooperative learning; this volume partly fills that gap in a unique way through qualitative, personal retrospective accounts.

This volume is more than historical because it offers for the first time a progression from the past to present state-of-the art knowledge in research and practice, to building a strong case for the successful future development and implementation of cooperative learning.

This volume sets forth perspectives on the following issues in the field:

- How is cooperative learning defined?
- What are the major approaches to cooperative learning?
- What are the common elements of all the approaches?
- Which attributes distinguish one approach from another?
- What are the state-of-the art classroom practices with each approach?
- What are the theoretical foundations for each approach?
- What is the research base for each approach?
- How are cooperative learning and collaborative learning related?

Table of Contents (some titles may be adjusted a bit)

1. Introduction to pioneering perspectives in cooperative learning. Neil Davidson
2. Jigsaw. Elliot Aronson
3. Complex instruction and building equitable classrooms. Elizabeth Cohen (written by Rachel Lotan & Nicole Holthuis)
4. Cooperative learning in mathematics and beyond. Neil Davidson
5. Cooperation versus competition. Morton Deutsch (as interviewed by Laurie Stevahn)
6. Learning together model. David Johnson and Roger Johnson
7. Structural approach. Spencer Kagan
8. Small group processes and organization development. Richard Schmuck (with coauthors Richard Arends and Neil Davidson)
9. Design for change: a teacher education project for cooperative learning and group investigation. Yael Sharan and Shlomo Sharan
10. Student Team Learning and Success for All. Robert Slavin and Nancy Madden
11. Conclusions. Neil Davidson

Call for proposals on a second volume of perspectives on cooperative learning

Dear IASCE members,

There are a number of outstanding leaders in the second generation of CL. After completing the current book, with its due date of September 2, we will begin work on a follow-up volume. The working title will be, "*Perspectives on cooperative learning by its second generation leaders*." The editorial team will consist of Robyn Gillies, Barbara Millis and Neil Davidson.
(Millis, the author of many articles and two books on CL and the executive editor of College Teaching, has 38 years as a faculty developer, much of it for CL in higher ed.)

This is an open invitation to IASCE members to present a proposal to write a chapter. We are looking for proposals by professionals who have shown leadership in cooperative learning for a considerable period of time.

Proposed chapters can deal with CL theory, research, classroom implementation, professional development, curriculum development and so on. Chapters should be scholarly pieces, well documented with accurate descriptions and clear lines of reasoning. Each chapter should include a short biographical section on how and why the author began his or her work with CL.

At this point, if you know you would like to submit a proposal, please send an email to each of the three editors. Later in the summer, we will send you more specific guidelines for the development of the proposal and the chapter. For now, we are simply requesting indications of interest.

We hope to hear from you.
Sincerely,
Robyn, Barbara, and Neil

r.gillies@uq.edu.au barbmillls@aol.com neild@umd.edu

Onward to the Future:

Network of International Cooperative Learning Educators and Enthusiasts

We propose a new global forum for cooperative learning (CL) named ***Network of International Cooperative Learning Educators and Enthusiasts (NICLEE)*** (pronounced "nicely"). Its purpose is to cultivate ongoing communication among educators worldwide who are passionate about fostering continued growth and development of CL. With the closing of the IASCE, the CL movement could benefit from an energizing international presence to keep alive theory, research, and practice relevant to CL: in classroom instruction,]curriculum development, professional development, and effective leadership in educational organizations. This proposed network holds promise for highlighting significant CL efforts around the world and for keeping connected those who have been involved in the IASCE.

At this time, we believe that a network may be the best way to foster ongoing communication among CL enthusiasts. We propose NICLEE as a network, not an association. It will provide a forum for sharing ideas and information, exploring resources and questions, proposing projects and inquiry, and celebrating effective cooperative learning activities and applications around the world. There would be no dues, no newsletter, and no sponsored conferences. Instead, it will establish an electronic platform that will need coordination, such as a network coordinator or a small team to support and monitor functioning. Those who were IASCE members and friends could immediately participate, and also invite colleagues into the conversation.

Please reply to 2020niclee@gmail.com to indicate your interest, learn more and receive future information. Tell us who you are, where you call home, and what you would find helpful in a CL network.

Key decisions will need to be made in moving forward with this NICLEE proposal. Particularly, we will seek ideas for further shaping the foundation and operation of the network by structuring conversation around a list of suggestions and possibilities. Your participation and input are welcomed and valued, so please reply to express your interest. Thanks!

We look forward to continuing the meaningful cooperative interactions and relationships forged through the IASCE over its 40 years, via this newly proposed NICLEE to support and sustain cooperative learning efforts worldwide!

Neil Davidson and Laurie Stevahn

Lalita Agashe, Robyn Gillies, Spencer Kagan, Richard Schmuck, Alexis Patterson Williams

Cooperative Learning Leaders and Past Board Members of the IASCE

From the Journals

Contributors: Jill Clark and Yael Sharan

Abramczyk, A., & Jurkowski, S. (2020.) Cooperative learning as an evidence-based teaching strategy: what teachers know, believe, and how they use it. *Journal of Education for Teaching*. https://doi.org/10.1080/02607476.2020.1733402

Cooperative learning is an evidence-based teaching strategy. In cooperative learning, teachers structure students' interactions and prepare them for cooperation so that students work together in small groups supporting each other's' learning processes. This study investigated whether the empirical evidence of the effectiveness of cooperative learning is reflected in teachers' professional competencies and their teaching practices. We surveyed 1,495 language teachers in Poland, measuring their knowledge and beliefs about cooperative learning and their use of cooperative learning in class. Although teachers were well informed about the principles of cooperative learning, they only knew a few methods to implement cooperative learning in class. Teachers agreed that cooperative learning is effective for students' academic and social learning and can provide students with individualised support for their learning processes. Despite these positive beliefs, teachers used cooperative learning infrequently. When they used cooperative learning, teachers organised and supported students' interactions in accordance with the principles of cooperative learning. Teachers reported that they would like to learn more about cooperative learning and use it more often in class. They were especially interested in support such as lesson examples and teaching materials. We discuss the implications of these results for teacher education.

Bauer, C. (2020). Engineering essential attributes of cooperative learning and quality discourse in a large enrollment course by leveraging clicker devices. *Journal of College Science Teaching, 49* (4), 16-23.

This article describes how clickers (student response systems) may be used to assess and support the development of productive process skills and discourse patterns within student teams during class periods. Clicker questions may poll the class about specific features of the internal workings of teams, such as role rotation, helpful or distracting behaviors, and the richness or evenness of discourse. Display of polling results to the class sets up a teachable moment regarding development of effective team communication. One question per class session provides several dozen opportunities over a course to raise student awareness concerning effective team communication and potentially to improve those skills. This innovation may be particularly advantageous for large classes where student team activity cannot be efficiently monitored by a single instructor. This is the first report of use of clickers for the purpose of assessing and supporting learning of team process skills.

Chan, M. (2020). A multilevel SEM study of classroom talk on cooperative learning and academic achievement: Does cooperative scaffolding matter? *International Journal of Educational Research, 101, Article* 101564 https://doi.org/10.1016/j.ijer.2020.101564

Although exploratory talk between teachers and students and amongst students can promote positive learning experiences and cognitive development, it is the former that has dominated much of contemporary classroom discourse. Research over the past four decades has not provided a convincing response to whether some modes of talk may be more beneficial, and in what order. Using a quantitative approach, students were surveyed on five facets of classroom talk and teacher scaffolding of cooperative learning. Academic performance and background (individual and classroom compositional) characteristics were also examined. Findings are broadly consistent with literature in regard to the dominance of presentational teacher questions. However, conventional recitation instruction appears to be educationally valuable when used skillfully with exploratory talk and cooperative teacher scaffolds.

Dendup, T., & Onthanee, A. (2020). Effectiveness of cooperative learning on English communicative ability of 4th grade students in Bhutan. *International Journal of Instruction, 13*(1), 255-266. https://doi.org/10.29333/iji.2020.13117a

This study examined the effectiveness of cooperative learning (CL) in enhancing the English communicative abilities (ECA) of 4th grade students in a remote Bhutanese school in South-west Bhutan. Traditionally, teaching in Bhutan has been by the rote method where students learn the material primarily to pass tests and have limited opportunities or follow through with application of language skills in real life. Although Bhutan has been using English as the medium of instruction for more than 5 decades, most Bhutanese students are found to have a very low ECA. CL is an accepted strategy in other countries for teaching with the application of skills. The study involved teaching the modalities of listening, reading, writing, and speaking with CL techniques to students not familiar with the CL approach. The study was conducted with 19 grade four students at a school located in a remote and scarcely populated area which is common for all rural schools in Bhutan. Pre and post testing (one group pretest-posttest design) was administered to assess increases in skills. The study revealed that the CL teaching style was effective in enhancing ECA. Therefore, cooperative learning may well be an effective teaching strategy to increase ECA in Bhutan.

Duran, D., Ribosa, J., & Sanchez, G. (2020) Peer tutoring for improvement in rhythm reading fluency and comprehension. *International Journal of Music Education,* pp.1–14. https://doi.org/10.1177/0255761419898313

Peer tutoring in music education is an under-researched but burgeoning area of study. This study aims to assess the effects of the same-age peer tutoring project Ritmos en dos on rhythm reading fluency and comprehension. For this purpose, 24 students from the third grade of secondary education participated in the project. This research utilises a mixed-methods sequential explanatory design, combining (a) a pretest-posttest control group design, with (b) a qualitative study to understand the possible quantitative changes using the interactivity analysis model. Results confirm our hypotheses that students' participation in the project improved their proficiency across rhythm reading fluency and comprehension. Regarding fluency, quantitative results show a significant improvement for the experimental group, but not for the control group; in comprehension, both groups show gains, but statistically significant differences favour the experimental group in the final comprehension level. Findings reveal different actions that might explain these improvements identified in the interaction between students. Regarding fluency, these actions were mainly related to pulse constancy and reading accuracy, while in reading comprehension, students were found to carry out syntactic analysis and meta-cognitive reflection. Implications suggested from this study point to initial training and cooperative interaction as key elements to be tackled.

Forsell, J., Forslund Frykedal, K., & Hammar Chiriac, E. (2019). Group work assessment: Assessing social skills at group level. *Small Group Research 51*(1), 87-124. https://doi.org/10.1177/1046496419878269

Group work assessment is often described by teachers as complex and challenging, with individual assessment and fair assessment emerging as dilemmas. The aim of this literature review is to explore and systematize research about group work assessment in educational settings. This is an integrated research area consisting of research combining group work and classroom assessment. A database search was conducted, inspired by the guidelines of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). The analysis and categorization evolved into a typology consisting of five themes: (a) purpose of group work assessment, (b) what is assessed in group work, (c) methods for group work assessment, (d) effects and consequences of group work assessment, and (e) quality in group work assessment. The findings reveal that research in the field of group work assessment notably focuses on social skills and group processes. Peer assessment plays a prominent role and teachers as assessors are surprising absences in the reviewed research.

Forslund Frykedal, K., & Hammar Chiriac, E. (2017). To make the unknown known: Assessment in group work among students. *Journal of Educational Research, 10*(2), 149-162.

When group work is used as pedagogical practice in compulsory schools, teachers are expected to assess each student's individual knowledge even if learning has been gained in interaction with other students. This can be particularly challenge for teachers, i.e., the dilemma of reconciling the demands for individual assessment while fulfilling the demand to teach cooperation abilities through group work. Earlier studies concerning group work as

reveal that assessment is a highly relevant but challenging factor when organising group work in educational settings. To our knowledge, assessment in group work is a rather neglected research area with very little attention being paid to research about this phenomenon. Previous research therefore provides little theoretical knowledge or useful tools to assist teachers in resolving these apparently conflicting demands. The main focus in this chapter is to present and elucidate our current knowledge about assessment in group work. Some of the aspects considered and problematized in this chapter are:

- Purpose of the assessment;
- What is assessed;
- How the assessment is carried out;
- Which level is in focus – individual level, group level or both;
- How the feedback is implemented; and
- Who is assessing – teacher, students or both.

Furthermore, an empirically grounded model with the purpose of clarifying different aspects of group assessment will be presented. Finally, the chapter is concluded with some pedagogical implications being suggested.

Forslund Frykedal, K., Hammar Chiriac, E., & Rosander, M. (2019) Efficacy beliefs and interdependence when being assessed working in a group. *Educational Studies*. https://doi.org/10.1080/03055698.2019.1706039

The aim of this study was to investigate factors that can predict collective efficacy in student work groups year 5 and 8 at compulsory school and to see if there are gender and year differences for efficacy beliefs and aspects of interdependence. A total of 283 completed questionnaires were analysed. Hierarchical multiple regression was used to predict collective efficacy and 2 × 2 ANOVA was used to analyse gender and year differences and interactions for following five factors: collective efficacy, self-efficacy, negative interdependence, positive interdependence and importance of good assessment and marks. The result showed that independent of gender, year and school, self-efficacy, positive and negative interdependence predicted collective efficacy in connection with group work assessment. The result also showed that there were better conditions for cooperation in year 5 compared to year 8. Additionally, it was significantly more important for girls than boys to achieve good assessment and marks.

Fung, D. (2020). The impacts of effective group work on social and gender differences in Hong Kong science classrooms. *International Journal of Science Education, 42*(3), 372-405. https://doi.org/10.1080/09500693.2020.1713419

This paper reports the findings of a quasi-experimental study that investigated the impacts of effective group work on Hong Kong science classrooms. One hundred and fifty-two Secondary 2 (or Grade 8) students from two schools participated in a teaching intervention (comprising 16 lessons) in which they studied the topic 'Making Use of Electricity' and resolved a series of related scientific inquiries. Informed by both the quantitative (i.e. diagnostic tests) and qualitative (i.e. science inquiry questions, audio-recordings of group discussions and focus-group interviews) results of the study, this paper reveals that effective group work can narrow the social and gender differences in Hong Kong students' science performance. Whilst a dynamic and respectful learning environment was found to help economically disadvantaged and female students to overcome such barriers to science learning as low self-esteem and high anxiety, a gender-balanced and socioeconomically diverse arrangement was found to be an important element of social group work practice. Finally, the study's broad implications for teacher and peer support for science teaching worldwide are also discussed.

Gu, J. (2020). On the necessity of cooperative learning for business English learning. *Journal of Language Teaching and Research, 11*(1), 121-127. http://dx.doi.org/10.17507/jltr.1101.14

With the globalization of the world and the Initiative of Belt and Road, Business English learning is becoming increasingly popular and important in China. Based on the comparison between traditional frontal-lecturing approach and cooperative learning and analysis of the characteristics of Business English course, this paper tries to integrate Business English teaching with cooperative learning from Dewey's interactive naturalism and humanism

with an attempt to explore why cooperative learning is effective in Business English learning to develop students' English competence, business skills and moral qualities.

Hammar Chiriac, E., Rosander, M., & Forslund Frykedal, K. (2019). An Educational intervention to increase efficacy and interdependence in group work. *Education Quarterly Reviews, 2*(2), 435-447. http://doi.10.31014/aior.1993.02.02.76

This study investigated whether an intervention, in the form of short educational sessions, influenced pupils' experiences of group work or cooperative learning (CL). The hypothesis tested was that an intervention for teachers and pupils would lead to pupils' increased (a) collective efficacy, (b) self-efficacy and, (c) positive interdependence, as well as (d) less negative interdependence. The participants were pupils from years 5 and 8 in three compulsory schools in Sweden, working in 22 groups divided into one intervention group and one control group (11 work groups in each condition). Data were collected through a questionnaire before and after participation in the study and analysed using a repeated measure ANOVA and 2×2 ANOVA. The results showed an increased collective efficacy, self-efficacy and positive interdependence and a reduction of negative interdependence. The conclusion is that the intervention provided for teachers and pupils did have an effect, thus promoting successful working as a group.

Hussien, A. M. (2020). The impact of combining communicative traits of writing with cooperative learning on trainee teachers' pedagogical knowledge and attitudes. *International Journal of Instruction, 13*(1), 813-930. https://doi.org/10.29333/iji.2020.13152a

This article reports an investigation into the impact of presenting communicative traits of writing through cooperative learning on trainee teachers' pedagogical knowledge and attitudes towards a 'traits of writing' approach and cooperative learning. Mixed methodologies were used with the participants in a quasiexperimental repeated measure. Forty-two trainee teachers, enrolled in the Bahrain Teachers College, answered the pre and post pedagogical knowledge test and completed the two attitude scales at the end of semester. The results suggest that presenting communicative traits of writing through cooperative learning has a positive effect on the participants' pedagogical knowledge, and also has a positive impact on their attitudes towards communicative traits of writing approach, and attitudes towards cooperative learning. Further implications for teacher education are presented.

Jony, M. S. (2020). Exploring the effectiveness of cooperative learning at secondary level in Bangladesh. *International Journal of Educational Research Review, 5*(1), 93-99. https://doi.10.24331/ijere.669388

In general, cooperative learning refers to the use of small groups of students to encourage them to work together and help each other to learn, accomplish learning goals, and increase their learning potential. This study attempts to explore the effectiveness of cooperative learning at secondary level classroom learning and students' achievement in particular. It also compares the achievements in means of scores between a student group taught using cooperative learning strategies and another group taught using non-cooperative learning strategies. This study is designed following a quasiexperimental research technique. 60 students from a secondary school of class 9 taking Science from 2 different sections were selected as samples and were divided into equal number experimental group and control group for this study. A pretest was conducted before administering the cooperative learning technique which was followed by a post-test after on to determine the effectiveness in the form of learning achievement. Students' achievements were measured through a self-constructed achievement test which was used in both the pretest and post-test. The data were analyzed through t-test using SPSS. The comparison of these results indicated a meaningful statistical difference between the two groups, and it was also found from the teachers that students who work in the cooperative learning groups were more engaged, more responsible in completing group assignments and more organized while working in their respective groups. Therefore, in order to promote quality learning, the results of this study may encourage the practice of cooperative learning for the secondary school level. To make the learning of students more enjoyable, effective, and sustained at secondary level; schools and teachers need to use the cooperative learning technique in the classrooms.

Kadam, D. M., & Sawant, S. Y. (2020). Modified reciprocal teaching: Cooperative learning technique for enhancing communication skills of first year engineering students. Journal of Engineering Education Transformations, 33 (Special Issue), 532-536. http://doi.10.16920/jeet/2020/v33i0/150111.

With the advancement of technology and globalization, Communication skills as a life-long learning skill is an essential component in engineering education. Communication is one of 12 graduate attributes, defined by ABET (Accreditation Board for Engineering and Technology). The engineering classroom is currently experiencing a shift from teacher-centred teaching where teacher focused on what they are teaching, to studentcentred learning through innovative teaching-learning techniques. Active learning has become a significant process in outcome-based education (OBE). It comprises various approaches such as cooperative and collaborative learning techniques, PBL (problem/project/puzzle-based Learning), TBL (Task based learning), Peer instructions, T-P-S (Think-Pair-Share), Flipped Classroom and Reciprocal Teaching and many others.
The Reciprocal Teaching is an instructional strategy specially designed for comprehension purpose. The present work offers some insights after successful implementation of modified reciprocal teaching for improving communication skills of First Year B. Tech. students at Kasegaon Education Society's Rajarambapu Institute of Technology, Rajaramnagar (RIT). It was an attempt to develop all four basic language skills: Listening, Speaking, Reading and Writing. This research was conducted for four weeks during practical sessions. After successful implementation the students of experimental group were assessed by qualitative and quantitative methods. The results reflected increase in CO attainment of experimental group as compared to control group. The structured implementation of modified reciprocal teaching as an active learning tool helped to enhance students' presentation skills, team work, leadership skills, and ultimately communication skills.

Khan, N., Ul Haq, N. A., & Saad, H. (2019). Impact of cooperative learning teaching methods on 7th grade students' academic achievement: An experimental study. *Journal of Elementary Education, 25* (2), 89-112.

This paper aimed to report the findings of an experimental study to measure the impact of Cooperative Learning (CL) on students' academic achievement (AA). In order to pursue the objectives of study, Pre-test Post-test Control Group design was used. The experimental group was given treatment of CL method whereas no treatment was given to control group. Total 128 Students of grade seven were selected as participants from a public sector school. Treatment was given for 13 weeks. ANOVA test was applied as a statistical technique to examine within group and between group impacts. The findings of the study proved the efficiency of CL in the area of academic achievement as experimental group performed better in post-test than control group. In the light of the findings of the study, recommendations were made for different stakeholders for the improvement of teaching learning practices, particularly in General Science and generally for other subjects. As cooperative learning is cooperation based learning method, this study wished to share the results related to the effectiveness of CL that may be valuable for society especially for teachers` motivation to improve their teaching and learning practices to enhance students' learning. Limitation is related to sample and design. Only female students were taken as sample and researcher employed quasi experimental design to conduct experiment.

Paschal, M. J., Nyoni, T., & Mkulu, D, G. (2020). The role of cooperative learning in attaining inclusive education in the classroom: Creativity and innovation in secondary schools in Mwanza Region- Tanzania. *International Journal of English Literature and Social Sciences (IJELS), 5*(2), 364-373. http://journal-repository.com/index.php/ijels/article/view/1730.

Cooperative learning is a strategy that teachers can use in the classroom to help students achieve better performance and also help in building positive interaction among students, giving all the learners chances to be active in the learning process. The world today is facing challenges in attaining inclusive education for all. The aim of this study is to examine the role of Cooperative learning in attaining Inclusive Education in the classroom. During presentation the presenters will present on the importance of Cooperative learning in attaining Inclusive Education in the classroom. Also the presenter will present on the challenges that hinder cooperative Learning in attaining inclusive learning in the classroom. Lastly, this paper discusses the basic strategies that would be employed to improve Cooperative learning as the strategies to attain inclusive Education in the classroom. The study employed qualitative methods in data collection. The targeted population was teachers and students in five secondary schools, purpose sampling technique employed to select English teachers while randomly sampling to

select students. This paper concludes that, in order to attain inclusive education, it is a vital for every educator to attain training on how to develop cooperative Learning. Also teachers should invest more in research and accept radical changes in the teaching and learning processes.

Patterson, A.D. (2019). Equity in groupwork: The social process of creating justice in a science classroom. *Cultural Studies of Science Education, 14*(2), 259–263. https://doi.org/10.1007/s11422-019-09918-x

Over the last few decades, there has been an international focus on productive talk in science classrooms, requiring teachers to use more dialogic practices with their students. Studies promoting a dialogic approach propose that students have conversations in small, student-led groups. However, the literature in education and science education regarding groupwork has highlighted that students can struggle to work collaboratively without the proper supports and scaffolds–particularly with regards to equity (Webb, in Hmelo-Silver (ed) The international handbook of collaborative learning, Routledge, Abingdon, 2013). Equitable interactions during groupwork are linked to increased learning among all members during a group task (Cohen. in Phi Delta Kappan 72(2):134–138, 1990). Thus, equity in quality and quantity of talk becomes the goal for groupwork. I argue that equity in group interactions requires justice that is socially constructed, including the flattening of social hierarchy. As such, equitable groupwork has three key features: student voice, visibility (of all students), and student authority. Group interactions between middle and high school students from a suburban California city are used to highlight these features. Images from video-recorded data, event maps from student dialogue, and data from student interviews are used to examine the role of visibility, voice, and authority in creating equitable interactions in groupwork. Implications from this study point to equity as a process—a transformative social process where students use their words (reflection + action; Freire, in Pedagogy of the Oppressed, Bloomsbury Publishing, London, 2000) to shift inequities and increase communication in science. Equity as a process does not mean the absence of inequity but that students use their words to address inequity when it arises to transform the space. What, then, is the role of the teacher in allowing for this transformative work to take place among the students? What does it look like to organize this kind of classroom? What do students need to know in order to engage in such equitable practice or transformative work? I engage with questions such as these and conclude with a discussion of how teachers can create the classroom conditions necessary to cultivate productive and equitable talk in science classrooms.

Remache Carrillo, N. M., Pilco Labre, M. G., & Yanez Valle, V. V. (2019). The effects of cooperative learning on reading comprehension. *Explorador Digital, 3*(3.1), 143-163. https://doi.org/10.33262/exploradordigital.v3i3.1.875

This study aimed to determine the influence of cooperative learning in reading comprehension of high school students at Unidad Educativa “Riobamba” during 2017-2018 school period. For the assessment of the validity and effectiveness of this research, a pre-test and a post-test were applied based on the Cambridge PET (Preliminary English Test) exam, reading section. That exam was composed of two parts: the first was carried out through a cooperative work in pairs and the second part, taking into consideration the cooperative work in groups of four students. A didactic guide for the teacher was designed and applied in the classroom. After that, the analysis of data was made before and after applying the intervention. The teacher's guide was designed to put cooperative learning strategies such as jig-saw, think-pair-share, and reciprocal questioning into action. Three stages of reading were used namely before reading, during reading, and after reading. After the implementation of the proposal, the data analysis was performed using the T-student mathematical test. It is concluded that the students improved their reading comprehension through cooperative work in pairs and in groups as well. It was recommended that teachers practice cooperative learning in the classroom to improve students' reading comprehension in order to optimize their development in English language learning.

Saad, A. (2002). Students' computational thinking skill through cooperative learning based on hands-on, inquiry-based, and student-centric learning approaches. *Universal Journal of Educational Research 8*(1), 290-296. http://doi.10.13189/ujer.2020.080135

Of late, computational thinking (CT) has received a great deal of attention from scholars and educators, given its immense potential in nurturing students’ problem-solving skills, which are the type of skills highly needed in to-

day's technology-driven era. For example, in Malaysia, a number of efforts have been pursued to develop strong computational thinking among school students through the implementation of learning activities that nurture such a skill in most of the school subjects. However, previous studies have shown that teachers have a low understanding and misconception about the concept of computational thinking, which could derail such efforts. Furthermore, the lack of studies focusing on motivating students to actively participate in the learning process is further compounding such a predicament. Premised on this context, this study was carried out to examine the impact of cooperative learning on the development of CT skill among a group of 25 Year-3 students, aged 9, which was carried out based on three learning approaches, namely student-centric, hands-on, and inquiry-based approaches. Through such learning, which took place at one private school located in Selangor, Malaysia, the students learned four learning concepts related to a topic of a science subject. In this study, the researcher played the role of a teacher by teaching these students the learning concepts using a lesson plan designed based on the three learning approaches. The methodology used to collect data was based on a class observation and an interview with the science teacher. The analysis of the qualitative data revealed that students were highly engaged and participative in the learning process and were able to learn the scientific concepts of the subject matter with greater efficacy, which was indicative of their improved CT skill. As such, these findings underscore the imperative of developing and nurturing computational thinking among students, with which students would be able to solve complex problems more effectively.

Sirias, D. (2020). Writing MIS mini-cases to enhance cooperative learning: A Theory of Constraints approach. *Journal of Information Systems Education, 13*(4), Article 10. https://aisel.aisnet.org/jise/vol13/iss4/10

Teaching Introduction to Management Information Systems (MIS) courses is a formidable challenge because such teaching entails covering a relatively large, ever-changing subject, as well as finding the right balance between audiences with different expectations and levels of knowledge. The literature suggests cooperative learning as a viable strategy to teach MIS effectively. In a cooperative learning environment, students can bring their expertise to the table and work together as teams to solve business problems. One strategy to support cooperative learning in an MIS class is teaching through case studies. Since cases tend to be too long to be used during a regular class session, this paper proposes the use of mini-cases to enhance cooperative learning. The paper also provides a procedure to write minicases based on one of the thinking processes within the Theory of Constraints.

Tabiolo, J. L., & Rogayan Jnr, D. (2019). Enhancing students' science achievement through Jigsaw II Strategy. *Journal of Science Learning, 3*(1), 29-35. https://doi.org/10.17509/jsl.v3i1.17680

The Science education curriculum in the Philippines has shifted from inputs-based to outcomes-based education, putting the learners at the core of the instruction. Hence, educators continue to innovate ways on how to engage the learners into relevant and responsive science instruction. Further, the implementation of the K to 12 curricula brings a paradigm shift in education in terms of pedagogy, assessment, and outcomes. Within-group quasi-experimental research attempts to test the effects of the Jigsaw II strategy on the students' science achievement. A total of 51 Grade 9 students in a government-run secondary school in Zambales, Philippines, participated in the study. Results revealed that the class improved from "approaching proficiency" to "proficient" level in their science achievement after the implementation of the strategy. It found out that the Jigsaw II strategy had a significant effect on the science achievement of the learners. The study recommends the use of the instructional strategy in enhancing students' performance. The strategy may be applied in other science topics to see its effectiveness further. This paper likewise contributes to the literature on the effectiveness of the Jigsaw II learning strategy in science teaching in the Philippine context.

Tankersley, A., & Cuevas, J. A. (2019). The effectiveness of cooperative learning in the reading classroom. *Perspectives in Learning, 18*(1). https://csuepress.columbusstate.edu/pil/vol18/iss1/2

This research examined the effectiveness of specific methods of cooperative learning on reading comprehension, motivation, and attitudes. The study implemented Collaborative Strategic Reading (CSR) and

the Jigsaw method in a rural public elementary school and included 60 participants from 3rd grade reading classes. One group used the CSR method to read information on four different topics while the other group read information on the same topics using the Jigsaw method. After controlling for initial attitudes, motivation, and global reading comprehension, the results indicated that neither of these methods led to greater gains in these areas than the other. However, when controlling for prior knowledge on the four specific topics, the CSR group made significant gains on all four posttests while the Jigsaw group only made significant gains on the first two tests. This suggests that the benefits of Jigsaw method may fade long term while CSR benefits may persist.

Van Ryzin, M.J., Roseth, C.J., & Biglan, A. (2020). Mediators of effects of cooperative learning on prosocial behavior in middle school. *International Journal of Applied Positive Psychology, 5,* 37-52. https://doi.org/10.1007/s41042-020-00026-8

In this study, we tested the effects of cooperative learning on students' prosocial behavior. Cooperative learning is a small-group instructional technique that establishes positive interdependence among students and, unlike most current school-based programs, does not mandate a formal curriculum. Given the emphasis in cooperative learning on peer reinforcement for positive and helpful behavior during learning activities, we hypothesized that cooperative learning would promote higher levels of prosocial behavior, and that these effects would be mediated by peer relatedness. Using a sample of 1890 students (47.1% female, 75.2% White) from a cluster randomized trial of 15 middle schools, we found that cooperative learning significantly enhanced prosocial behavior across two years. Mediation was only partial, however, suggesting that additional mechanisms were at work, such as changes to social norms or teacher behavior. Given that cooperative learning has been shown to enhance student engagement and academic achievement in prior research, we argue that cooperative learning should be a central component of teacher training and professional development.

Veldman, M.A., Van Kuijk, M.F., Doolaard, S., & Bosker, R.J. (2020) The proof of the pudding is in the eating? Implementation of cooperative learning: differences in teachers' attitudes and beliefs, *Teachers and Teaching*. https://doi.org/10.1080/13540602.2020.1740197

In the current study differences between primary school teachers classified as high-performing in their implementation of cooperative learning (CL) in their classrooms and teachers who were less successful in implementing cooperative learning were investigated. The levels of implementation of cooperative learning differed significantly between teachers, especially in teaching students the needed cooperative behaviours. Based on semi-structured interviews, it was found that low-performing CL teachers struggle more with student behaviour during cooperative learning, while high-performing CL teachers feel more able to regulate student behaviour. We concluded that teachers who differed in their teacher performance of implementation of cooperative learning also differed in their attitudes and beliefs about this approach. An integrated model on professional development and teacher change is proposed to interpret the results of differences between teachers. This model shows that positive attitudes and beliefs before implementation, but also experiencing positive student outcomes (incl. positive student behaviour) during implementation are important factors in making cooperative learning successful in practice. We suggest that teachers should be prevented from entering a negative spiral in which they experience student behaviour during cooperative learning only as difficult and, therefore, do not succeed in improving students' cognitive and behavioural outcomes.

Volkova, N. P., Zinukova, N. V., & Lebid, O. V. (2020). Cooperative learning as a means of forming communicative skills to students. *Revista Espacios, 41*(2), 1-9.

The article presents the results of using interactive learning technologies to implement cooperative learning obtained on the basis of the bachelors majoring in "Pedagogical education" study. The study found that the introducing cooperative learning technologies in small groups based on professionally oriented situations will increase the motivation of future university trainers and manifest their personal position thus forming their

communicative skills. A set of organizational and pedagogical conditions of realizing cooperative learning was determined and experimentally approved. Criteria, indicators and level of forming university students' communicative skills were developed. Keywords: cooperative learning, formation of communicative skills, educational process, university students, interactive and ethical skills.

Wang, C., Fang, T., & Gu, Y. (2020). Learning performance and behavioral patterns of online collaborative learning: Impact of cognitive load and affordances of different multimedia. *Computers and Education, 143.* https://doi.org/10.1016/j.compedu.2019.103683

In online collaborative learning, discussions have been widely utilized as an educational activity, and much research has been conducted on the process and behaviors involved in synchronous or asynchronous discussions. However, research on behavioral patterns in collaborative learning environments with different formats of learning materials has not been addressed in detailed yet. In this study, we designed three versions of media to present the same learning contents: interactive version, video version, and text version. The differences among the above three versions are the form of information organization and the interaction mode between students and the given version. There were 131 eighth graders from three classes participated in this study. They were asked to complete a group worksheet through online discussion while engaging with the given learning materials. In order to explore students' online collaborative behavioral patterns while engaging with different multimedia, this study proposed a verb-dominated coding scheme for synchronous online collaborative learning and conducted a lag sequential analysis. The findings indicate that Class A (interactive version) formed an active learning atmosphere, while Class B (video version) spent more time on showing disagreement due to overloaded working memory caused by improper information presentation. In contrast, Class C (text version) had high efficiency in information exchanges because of the convenience of information acquisition. Besides, Class A gained the highest scores in group worksheet and invested moderate cognitive load. Class B had unsatisfactory learning performance on group worksheet along with the highest cognitive load. Class C invested the lowest cognitive load and had better knowledge retention than Class A, as shown in the results of the post-test a week later.

Wang, X., & Hu, J. (2020) Analysis of cooperative learning in management (bi-lingual) class: Based on rain classroom. *Creative Education, 11*, 239-249. http://doi.10.4236/ce.2020.113018.

Rain classroom is a kind of mixed teaching tool, which is based on MOOC platform of Tsinghua University. It effectively combines the teachers' courseware making tool PowerPoint with the students' favorite WeChat App. As a new teaching mode, cooperative learning teaching mode is a new exploration in Management (Bi-lingual) teaching. The model is student-centered rather than teacher-led. It emphasizes both the independent study of students and the interaction between individual students and student groups. Meanwhile, it teaches students to get along with others, dares to show themselves, and learn modestly. Based on the research methods such as classroom practice, questionnaire, interview, and combining the characteristics of Management (Bi-lingual) translation course and the teaching requirements of this course, this paper conducts an investigation and analysis on the teaching effect. According to the result of this survey, it is proved that the Management (Bi-lingual) class based on cooperative learning is feasible. It can provide strong theoretical support for innovating the cooperative teaching mode of Management (Bi-lingual) Class, so that more teachers can grasp the key points of this mode and students of this major can achieve better development.

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