International Association for the Study of Cooperation in Education
IASCE

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Dear Colleagues,

IASCE is pleased to bring you the first member newsletter of 2017.

When I read the features for this issue, I was struck by the variety of voices and applications of the principles of cooperation. Kumiko Fushino's update on JASCE (Japan Association for the Study of Cooperation in Education) reminds us how careful planning and long-term commitment can lead to solid implementation of cooperative learning. JASCE is a model of these qualities as they have continued to spread support for cooperative learning throughout Japan. In two short articles, George Jacobs invites us to consider how to use cooperative learning when working with just one student and how cooperative groups can meet the needs of introverts. The details in both articles are interesting; however, I think the bigger message George leaves us with is that, with a little thought, cooperation can be appropriate and valuable in a wider variety of circumstances than we sometimes consider. The Serendipity feature examines theatre games, adult play, and choral singing as avenues for building communication, innovation, and collaboration. If you, like me, live in a country where opportunities for students to engage in the arts are being defunded, and where testing mandates make it difficult for teachers to provide time in the school day for students to learn in ways that can't be easily and quickly measured, it is important to be reminded that the arts and play have the power to connect and inspire us.

In the Members' Column, we hear from Don Plumb and François Lombard about applications of cooperative learning in teaching science. We first met François in Odense and it is nice to learn more about his work and thinking. Both François and Don have extensive experience teaching sciences with high-school students and both have worked with adults to support improvement in science education. Their approaches have both similarities and differences and this contributes to the value of the column. Both have a firm commitment to science content. Don warns against science demonstrations as 'edutainment' while François emphasizes the importance of science content. Both are committed to ensuring that all students can and do contribute equitably which, we know, is critical both for individual learning and for effective cooperation.

Equitable educational opportunities are, in a broad sense, at the heart of the volume Intercultural Education and competences: Challenges and answers for the global world reviewed by Wendy Jolliffe. This volume is particularly rich in the variety of perspectives the authors bring to the essential question of how to maximize potential for the kinds of diverse groups and learning situations that are becoming increasingly common in the globalized world. Wendy suggests that several of the articles are "provocative"

and, in a time when protectionism and "us/them" rhetoric is expanding in some parts of the world, we need provocative thinkers. We have included an announcement of the June 2017 IAIE conference in Angers, which promises to provide another opportunity to consider these critical issues.

From the Journals, once again, provides a rich and varied selection of abstracts. I often think that this feature has "something for everyone," meaning that, no matter where you live, what you teach, who you teach, or what questions you have about the use of cooperation for learning, the abstracts will yield something of interest. As an organization, we are committed to supporting the "study of cooperation in education," and it is always gratifying to read how people around the world are engaged in this study.

As always, we thank you for your support—both for cooperative learning and for IASCE. We encourage you to contact us with ideas, questions, and information about opportunities. If you would like to establish a study group or other network, we can include an announcement in the newsletter. If you have membership questions, our new Membership Coordinator, Maureen Breeze maureen@iasce.net will be glad to help. We look forward to hearing from you.

Cooperatively yours,

Writing for This Newsletter

There are so many things happening world-wide related to cooperative learning! Help others find out about them by writing articles or short news items for inclusion in this newsletter, and by submitting abstracts of published work for inclusion in the *From the Journals* section of the newsletter. Short pieces (1000 words or less) are preferred.

The newsletter appears three times a year. Please email submissions or questions about them to the editor of the IASCE Newsletter, Jill Clark at jilliandc@gmail.com . Put "IASCE Newsletter" on the subject line of the email, please.

Intercultural Education and Competences: Challenges and Answers for the Global World

Editors: Carl A. Grant and Agostino Portera

Reviewed by Wendy Jolliffe

This book is the product of a conference organised by the Centre for Intercultural Studies in Verona, Italy in 2013 that responded to issues raised by the 2008 Council of Europe White Paper on Intercultural Dialogue. The varied papers provide an insight into the many philosophical and sociological concepts related to intercultural education and will provide interesting reading for those who wish to study intercultural education in more depth. All the contributors of the book concur that there is an urgent need to rethink educational methods, content and goals in a multi-cultural and multi-ethnic context.

The book begins with discussion of globalisation. Whilst it is impossible to remain completely up to date with any such publication recent dramatic events, such as Brexit in the UK and the Trump presidency in the USA, could signal significant changes to globalisation and a possible return to protectionism; altering the backdrop of the book. Nevertheless, the cry for developing competencies that support interconnectedness between peoples remains, of course, very relevant. This becomes more apparent with ever-developing internet communication technologies, which are instrumental in being part of a 'global village,' as cited by Portera (page 23).

The introduction to the book cites projects by the Council of Europe, such as 'Competences for democratic culture' (2008), which aimed to develop a new European framework of competences that young people need to become democratic citizens. As the book is published in 2017, the status, or results from such projects, would have been a useful addition to bring it up-to-date.

The book covers wide-ranging and provocative themes that question sociological and political concepts. Portera, Barrett and Tibaldeo examine theoretical perspectives on intercultural education and studies into competencies, and these provide a useful insight into what such competencies should consist of, but as Barrett argues, implementation is very much dependent on institutional structures in societies.

Zygmunt Bauman's chapter provides a very different postmodern perspective as he challenges our conceptions of time. He refers to a 'liquid-modern' society that is characterised by a 'hurried' or 'nowist' culture and he introduces the idea of the 'tyranny of the moment' (p xii) that strikes a chord in an age of instant communication, or, as he terms it, the tendency for us to 'drown in an information deluge.' He uses a rather curious analogy of missiles, comparing ballistic missiles that have fixed direction and course, with smart missiles that can change course and thus respond quickly. The central argument is that due to such a rapidly changing world, education needs to be 'smart', that is continuous and lifelong.

Marco Catarci discusses an intercultural approach that aims to promote dialogue and understanding to mediate cultural differences. He stresses the key role of intercultural mediation and those who fulfil this role to promote the removal of language and cultural barriers. He provides useful insights into competence of the profession of intercultural mediators derived from a research study.

One of the most vivid pictures presented in the book of the dangers of a lack of an intercultural approach, is from Grant. He discusses theories of social justice as a framework for education in the 'Black Belt' in Chicago's South Side. Grant argues that neoliberalism acts in opposition to a social justice perspective and increases the gap between those receiving benefits and those excluded and punished. This reflects a failure by schools in the Black Belt due to inadequate public funding for education. He argues that money matters in education in helping to close the gap, but politicians fail to recognise the relationship between funding and school quality.

One of the strengths of the book is the range of insights into different phases and approaches to education. Perselli and Moehrke-Rasul present a critical pedagogical review of internationalisation and practices in tertiary education. They argue that whilst new perspectives are emerging that acknowledge international students as 'resourceful peers', the practical implications of teaching in culturally diverse settings require further explication. Wilbur examines reflective inquiry to support adults' international competences through the use of Bennett's

intercultural positioning system (2009). This system is based on cultural mapping to identify and bridge cultural positions. In this way students can notice differences and locate themselves according to contextual characteristics. Examining secondary school intercultural workshops that focused on deconstructing dominant stereotypes with 16 and 18-year-old students, Surian, Greco, Mahmud and Mantovani present the results of Reggio Emilia's secondary school. For those interested in Reggio Emilia, usually associated with early years education, this presents an interesting exploration of this approach.

Malusà and Tarozzi explore the challenges of educational quality and social equality and cite results from a longitudinal study of a primary school class in Trento, Italy, until they reach first grade of middle school. They argue that EU and Italian policies are more concerned with quality being denoted by efficiency, competitiveness and the provision of human capital for the labour market, rather than in reducing inequalities. They present some defining features to promote quality schooling for all and elements that may be transferable to other settings. The need to train teachers to help create an environment that is open to intercultural dialogue where cultural diversity is respected is stressed.

Focusing on on-campus courses, Celinska and Swazo reflect on the effectiveness of increasing trainees' multicultural competences and propose various alternatives including community service learning and international service learning and cite a faculty-led international course (FLIC). The authors suggest that FLIC may be a valid approach as it is based on intentional cultural immersion and it creates opportunities that are not available in a traditional on-campus course.

Insights into students with LGBT parents provide another fascinating perspective presented by McNeilly and Ferrari. Analysis of interviews with the students showed they avoid others perceived as homophobic and also avoid disclosing their parents' sexual identity. These students believe in the power of education to reduce ignorant responses and stereotypes and to promote accepting attitudes. The authors stress the value of using non-heterosexual narratives in school curricula and the role of teachers in developing students' personal identity narratives.

Concepts of community and building a sense of belonging in multicultural schools are central to the chapter by Dusi and Steinbach. The challenges that this presents that make it particularly difficult for children from migrant families to feel part of a community are explored. They argue that the concept of relationships with others is at the heart of learning and it is essential the teacher is able to build a network of relationships that involves each and every student. Their study with pre-service teachers in Italy and Canada helped them to acknowledge the necessity for teachers to foster a sense of belonging in order to support learning, motivation and well-being in the classroom.

Another interesting dimension explored by Sanchez-Mazas and Mechi is the current context of globalisation and professional mobility. They present a social psychological approach to understanding the biases that may affect teachers in multicultural schools that emphasises the fluidity of categorizations related to individuals, situations, behaviours and opinions. This helps to prevent the crystallisation of single categories and to guide the teacher through two fundamental aspects of reflecting before accepting and ensuring a plurality of viewpoints.

How cooperative learning (CL) can respond to the cultural and linguistic challenges teachers face in the intercultural classroom is the focus for Sharan. She discusses how the variety of CL teaching methods can provide ways to actively engage students from different cultures. Use of CL methods can help students find meaningful connections between their contexts and the curriculum. When teachers understand that students with various backgrounds, religion, ethnicity and cultures can be a resource rather than a problem, it encourages respect for cultural diversity and enriches the classroom. At the core of the cooperative learning classroom is the sense of community and this, Sharan states, is 'nurtured by activities that develop the interpersonal and helping skills required for working together' (p 198). However, as she emphasises, it is essential to ensure gradual implementation of CL procedures alongside sensitivity to diversity.

Whether wanting to explore a particular aspect of intercultural education, or more underlying theoretical and philosophical viewpoints, there is much in this book to engage the reader. A diverse range of studies from

different cultural contexts will further the goal of rethinking educational methods, content and goals in a multi-cultural and multi-ethnic context. IASCE members will find much of interest here, not only from Yael Sharan's chapter which specifically explores the power of cooperative learning to support diversity, but also through deepening their understanding of issues and potential ways forward in promoting intercultural education which is at the heart of the cooperative heterogeneous classroom.

Intercultural Education and competences: Challenges and answers for the global world

Chapter Titles and Authors

Part 1 – Intercultural Education and Competences for a Global World

Chapter One – "Liquid Modern Challenges to Education"
Zygmunt Bauman

Chapter Two – "Intercultural Competences in Education"
Agostino Portera

Chapter Three – "Competences for Democratic Culture and Intercultural Dialogue"
Martyn Barrett

Chapter Four – "Intercultural Mediators as Relational Facilitators in a Plural Society"
Marco Catarci

Part 2 – Neoliberalism and Multicultural and Intercultural Education

Chapter Five – "Education in Urban Spaces: Neoliberal Rhetoric and Social Justices Responses"
Carl A. Grant

Chapter Six – "Responsibility towards Diversity: An Educational Proposal for the Enhancement of Democracy"
Roberto Franzini Tibaldeo

Chapter Seven – "Curriculum Internationalisation and Intercultural Learning from the Perspective of Recognition: A Critical Pedagogic Review and Discussion of the Literature"
Victoria Perselli and Diana Moehrke-Rasul

Chapter Eight – "Who Talks to Whom in Schools and Cafes? Adult Student Inquiry for Intercultural Competence"
Gretchen Wilbur

Part 3 – Intercultural Competences in Education and Practices

Chapter Nine – "Learning History as Views Sharing: Examples of Collaborative Practices"
Alessio Surian, Chiara Greco, Marwa Mahmud and Giuseppe Mantovani

Chapter Ten – "What Cooperative Learning Contributes to the Intercultural Classroom"
Yael Sharan

Chapter Eleven – "A Sense of Belonging in Multicultural Schools: Opinions of Future Italian and Canadian Primary Teachers"
Paola Dusi and Marilyn Steinbach

Chapter Twelve –"From Biases to Socio-Cognitive Flexibility: A Training Program for Teaching in Intercultural School Settings"
Margarita Sanchez-Mazas and Aneta Mechi

Chapter Thirteen – "School Experiences of Canadian Adolescents with Lesbian, Gay and Bisexual Parents"
Kenneth D. McNeilly and Michel Ferrari

Chapter Fourteen – "Ensuring Quality and Equity in an Italian Multicultural Primary School"
Giovanna Malusà and Massimiliano Tarozzi

Chapter Fifteen – "Student Perspectives on Learning in Faculty-Led International Multicultural Courses"
Dorota Celinska and Roberto Swazo

International Association for Intercultural Education (IAIE) Conference

Education theory and practice in challenging times:
cultivating an ethos of social justice, respect and diversity

Angers (France) June 13th to 16th, 2017

International (bilingual) IAIE Conference

The focus is the dynamic interplay between societal actors at a time when social and political global developments challenge the very fabric of today's multicultural societies. The conference aims to create an active and open forum for all who are connected to intercultural education and related fields, including theorists, practitioners, and students.

Visit www.iaie.org/angers/angers.pdf for details

Introverts and Cooperative Learning

George Jacobs

The extroversion – introversion continuum is well known, not only among psychologists, but also among the public in general. Recently, Susan Cain (2012; 2016), in two best-selling books and a Ted Talk (Cain, 2013) with over 16 million views as of March 2017, has argued that introverts are underappreciated. The purpose of this brief report is to use the cooperative learning literature to address what Cain says about introverts in groups in education settings.

First, a bit of background may be useful. Introversion and extroversion are variables along a continuum with no student (or teacher, for that matter) completely introvert or extrovert, and some people, known as ambiverts, in the middle. Generally introverts, among whom I count myself, prefer to:

- sometimes have time alone
- not be at the centre of attention
- be in groups of two or three rather than large groups
- engage in deep conversations instead of chit chat
- have opportunities to think before speaking
- ask questions instead of answering them
- write sometimes rather than speak.

Cain estimates that about one third of the population are introverts.

Cain's second book is titled, *Quiet power: Growing up as an introvert in a world that can't stop talking*, and is written especially to share advice from young introverts. This book shows greater appreciation of group activities compared to her first book, which contains a chapter, "When collaboration kills creativity". In the first book, Cain (cited in Jacobs, 2014) argues that learning, productivity, and creativity tend to decline when people work in groups rather than alone. She gives the example of a task in which graduate students were to develop a list of equipment needed in a survival situation. One of the groups did poorly despite the fact that one of the group's members had substantial experience in the specific survival context. What went wrong? That person was an introvert, and the extroverts in the group did not let him speak.

Fortunately Cain does recognise that, when properly carried out, group activities can be beneficial for all; for example please note the word 'When' in the chapter title from the previous paragraph, "When collaboration kills creativity". Cain gives some advice for introvert students learning in groups. Not all of her advice is in sync with the cooperative learning literature.

- Group activities do not mean that students are always together in the same space and always interacting. There can also be time to spend apart from groupmates working towards the group's goals, and, even when the group meets together, to work alone.

- Cain urges that introverts identify the group roles with which they are most comfortable and then take on those roles, usually the non-speaking roles. I tend to disagree, because schools are not like companies; in schools, the goal is for students to try on new roles. Furthermore, Cain notes that when introverts need to, they can step into the limelight, speaking and otherwise performing.

- Cain also advocates that students be allowed to choose their own partners. Yes, with this method of group selection, students usually feel more comfortable with groupmates. However, "birds of a feather flock together", which means that student selected groups tend to be homogeneous on variables such as sex, ethnicity, socio-economic status and past achievement. This runs counter to the cooperative learning principle of heterogeneous grouping, which promotes the view that groups that are heterogeneous as to membership aid learning and overall social cohesion.

- Another cooperative learning principle is the teaching of cooperative skills. Cain urges the development of such skills, such as how students can stop themselves from being interrupted by raising their voice slightly and holding up an open hand with the palm facing outward. Additionally, extroverts can learn such cooperative skills as encouraging others to participate and listening politely.

In conclusion, appreciating diversity represents an important concept in education. Diversity takes many forms, including personality variables, such as extroversion-introversion. Introvert students do not need to be 'cured' by being changed into extroverts. Instead, teachers and students, including the introvert students themselves, need to appreciate the strengths of introverts, such as being careful listeners, detailed observers and reflective thinkers. In this way, cooperative learning can be a growth experience for all students, as well as their teachers.

From the Japan Association for the Study of Cooperation in Education (JASCE)

Kumiko Fushino (IASCE & JASCE board member)

2016 was a very fruitful year for JASCE. We held our 12th annual conference over two days on November 5th and 6th at Mie University in Mie Prefecture. More than 200 people attended the conference and enjoyed many paper presentations, reports, workshops, and plenary talks. On November 4th, the day before the conference, we also had a pre-conference event where we visited a junior high school and observed lessons. We decided which class to observe and stayed in class for the entire lesson period to observe how CL was implemented. After the lesson, the participants from each classroom discussed the lesson they had just observed. The discussion organizer used some CL techniques to encourage the participants to actively exchange their ideas.

One of the highlights of the 2016 conference was that we welcomed a delegate from Taiwan Cooperative Learning (TCL) who introduced us to their attempts and their achievements in spreading CL in all junior high schools in Taiwan. We were very happy to have them at our conference. JASCE conferences are normally conducted all in Japanese, but we provided English translation this time so that Japanese speakers were able to learn about CL in Taiwan directly from the Taiwan team. JASCE truly appreciate TCL's participation in our conference and hope to further develop our friendship.

2017 is going to be a cornerstone of JASCE history. JASCE has provided basic and advanced level CL workshops for many years, and this year we have introduced the highest level, "Master" workshop, which was held on March 4th and 5th at Chukyo University in Nagoya City, Aichi Prefecture. Those who had completed the basic and advanced level workshops and had at least one-year's experience of CL practice were able to participate in this workshop. Each JASCE board member became an instructor at this workshop to share his/her specialty with the participants. As a pre-workshop assignment, the participants prepared a plan for a one-day workshop and brought their plan to the workshop. As a post-workshop assignment, they were asked to refine their plan and, after closely observing a JASCE basic workshop conducted by a JASCE certified instructor, to run a one-day workshop. JASCE hopes that these participants will become future JASCE basic workshop instructors so that we can hold more workshops in more places in Japan.

In addition to the Master workshop, this year we will conduct quite a few basic level workshops and some advanced level workshops. This year's conference is scheduled to be held at Okayama University in Okayama City, Okayama Prefecture, from October 27th to 29th. For more information, please visit our webpage (https://jasce.jp)

IASCE Members' Column

Coordinator: Yael Sharan

This Members Column focuses on CL's contribution to science teaching, discussed by two veteran science teachers and science teacher educators. Opening the discussion is IASCE Board member Don Plumb[1], followed by François Lombard[2], of the University of Geneva. Both offer their views on the importance of CL's specific role in learning and teaching science and its practice.

Don. Science is a vital area of study to help students deal with a rapidly changing technological world. Issues such as nanotechnology, genomics, and renewable energy choices require scientific literacy in as many citizens as possible. A strategy like cooperative learning that increases student engagement should be part of every teacher's repertoire.

One important distinction for the science teacher is the difference between CL and group work. I've found resistance to CL because teachers have been "scarred" in their own experience by ineffective group work, in which there is no individual accountability and students can opt not to do their fair share of the task. Too often in their past, these teachers have carried most of the load in poorly planned group work.

There are a number of ways in which science teachers can be introduced to CL. In-service professional development workshops, websites, and print publications can all be effective. Yet, after the basics have been learned, working with another science teacher who is also trying to apply CL is even more effective.

Science lessons can become very limited in technique, mostly direct instruction lessons (the "sage on the stage") with occasional laboratory investigations and demonstrations. I try to include at least one CL structure in every class, but that may be anything from a 3-5 min processing activity (for example, Numbered Heads Together, in which teams of three or four reflect on the current material, and then are randomly chosen to report their ideas) to a full class debate structure.

Science teachers, particularly chemistry teachers, like to engage students with demonstrations, such as exploding a hydrogen-filled balloon when introducing chemical change. Such demos require a lot of prep time and often the students remember the "entertainment" but nothing of the science behind it. A CL structure like Timed Pair Share before and after the demo can make it more effective. For example, before the activity each student in a pair could have 30 seconds to predict what would happen in the demo; after the activity, each student would have 30 seconds to explain the connection of the observed results to the concepts under study.

Lab classes are traditionally taught with students working in pairs, often following a "recipe" of procedures. Some students, particularly males, have a tendency to dominate the handling of equipment, so making homogeneous all-male and all-female groups as well as assigning (and enforcing) clear roles can be effective. For example, handling of particular equipment can be assigned to specific students.

In parts of science lessons that are direct instruction (or "Socratic"), CL structures can be used in three ways: learning new content, guided practice to reinforce new knowledge, and checking for understanding. For example, a structure like Sage-N-Scribe where pairs of students work on a set of problems, alternating dictating and writing roles, is very effective guided practice.

Teachers often assign group science projects to students, particularly if they are trying to bring some STSE (Science, Technology, Society and Environment) issues into the curriculum. Inevitably, problems arise with inequity in contribution to the final product. Frequent processing with CL structures can help even out the involvement. I never use group marks for assessment: rather, each student produces a particular part of the assignment and is individually graded.

David and Roger Johnson's Creative Controversy CL strategy is an excellent way to bring discussion of societal issues into the science classroom. Students work in teams of four, two "pro" and two "con", to debate a

statement such as "*Nuclear Power is better than Solar Power*". Each pair is given a teacher-prepared page of arguments to support either the "Pro" or "Con" side. In a very organized series of steps they present arguments and record their opponents' arguments. Then, in the key step, they reverse their point of view and, using only their own notes, present the opposing viewpoint. At the end, the team of four produces a consensus statement of what they now believe.

Some teachers think the science curriculum is just too packed and that CL takes too much time, but a 3-5 min processing activity can be a more effective way to use that time. The desk and fixed lab bench arrangements in many labs can make it difficult to imagine CL teams huddled around a table, but arranging lab stools around a bench or having students turn to work with classmates behind them is possible.

Although cooperative learning can seem difficult to apply to science my experience has shown that it promotes student involvement and engagement, helps students take responsibility for their own learning and generally improves their thinking and their understanding of science content.

François: What characterizes scientific knowledge is not definitive truth: it is *the way* it is validated. Debate about how the data support a claim is a critical part of science knowledge validation. I agree with Don about the importance of CL in discussing socio-scientific issues, but would argue for a sound understanding of the scientific techniques, then their potentials, before addressing the issues.

This puts a more challenging goal before CL: teaching the scientific content itself. Can CL help learners develop complex scientific explanations of phenomena such as photosynthesis or immune mechanisms against cancer? Here the best knowledge is not chosen democratically! We know it's not the sun that revolves around the earth because arguments confronting data about planets' apparent movement showed the earth revolving around the sun was the best explanation. If we had to vote we'd probably still not have understood that and we'd have no GPS satellites.

So collaboration has a specific role in science learning: it organizes discussion about different explanations (models) and of how well they allow predictions or explanations of what we can observe or measure.

This has led me and my colleagues to develop some very efficient learning designs, inspired by David and Roger Johnson's Creative Controversy, with some adjustment. A lot of time was spent in structured discussion of explanations (co-writing and oral presentations to peers). In particular we focused the learning process by the production of a brochure critical to all in order to prepare for final exams. This built positive interdependence, as many students said (e.g. "Because this document was important for others, I made an effort to make it as clear and complete as possible"). An interesting point is that all students relied on the contribution of all; realizing that even the most successful students relied on their work was for many students a very strong motivator! Their involvement was incredible: over time a group of four could produce more than 3000 words of complex explanations in three weeks.

Like Don I also know that teachers think the science curriculum is just too packed (it is!) and that CL takes too much time. It is noteworthy that implementing CL for eight full-years in high schools with 19-year old students majoring in biology has shown that, if carried out efficiently, it leads most learners to succeed at difficult learning goals, including pursuing higher medical or science studies.

As Don points out, inequity in contribution to the final product can be an issue and is alleviated using another principle of CL : individual responsibility. Having to present in front of peers, and knowing that their contribution in the Wiki (collaborative writing space) was recorded, and that all (including the teacher) could see how much each one contributed, helped resolve those problems.

A concluding word about the Swiss system. In Geneva science teachers have a Masters in their topic (biology, chemistry or physics) and then follow two years of vocational training. Once employed teachers have a great degree of autonomy in choosing pedagogical methods and in designing activities, as the curriculum is quite general. This puts a great deal of responsibility on each teacher but opens the opportunity for implementing CL. Since I am involved in designing several modules for training biology teachers, they have been exposed to CL

both as learners and as teachers, in particular with Céline Buchs. However the Swiss system is federal on its small scale and teacher training in each of our 23 cantons is significantly different.

[1]Don Plumb taught science and math to grade 7-12 students in the private and public sector in Canada, and for a while in Australia. He was very active in GLACIE, (the Great Lakes Association for Cooperation in Education) that ran interactive annual conferences on CL for many years. His first IASCE conference was in Scarborough in 2013 and since then he's been on the Board. Don is currently delivering instructional design workshops in Canada and Scandinavia. To find out more about his work write to d.plumb@sympatico.ca

[2]François Lombard has been a high school biology teacher for over 40 years. He is also a lecturer in teacher vocational training courses, designs computer-supported collaborative learning, and leads university projects that keep teachers up-to-date in science. His research focus is about inquiry, design-based research, and patterns in conceptual development. To find out more about his work write to francois.lombard@unige.ch

Cooperative Learning with Only One Student? Yes

George M Jacobs,
James Cook University Singapore
george.jacobs@gmail.com

Chin Ke Wei
Farrer Park Hospital, Singapore
chinkewei@farrerpark.com

A frequently heard concern regarding the use of Cooperative Learning comes from teachers with large numbers of students in their classes; 40, 50, even more than 100 students in one class. The cooperative learning literature provides reasoned responses to this reasonable concern (e.g., Smith, 2005). Perhaps, a less frequently heard concern related to cooperative learning and class size arises as to whether cooperative learning can be used with a class of only one student. This article suggests that yes, cooperative learning can also work well with that class size.

Introduction

A class size of one may be more common than thought, in at least three contexts. First, classroom teachers sometimes provide individual students with one-on-one assistance during class time or before or after class. Second, many students have private tutors outside of school hours, and some schools organise peer tutoring. Sometimes, these tutors teach only one student at a time. Third, in clinical situations, such as occur in nurse education, educators may sometimes individually supervise their students in their mastery of essential skills, in a way similar to that in which people supervise apprentices.

Can cooperative learning be appropriate in these one-student / one-teacher situations? Isn't cooperative learning supposed to be about groups of two or more students helping each other, with the teacher acting as a guide on the side, not as a participant? Well, we have tried cooperative learning with one student, and we are happy to report that it can work well.

Before we discuss practical examples, first, some background. Perhaps the key theoretical foundation for cooperative learning lies in the idea that learning is a profoundly social endeavour. Indeed, the word 'social' appears in the names of many current theories of learning, e.g., Social Interdependence Theory (Johnson & Johnson, 2009) and Sociocultural Theory (Vygotsky, 1978). Central to these theories is the notion that we learn and are

motivated to learn via interaction with people. Cooperative learning provides a platform for those interactions. The many studies that investigated cooperative learning and similar interactive approaches to learning have generally found cognitive and affective benefits. (For a meta-analysis of such studies, see Lou, Abrami, and d'Apollonia, 2001.)

Examples of Cooperative Learning with One Student

This section of the article looks at teachers using cooperative learning with just one student in two contexts: when one student needs individual tutoring and in clinical situations. Before looking at those two contexts, two other contexts should be recalled in which, although there may be a full complement of students in a class, teachers might join students to act as a member of a cooperative learning group of two-four members. First, sometimes teachers join a group in order to demonstrate the steps in a cooperative learning technique or to highlight a cooperative skill, such as checking that others understand. Second, when a group is missing a member because, for example, a member is absent due to illness or a student left the room temporarily to see another member of the school's staff, teachers may sit in.

Tutoring Students One-on-One Via Cooperative Learning

Many times, teachers need to provide individual tutoring to students. Also, other school personnel or other students can play this teaching role, for instance, some schools have programs in which older students tutor younger students. In these one-on-one settings, rather than the teachers or other people in the teacher role only lecturing or demonstrating, or only waiting for the student to finish their work and then providing feedback, it might sometimes be useful and more engaging if teachers take part along with the one student. One way to do this would be to use thinking aloud (Block, 1986), in which people take turns to say what is happening in their minds as they go about a task. For instance, if a pair is reading the same text, they can take turns to think aloud to describe what they do when they encounter unknown words or how they connect what they are reading to their prior knowledge. While one person is the Thinker, their partner is the Coach. Thinking aloud provides teachers and students with windows onto each other's minds. Thus, while thinking aloud to their one student, teachers can model strategies and also show that teachers, too, sometimes struggle and also sometimes enjoy the learning process. When students think aloud, teachers can better understand and help students, because instead of only looking at students' work and trying to intuit in what areas students have done well and where they might still be struggling, with think aloud, teachers now have more insight.

Almost any cooperative learning technique can be done with one student and one teacher. In addition to thinking aloud, another simple cooperative learning technique is Write-Circle of Speakers. First, each student works alone to write their ideas. Then, they take turns to share what they have written and comment on each other's thinking. Finally, they discuss with the goal of preparing a new response, based on what was learned through their interaction. As with the think aloud technique, with Write-Circle of Speakers, teachers can partner their students.

Cooperative Learning with One Student in Clinical Settings

Clinical practice experience is a key component in the development of nursing professionals, as it provides a crucial means of integrating theory with practice to enhance nurses' clinical reasoning skills. Clinical practice needs to be provided not only to people studying to become nurses but also to experienced nurses who newly join an organization or transfer to a new clinical setting. Therefore, all nurses are expected to be able to facilitate others' learning. Students, as well as nurses who are new to a particular nursing setting, are assigned to a clinical preceptor or buddy who provides orientation, supervision and guidance, sometimes on a one-to-one basis, to maximize learning opportunities.

For instance, if preceptors want preceptees to become familiar with the six or seven steps of the bag valve mask function test, preceptors may start with a demonstration of the steps and an explanation of the rationale for each step. Then, they can use Circle of Speakers in which one demonstrates a step and the other explains the rationale for that step. After they have completed all the steps, they start again so that the preceptee has an opportunity to demonstrate and explain each of the steps. Both parties can provide each other with feedback. Such cooperative learning practice helps preceptors to gain feedback on preceptees' understanding. However, this practice should probably not be done in front of patients, as it might result in their losing confidence in the care they are receiving.

The debriefing session is yet another context in which preceptors and preceptees can use cooperative learning. Preceptors are required to have a debriefing session with preceptees at the end of each working day, so that both reflect on the day's clinical experience. Unfortunately, traditional debrief sessions are mainly one-way communication in which preceptors comment on preceptees' practice and suggest improvements. Cooperative learning offers many ways to promote two-way communication. For instance, in the Circle of Writers technique both parties write down their queries or share what they have observed or learnt from each other's practice. Subsequently, they switch the papers and write feedback or explanation. Furthermore, Circle of Writers enables the preceptors or preceptees to better express themselves, especially if they are not vocal people or are not strong in the medium of instruction. The debriefing papers can also be kept in preceptees' learning portfolios.

Conclusion

In conclusion, this article has argued that just as cooperative learning can be useful with large classes of students, so too can cooperative learning be of benefit when a class consists of only one student. Indeed, the famous educator, Benjamin Bloom, who, with his colleagues, developed what is commonly known as Bloom's Taxonomy of Educational Objectives (Anderson, Krathwohl, & Bloom, 2001) cited research suggesting that the best context for learning is one student interacting with one teacher (Bloom, 1984). Cooperative learning provides an engaging and productive means of facilitating this one-on-one teaching.

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Serendipity

Lynda Baloche

Yes, And: *How Improvisation Reverses "No, But" Thinking and Improves Creativity and Collaboration*. is based on the work of Viola Spolin, a pioneer of improvisatory theatre. Spolin first developed the idea of "yes, and thinking" when she was working with immigrant children, helping them build confidence. Yes, and thinking became the foundation for much improvisatory theatre and has since been adapted successfully in a variety of corporate, non-profit, and arts venues. While this book focuses on adult and organizational applications, the ten-page appendix is the most concise and helpful explanation of 17 basic improvisation games I have found. These "games" are designed to emphasize a variety of communication and collaborative skills and are usable with participants ranging from young children to adults. These are carefully designed and time-tested tools; they can add movement, sound, and a bit of theatre and laughter into learning and interpersonal-skill development.

Shortly after I read *Yes, And*, and thought about Spolin and the creativity and joy of her work, I heard an interview with Steven Johnson about his book *Wonderland: How Play Made the Modern World*. Johnson examines the power of play and delight through the ages—and the variety of innovations that first manifested themselves in toys. From bone flutes (circa 33,000 BCE) to the technology of pierced cylinders for music boxes that was later revisited as key-punch cards for computer data entry, Johnson provides fascinating examples of how personkind has sought beauty, novelty, and play throughout the ages—and how inventions that seemed "delightful," but not "useful," later fuelled entire industries, technological shifts, and social habits that changed the lives of millions. Johnson suggests that "when the world surprises us with something, our brains are wired to pay attention" (281) and that games, play, and other amusements—far from being unimportant—provide our brains with an important "novelty bonus"(282).

Two items in *Science Daily* further stimulated my thinking about the importance of play and delight, and the role of the arts.

The first, *Psychology: Playful people are at an advantage* focuses on the work of René Proyer who claims that adult play is a positive, and understudied, trait. He outlines four types of playful adults (none of which are related to playing sports or games). He suggests that adult playfulness is an important personality trait that shares some overlap, but is not redundant, with the personality traits of extraversion, agreeableness, conscientiousness, openness to experience, and emotional stability.

https://www.sciencedaily.com/releases/2017/01/170111102859.htl

The second, *Melody modulates choir members' heart rate* examines what happens when people sing in a choir. Effects include that choral singing synchronises the singers' muscular movements and neural activities and, when singing in unison, their heart rates tend to increase and decrease at the same time. The researchers state that "singing regulates activity in the so-called vagus nerve which is involved in our emotional life and our communication with others. . . . Songs with long phrases achieve the same effect as breathing exercises in yoga." Thinking about this research reminded me of the powerful documentary *To Breathe as One*.

https://www.sciencedaily.com/releases/2013/07/130708200153.htm

(the original article) http://journal.frontiersin.org/article/10.3389/fpsyg.2013.00334/full

(information about the documentary) http://www.tobreatheasone.com/

Reviewing each of these resources left me thinking why, so often, the arts are neglected in education, playfulness may not be recognized as a positive trait, and novelty and wonder are viewed as unimportant and a "waste of time." We have many resources to help us learn how to incorporate movement, improvisation, sound, and visual arts into our teaching, professional development, and daily lives. Both history and research tell us that it is important to "take the time" to be playful, to recognize and encourage novelty, and to delight in wonder. What are we waiting for?

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From the Journals

Contributors: Jill Clark, George Jacobs and Lalita Agashe

Allen, E. G. (2016). "I hate group work!": Addressing students' concerns about small-group learning. *Insight, 11*, 81-89. Retrieved from http://insightjournal.park.edu/wp-content/uploads/2016/07/8-Allan.pdf

This article identifies the strategies used by architecture professors and their undergraduate students to mitigate common issues that students raise about group work. Based on participant-observation, interviews with students and faculty, and analysis of instructional materials and student work, this IRB-approved ethnographic case study complicates the separation of collaborative, cooperative, and problem-based learning into distinct pedagogical models. Rather than viewing students' concerns as a form of resistance that can be avoided with the right approach to small-group learning, this article explores how the hybrid model operating in design studio pedagogy confronts the problems inherent in any form of group work.

Chen, Q., & Liu, Y. (2017). The impact of cooperative learning on CHC students' achievements and its changes over the past decade. *International Journal of Higher Education, 6*(2), 75-88. doi: 10.5430/ijhe.v6n2p75

Informed by emergent learning theories and multiple evidenced benefits, cooperative learning has developed into a widely accepted organization mode of class in the Western context. For the same reason, cooperative learning is transferred, during the past decade, into classrooms of Confucian Heritage Culture (CHC) contexts. Concerns, however, are raised regarding the effectiveness of the transfer, for contextual factors have long been acknowledged as a powerful barrier to borrowed initiatives, especially those that are not compatible with the deep-rooted cultural values in the situated contexts. This paper is built on Thanh-Pham's (2014) review of literature, which is on the impact of cooperative learning on the CHC students' learning achievements and conducted during 1990 to 2006. This paper has expanded Thanh-Pham (2014) with a similar review on available literatures, which were published from 2007 up to 2016. This review of 39 publications shows up noticeable changes regarding the impact of cooperative learning in the CHC contexts. Specifically, the positive findings have risen from 47.2% to 86.9%, whereas negative and null change studies fall considerably. Influencing factors are analyzed via SPSS22.0 Software and verified with exemplars. Reasons for these changes point to the changing context and adaptive agency.

Cronin, C., Cochrane, T., & Averill, G. (2016). Nurturing global collaboration and networked learning in higher education. *Research in Learning Technology, 24*. doi: http://dx.doi.org/10.3402/rlt.v24.26497

We consider the principles of communities of practice (CoP) and networked learning in higher education, illustrated with a case study. iCollab has grown from an international community of practice connecting students

and lecturers in seven modules across seven higher education institutions in six countries, to a global network supporting the exploration and evaluation of mobile web tools to engage in participatory curriculum development and supporting students in developing international collaboration and cooperation skills. This article explores the interplay of collaboration and cooperation, CoP and networked learning; describes how this interplay has operated in iCollab; and highlights opportunities and challenges of learning, teaching and interacting with students in networked publics in higher education.

Emerson, T. L. N., English, L. K., & McGoldrick, K. (2017). The high costs of large enrollment classes: Can cooperative learning help? *Eastern Economic Journal,* pp. 1–20. doi:10.1057/s41302-017-0093-2

We examine the potential for cooperative learning activities to offset costs of large enrollment courses. We use a quasi-experimental research design to examine achievement and course perceptions in small and large enrollment sections of microeconomic principles. While large enrollment sections attain lower levels of achievement (measured by course score) than those with smaller enrollments, this effect is partially mitigated by use of cooperative learning. Furthermore, while students in large enrollment sections report lower levels of satisfaction and learning than students in smaller-sized classes, the use of cooperative learning eliminates the negative effects of increased class size on student perceptions.

Fernandez-Rio, J. (2016). Implementing cooperative learning: A proposal. *Journal of Physical Education, Recreation & Dance, 87*(5), 5-6. http://dx.doi.org/10.1080/07303084.2016.1156992

In today's world the term cooperation could be considered a trending topic because it is everywhere: in politics, in business and, of course, in education. Worldwide, the latest educational legislation includes this social value as one of the main goals to achieve in schools. To fulfill this demand many educators claim that they teach their students how to cooperate in their classes, but most of them do it only on special occasions such as festivities or celebrations. Some go a step further to incorporate learning units that develop cooperative skills through the teaching of specifically designed games such as those proposed by Orlick. However, this does not seem to be enough. After many years of reading, experiencing, applying, assessing and researching cooperative learning at the primary, secondary and college level, a proposal to implement it in any educational context was designed: the cooperative learning cycle.

Fernandez-Río J., Cecchini J. A., Méndez-Giménez A., Méndez-Alonso D., & Prieto J. A. (2017). Self-regulation, cooperative learning, and academic self-efficacy: Interactions to prevent school failure. *Frontiers in Psychology, 8,* 1-10. doi: 10.3389/fpsyg.2017.00022

Learning to learn and learning to cooperate are two important goals for individuals. Moreover, self-regulation has been identified as fundamental to prevent school failure. The goal of the present study was to assess the interactions between self-regulated learning, cooperative learning and academic self-efficacy in secondary education students experiencing cooperative learning as the main pedagogical approach for at least one school year. 2.513 secondary education students (1.308 males, 1.205 females), 12–17 years old (M = 13.85, SD = 1.29), enrolled in 17 different schools belonging to the National Network of Schools on Cooperative Learning in Spain agreed to participate. They all had experienced this pedagogical approach a minimum of one school year. Participants were asked to complete the cooperative learning questionnaire, the strategies to control the study questionnaire and the global academic self-efficacy questionnaire. Participants were grouped based on their perceptions on cooperative learning and self-regulated learning in their classes. A combination of hierarchical and κ-means cluster analyses was used. Results revealed a four-cluster solution: cluster one included students with low levels of cooperative learning, self-regulated learning and academic self-efficacy, cluster two included students with high levels of cooperative learning, self-regulated learning and academic self-efficacy, cluster three included students with high levels of cooperative learning, low levels of self-regulated learning and intermediate-low levels of academic self-efficacy, and, finally, cluster four included students with high levels of self-regulated learning, low levels of cooperative learning, and intermediate-high levels of academic self-efficacy. Self-regulated learning was found more influential than cooperative learning on students' academic self-efficacy. In cooperative learning contexts students interact through different types of regulations: self, co, and shared. Educators should

be aware of these interactions, symmetrical or asymmetrical, because they determine the quality and quantity of the students' participation and achievements, and they are key elements to prevent school failure.

Goodyear, V. A. (2016). Sustained professional development on cooperative learning: Impact on six teachers' practices and students' learning. *Research Quarterly for Exercise and Sport, 88*(1). doi: http://dx.doi.org/10.1080/02701367.2016.1263381

Purpose: It has been argued, extensively and internationally, that sustained school-based continuous professional development (CPD) has the potential to overcome some of the shortcomings of traditional one-off CPD programs. Yet, the evidence base on more effective or less effective forms of CPD is contradictory. The mechanisms by which sustained support should be offered are unclear, and the impacts on teachers' and students' learning are complex and difficult to track. The purpose of this study was to examine the impact of a sustained school-based, tailored, and supported CPD program on teachers' practices and students' learning. Method: Data are reported from 6 case studies of individual teachers engaged in a yearlong CPD program focused on cooperative learning. The CPD program involved participatory action research and frequent interaction/support from a boundary spanner (researcher/facilitator). Data were gathered from 29 video-recorded lessons, 108 interviews, and 35 field journal entries. Results: (a) Individualized (external) support, (b) departmental (internal) support, and (c) sustained support impacted teachers' practices of cooperative learning. The teachers adapted their practices of cooperative learning in response to their students' learning needs. Teachers began to develop a level of pedagogical fluency, and in doing so, teachers advanced students' learning. Conclusions: Because this study demonstrates impact, it contributes to international literature on effective CPD. The key contribution is the detailed evidence about how and why CPD supported 6 individual teachers to learn-differently-and the complexity of the learning support required to engage in ongoing curriculum development to positively impact student learning.

Grande-Ortiz, M.A., Tevar-Sanz. G., Ayuga-Téllez, E., Gonzalez-Garcia, C., Sanchez-De Medina, AS., & Ramírez-Montoro, J.J. (2017). Cooperative learning in forestry engineering with NIPPE Descartes software. *Computer Applications in Engineering Education, 25*(1), 103–111. doi 10.1002/cae.21783 2017

This work describes the methodology, procedure, and results obtained from the application of an education co-operative learning experience with NIPPE Descartes software in a specific task. Students in the second year of a degree course in Forestry Engineering at the Madrid Polytechnic University were invited to take part in a peer-learning experience. The students were organized in pairs and asked to complete an optional task in one of the modules in the subject of Mechanics. This experience took place between 2006 and 2011. The results were compared with the previous period between 2003 and 2006 in which this task was not required. The students were surveyed to assess their degree of satisfaction and the contribution of the experience to the learning of the subject. This methodology was observed to substantially reduce the percentage of students who do not show up for their evaluation exams, and the percentage of pass and fail marks also reveals significant differences. Additionally, of the students who performed the task, the number who passed in the ordinary examination period increased nearly 30% points compared to those who did not. It is worth noting that 43% of the students participating in the experience rated the activity as a fairly or very positive in terms of contributing to learning the subject. This work describes the methodology, procedure, and results obtained from the application of an education co-operative learning experience with NIPPE Descartes software in a specific task. Students in the second year of a degree course in Forestry Engineering at the Madrid Polytechnic University were invited to take part in a peer-learning experience. The students were organized in pairs and asked to complete an optional task in one of the modules in the subject of Mechanics. This experience took place between 2006 and 2011. The results were compared with the previous period between 2003 and 2006 in which this task was not required. The students were surveyed to assess their degree of satisfaction and the contribution of the experience to the learning of the subject. This methodology was observed to substantially reduce the percentage of students who do not show up for their evaluation exams, and the percentage of pass and fail marks also reveals significant differences. Additionally, of the students who performed the task, the number who passed in the ordinary examination period increased nearly 30% points compared to those who did not. It is worth noting that 43% of the students participating in the experience rated the activity as a fairly or very positive in terms of contributing to learning the subject. This work describes the methodology, procedure, and results obtained from the application of an education

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Hayek, A., Toma, C., Guidotti, S., Oberlé, D., & Butera, F. (2017). Grades degrade group coordination: Deteriorated interactions and performance in a cooperative motor task. *European Journal of Psychology of Education, 32*(1), 97-112. doi:http://dx.doi.org/10.1007/s10212-016-0286-9

At school, pupils often cooperate on common projects and must coordinate their different individual actions. However, grades are pervasively used even in cooperative situations, which make the pupils' differences in achievement and their relative rank salient and may reduce their inclination to work constructively with others. Thus, we hypothesized that grades would elicit disruptive interactions and reduce performance in a cooperative cognitive-motor task necessitating inter-individual coordination of members. In a study with 5th graders, grades (vs. a neutral concept) were primed at the onset of a cooperative group interaction. Results showed that, although pupils were set to work cooperatively, priming grades (vs. neutral concepts) harmed inter-individual coordination by eliciting more negative dominant behaviours among pupils during interactions, which decreased group performance.

Jeong, H., & Hmelo-Silver, C. (2016). Seven affordances of computer-supported collaborative learning: How to support collaborative learning? How can technologies help? *Educational Psychologist 51*(2), 1-19. doi: 10.1080/00461520.2016.1158654

This article proposes 7 core affordances of technology for collaborative learning based on theories of collaborative learning and CSCL (Computer-Supported Collaborative Learning) practices. Technology affords learner opportunities to (1) engage in a joint task, (2) communicate, (3) share resources, (4) engage in productive collaborative learning processes, (5) engage in co-construction, (6) monitor and regulate collaborative learning, and (7) find and build groups and communities. We elaborate our framework using in-depth explorations of how technologies are actually used to support collaborative learning in CSCL research and identify representative design strategies and technology examples. While technology can play an important role in addressing the demands of collaborative learning, it needs to be considered in conjunction with pedagogical strategies and other social and cultural supports for collaborative learning. The supports also need to remain at an appropriate level so as not to interfere with long-term learning goals.

Leasa, M., & Corebima, A.D. (2017). The effect of numbered heads together (NHT) cooperative learning model on the cognitive achievement of students with different academic ability. *Journal of Physics Conference Series 795(*1):012071

Learning models and academic ability may affect students' achievement in science. This study, thus aimed to investigate the effect of numbered heads together (NHT) cooperative learning model on elementary students' cognitive achievement in natural science. This study employed a quasi-experimental design with pretest-posttest non-equivalent control group with 2 x 2 factorial. There were two learning models compared NHT and the conventional, and two academic ability high and low. The results of ana Cova test confirmed the difference in the students' cognitive achievement based on learning models and general academic ability. However, the interaction between learning models and academic ability did not affect the students' cognitive achievement. In

In conclusion, teachers are strongly recommended to be more creative in designing learning using other types of cooperative learning models. Also, schools are required to create a better learning environment which is more cooperative to avoid unfair competition among students in the classroom and as a result improve the students' academic ability. Further research needs to be conducted to explore the contribution of other aspects in cooperative learning toward cognitive achievement of students with different academic ability.

Leung, A. C. K., Hashemi Pour, B., Reynolds, D., & Jerzak, S. (2017). New assessment process in an introductory undergraduate physics laboratory: An exploration on collaborative learning. *Assessment and Evaluation in Higher Education, 42*(2), 169-181. doi: http://dx.doi.org/10.1080/02602938.2015.1089977

A new team learning assessment process was designed and tested in a first-year university physics laboratory class. The assessment process was designed to provide a strong incentive for students to cooperate and feel responsible for each other's learning and fostering a sense of collaboration rather than competition. Specifically, the new assessment process involves randomly dividing students into teams of four to work on a physics experiment and, at the end of the laboratory session, randomly selecting only one team member to carry out a post-laboratory session performance task. The results indicate that learning outcomes were not compromised in the new assessment process and that peer instruction was employed to a greater extent compared to our standard process. Student responses from a post-assessment survey revealed that 76% of students considered our new assessment process to be fair, whereas 57% of students felt our standard process was fair. The new assessment process used in this study led to a 75% reduction in grading duties - an advantage for large class management.

López-Mondéjar, L. M., & Tomás Pastor, L. M. (2017). Development of socio-emotional skills through cooperative learning in a university environment. *Procedia - Social and Behavioral Sciences*, 237(21), 432–437. doi.org/10.1016/j.sbspro

This paper presents the results obtained on the socio-emotional variables arising from a cooperative learning project conducted in the university classroom. The idea of using this type of methodology comes mainly from the experience of university lecturers with regard to the routine difficulties encountered by students in group-work sessions. For this research project, a Likert scale questionnaire was used on a sample of 103 undergraduates reading degrees in Pre-School Education and Primary Education, in order to evaluate a possible improvement in the students' acquisition of socio-emotional skills. Once the research was completed in a cooperative learning classroom, the results reflected greater empathy and assertiveness among group members, as well as greater cohesion and confidence in reaching agreements and accepting views which differ from their own. Therefore, we can establish a positive relationship between the use of a cooperative methodology and an improvement in the socio-emotional skills of university students.

McNaughton, J., Crick, T., Joyce-Gibbons, A., Beauchamp, G., Young, N., & Tan, E. (2017). Facilitating collaborative learning between two primary schools using large multi-touch devices. *Journal of Computers in Education*, pp. 1-14. doi: 10.1007/s40692-017-0081-x

This paper presents a technical case study and the associated research software/hardware underpinning an educational research trial in which large touchscreen interfaces were used to facilitate collaborative interactions between primary school students at separate locations. As part of the trial, an application for supporting a collaborative classroom activity was created which allowed students at either location to transfer resources to the students at the other via a 'flick' gesture. The trial required several novel innovations to the existing SynergyNet software framework to enable it to support synchronous remote collaboration. The innovations enabled the first successful classroom collaboration activities between two separate locations within the United Kingdom using large touchscreen interfaces. This paper details the challenges encountered in implementing these innovations and their solutions.

Rambe, P. (2017). Spaces for interactive engagement or technology for differential academic participation? Google Groups for collaborative learning at a South African University. *Journal of Computing in Higher Education*, pp 1-35. doi: 10.1007/s12528-017-9141-5

The rhetoric on the potential of Web 2.0 technologies to democratize online engagement of students often overlooks the discomforting, differential participation and asymmetrical engagement that accompanies student adoption of emerging technologies. This paper, therefore, constitutes a critical reality check for student adoption of technology to the extent that it explores the potential of Google Groups (i.e. self-organised online groups) to leverage collaborative engagement and balanced participation of students with minimal educator support. Community of Inquiry and a case study approach involving in-depth interviews with racially mixed students and Google Group artifacts were drawn upon as theoretical and methodological lenses for examining the equality of participation, academic rigor and complexity of engagement in Google Groups. Study findings were mixed: a semblance of authentic peer-based engagements, emergent academic networking, and inter-racial communication in Google Groups was juxtaposed with gender asymmetries in participation, dominance of group administrators' postings and shallow collaborative engagements. The study, therefore, recommends actively engaged Group leaders who steer gender and racially balanced engagements, scaffold peer on-task behavior; including a sound pedagogical strategy anchored in collaborative problem-solving; authentic construction of knowledge; effective completion of collaborative tasks by students; and constructive assessments by the educator and peers.

Scagar, K., Boonstra, J., Peeters, T., & Wiegant, F. (2016). Collaborative Learning in Higher Education: Evoking positive interdependence. *CBE life sciences education 15*(4), ar69. doi: 10.1187/cbe.16-07-0219

Collaborative learning is a widely used instructional method, but the learning potential of this instructional method is often underused in practice. Therefore, the importance of various factors underlying effective collaborative learning should be determined. In the current study, five different life sciences undergraduate courses with successful collaborative-learning results were selected. This study focuses on factors that increased the effectiveness of collaboration in these courses, according to the students. Nine focus group interviews were conducted and analyzed. Results show that factors evoking effective collaboration were student autonomy and self-regulatory behavior, combined with a challenging, open, and complex group task that required the students to create something new and original. The design factors of these courses fostered a sense of responsibility and of shared ownership of both the collaborative process and the end product of the group assignment. In addition, students reported the absence of any free riders in these group assignments. Interestingly, it was observed that students seemed to value their sense of achievement, their learning processes, and the products they were working on more than their grades. It is concluded that collaborative learning in higher education should be designed using challenging and relevant tasks that build shared ownership with students.

Zhang, H., Peng, W., & Sun, L. (2017). English Cooperative Learning Mode in a Rural Junior High School in China. *Journal of Education and Training Studies, 5*(3), 86-96.

Cooperative learning is one of the most recognized and fruitful research areas in modern education practice. It has been widely used in many countries as an effective teaching strategy to improve class efficiency and students' comprehensive language ability since the 1990's. This paper takes JA Junior High School, a rural junior high school in Nantong, China, as a case to explore its English cooperative learning mode. A questionnaire was designed based on nine factors namely learning expectation, learning interest, learning initiative, emotional experience, cooperative awareness, cooperative ability, learning effectiveness, learning evaluation and English usage level. The purpose is to try to find whether gender, grade and academic achievements have an effect on English cooperative learning. 515 valid questionnaires were collected and analyzed by t-test and One-way ANOVA. After analysis, it turned out that these three factors have an impact on the effectiveness of English cooperative learning. The results showed that the differences of gender, grade and academic achievements should be taken into consideration in accordance with the characteristics of rural middle school in constructing the English cooperative learning mode.

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