INTERNATIONAL ASSOCIATION FOR THE STUDY OF COOPERATION IN EDUCATION

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Conference Update—Manchester Here We Come

All around the world, IASCE members, plus our colleagues at the Co-operative College and the United Kingdom Co-operative Learning Network, are preparing for the conference in Manchester, England from June 20 to 23, 2002. Those of us who have never been to Manchester are looking forward to exploring the city and the surrounding areas. From reflecting on the organizational feats of Roman Emperors (Manchester isn't all that far from Hadrian's Wall), to hiking the peaks and lakes, gazing at old manors, tracing the haunts of favorite authors, and exploring the contemporary music and sports scene, it seems the area has something for everyone.

And the conference? January, the month the proposals for presentations were due, felt like a major holiday for Maureen (our board member from Britain) and for me. Our computers kept beeping and telling us we had mail. We received proposals from many parts of the world—reminding us that we are truly international. We received proposals from old friends of cooperative learning and proposals from voices that are new to our organizations. And the quality and variety! We predict many of you who join us in Manchester will have a hard time deciding which sessions to attend. People are engaged in such interesting work and are bringing vibrant and exciting voices to cooperative learning and to this conference. We are excited and our hearts are warmed by the passion, the commitment, and the willingness to share. And about that willingness to share—please keep in mind that all presenters and participants in the conference pay to attend and participate. In keeping with the spirit of cooperation and with the belief that everyone is a valued member of the group, that has been the tradition of IASCE.

Yes, there are many stimulating sessions planned for the conference, but a conference can be much more than the sum total of sessions. The University of Manchester Institute of Science and Technology conference facility gives us a chance to get to know each other in ways that staying in hotels spread throughout a city would not. The local planning group (special thanks to Maureen) is doing a creative and energetic job of planning what I think of as the most important part--the glue--of the conference. Glue is what holds things together, and for our conference the glue includes shared meals, shared snacks, weird and wild activities, plus all those little moments when—with the help of pleasant surroundings--you have a chance to finish a conversation with an old friend, follow up with a new acquaintance to hear more about their work and their world, or just take a shared walk. The all-inclusive pricing of the conference, the design of the facility, and the local planning group help make this possible; your participation helps make it a reality.

I could tell you more, but I won't. You can access the conference website through IASCE.net (click on Upcoming Events). You'll find lots of details including the names of sessions and presenters, you'll find information about plenary sessions, you'll find descriptions of different types of accommodations, and you will be able to register "on line" and leave the hassles of currency conversion to the experts. There are maps of UMIST, pictures of the area, plus links to all sorts of additional information. There is even information about a visit to schools in the North West of England and a Co-operative Industrial Heritage tour that may be available immediately after the conference. If you have specific questions that you can't seem to find the answer to, you can email me lbaloche@wcupa.edu and I will try to help.

If you have had any doubts about the vibrancy of cooperative learning or to the commitment to equity and to socially responsible citizenship among educators throughout the world, put those doubts aside. There will be a lot of people traveling to Manchester in June; I hope each and every one of you will join us and that you will encourage your colleagues to join us as well. Never has spreading the ideas of cooperation and responsible citizenship been more critical.

Cooperatively yours,
Lynda Baloche
IASCE Co-President and Conference Co-Planner

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IASCE EXECUTIVE BOARD OF DIRECTORS

Team efforts: Collaboration and confrontations work side-by-side

A Review Essay

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To the readers of IASCE's Newsletter words and connotations of "collaboration", "cooperation", and "team-effort" will not come as unexpected reading; but what might be delightful is the wide variety in the implementation and the implications of these very ideas. As I discover more about cooperative learning, I find myself constantly revising and challenging my perceptions. The four articles from *Harvard Business Review* [http://www.hbsp.harvard.edu/products/hbr/] reviewed here are among those that have guided me. The complete reference for each article is available at the end of this review.

The Sandberg article, *Understanding Competence at Work*, is included in "Forethought", the front section of each issue of *Harvard Business Review.* While the article is brief, its message is profound. The author has done a great job in connecting the theoretical advantages of cooperative efforts to practical usage in the everyday workforce. Sandberg advocates that as people in the workplace strive to fulfill their own goals, they need to develop the foresight to anticipate and appreciate the goals of their team members.

The challenge, according to Sandberg, is in developing an understanding of the differences in individual goals among team players. The author argues that perspective-taking skills can and need to be developed. He explains by giving actual examples from a study conducted at the Volvo Car Corporation in Sweden and describes three different competencies of working together. The first group—"Sequential Optimizers" work on their own goals, the second group—"Interactive Optimizers" cooperate with other members of the same group, and the third group—"Customer Optimizers" cooperate with all colleagues interested in working towards satisfying the customers' needs. Not surprisingly, the last group has well-developed perspective-taking skills; they also excel at their work. Interestingly, those in the first group, with least developed perspective taking skills, are not able to account for their lesser developed "work competence". I wish this study had extended its findings. I would have liked to know if the group deficient in perspective-taking skills was ever given help in developing them, and if so, how?

We have come to understand that people with higher levels of Interpersonal and Intrapersonal Intelligences (Gardner, 1983), and those with well-developed Emotional Intelligence (EQ) (Goleman, 1995) have greater success in life and at work. In the article, *Building the Emotional Intelligence of Groups,* Druskatt and Wolff describe their research on group emotional intelligence: "Individual emotional intelligence has a group analog, and it is just as critical to groups' effectiveness. Teams can develop greater emotional intelligence and, in so doing, boost their overall performance" (p.82).

The authors state that even though we have a tendency to quantify individual performance, most of the work done in any kind of organization is accomplished by teams. It therefore becomes imperative for progressive managers to make concerted efforts to develop team EQ. The authors quote Goleman: "Personal competence comes from being aware of and regulating one's own emotions; social competence is awareness and regulation of others' emotions" (p. 82). For effective group work to take place, a higher and more complex level of awareness is required—an understanding of the emotions of one's own group as well as those of other groups within and outside of the immediate boundaries.

A group which works well together will develop many characteristics—trust, a sense of group identity, and a sense of group efficacy. The authors lay out the foundations and the norms for developing group EQ:

> Group intelligence is about the small acts that make a big difference. It is not about a team member working all night to meet a deadline; it is about saying thank you for doing so. It is not about in-depth discussion of ideas; it is about asking a quiet member for his thoughts. It is not about harmony, lack of tension, and all members liking each other; it is about acknowledging when harmony is false, tension unexpressed, and treating others with respect (p. 86).

Druskatt and Wolff have put together a graphic organizer which is worth hanging near coffee machines and water coolers, in board rooms, classrooms, and teachers' lounges, and wherever else people get together to collaborate.

A concerned reader might ask: "Will the ride to developing such sophisticated team effectiveness be a smooth one?" The authors honestly concede that confrontations and heated discussions are natural outcomes of group dynamics. However, they need not be avoided. An ambitious manager with foresight uses confrontation as a tool. The article brilliantly describes the circumstances and the consequences of group discussions where arguments become the foreplay to higher levels of creativity and productivity. Figure 1 portrays this.

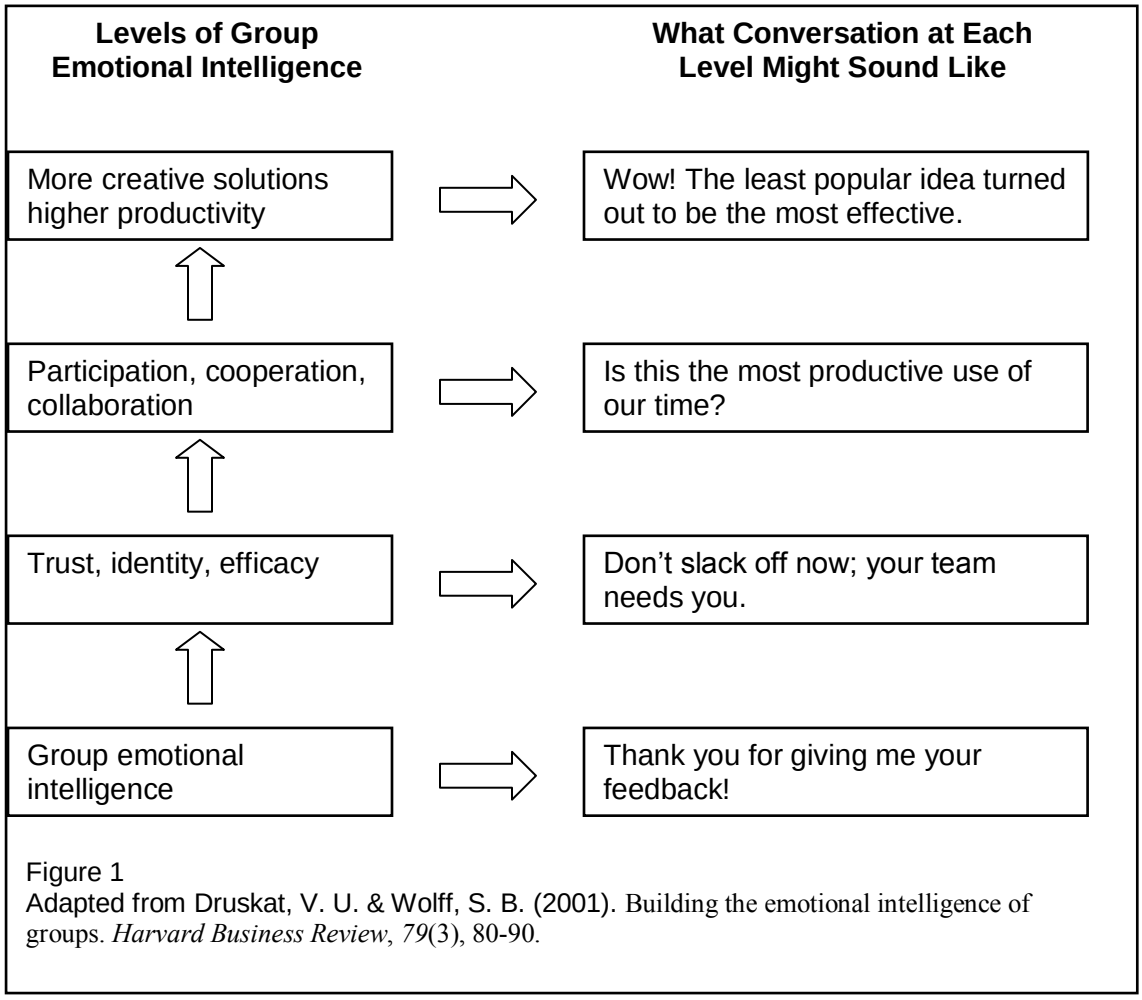


Figure 1
Adapted from Druskat, V. U. & Wolff, S. B. (2001). Building the emotional intelligence of groups. *Harvard Business Review*, *79*(3), 80-90.

The last two articles, *Level 5 Leadership: The Triumph of Humility and Fierce Resolve*, and *Speeding up Team Learning* are somewhat similar; they both describe the "paradoxes and challenges" of effective group leadership. Interestingly, in a very subtle way, they both point out that there is nothing contradictory about needing both—a team leader and the democratic principles of equality in a group. According to both articles, team leaders can motivate their people by affecting team learning, by successfully implementing new methodologies with everyone's consent, and by creating an atmosphere of psychological safety. All of the above attributes are highly coveted in any organization. Yet, the burden to create them is not insignificant. What makes up the profile of group leaders who are able to do so?

The article, *Speeding up Team Learning,* defines three necessary characteristics to become a "Learning Leader".

1. Be accessible: In order to make clear that others' opinions are welcomed and valued the leader must be available, not aloof.

2. Ask for input: An atmosphere of information sharing can be reinforced by an explicit request from the team leader for contributions from members.
3. Serve as a "fallibility model": Team leaders can further foster a learning environment by admitting their mistakes to the team (p. 132).

Collins' description of effective team leadership is not as straightforward. He has summarized his five years of research about what makes some companies great. From Collin's perspective, the answer often focuses on the CEOs. He describes a wide range of CEOs—from successful, yet uncelebrated ones to celebrated, yet dysfunctional ones. Collins tends to frame his findings in terms of personality. For those of us who might think more in terms of interpersonal skills and collaboration, it is easy to interpret his descriptions of the most successful CEOs as those who operate consistently at extraordinarily high levels of "task" commitment and skill while, simultaneously, focusing on "maintenance" issues with a level of skill that stems from deep emotional intelligence.

1. Successful managers value the contributions of the employees and let them know that they "look out the window to assign credit - even undue credit. They look in the mirror to assign blame, never citing external factors" (p.75).
2. Successful managers have "paradoxes" in their personal attributes, which they use to challenge and motivate their employees: "They are timid and ferocious. Shy and fearless. They are rare –and unstoppable" (p.67). According Collins, such personal attributes give rise to group leaders of high caliber.
3. Successful managers put the goals of their group before "their own needs [for] the greater ambition of something larger" (p.75).

Eventually, such exemplary leadership creates value, honor, and psychological safety among the employees. And, as the article by Druskatt and Wolff indicates, such leadership increases productivity and creativity.

A common theme regarding the benefits of collaborative work resonates in all these articles. Each, in its own way, builds a strong case for the value of collaboration and presents a complex picture of the skills needed for highly successful collaboration. Read by educators, these articles help build a strong case for the value of collaborative work that takes the time to teach good interpersonal skills and to reflect on the use of these skills to both get the task done and to build and maintain relationships with peers.

Each of the above articles has its merits. However, if you have the time and the inclination to read only one, I urge you to read *Building the Emotional Intelligence of Groups* by Druskatt and Wolff. It is simple and powerful.

Collins, J. (2001). Level 5 leadership: The triumph of humility and fierce resolve. *Harvard Business Review, 79(1),* 66-76.

Druskat, V.U. & Wolff, S.B. (2001). Building the emotional intelligence of groups. *Harvard Business Review, 79*(3), 80-90.

Edmondson, A., Bohmer, R. & Pisano, G. (2001). Speeding up team learning. *Harvard Business Review*, *79*(9), 125-132.

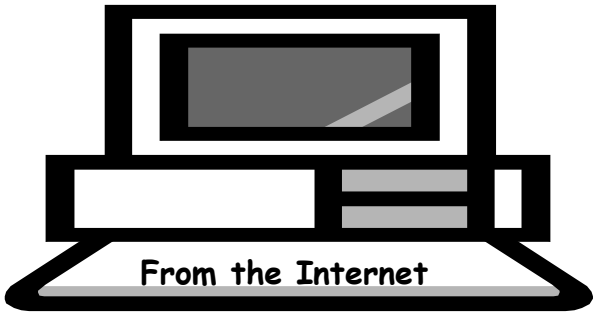
Sandberg, J. (2001). Understanding competence at work. *Harvard Business Review*, *79(3),* 24-28.

References:

Gardner, H. (1983). *Frames of mind*. New York: Basic.

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York: Bantam.

I would like to thank Lynda Baloche for her help in writing this review.



Here's an annotated list of web pages related to CL that I discovered through the courtesy of LEUNG Kwok-wing and his colleagues at the Education Department of the government of Hong Kong. An asterisk indicates that the annotation is written specially for this list of pages, i.e., the annotation does not appear in the web page.

1. http://college.hmco.com/education/pbl/tc/coop.html

   *** An overview of cooperative learning excerpted from a book: Biehler/Snowman, *Psychology Applied to Teaching*, 8/e, 1997, Houghton Mifflin Co. (Chapters 4 & 11).**

2. http://www.coedu.usf.edu/~morris/lp_index.html#cooperative

   * This is a collection of more than 75 ideas for group activities. The collection is divided into subject areas with the usual ones covered, but more for language arts. Even if you don't use the actual activities, they might spark ideas for other things your students can do together.

3. http://www.vta.spcomm.uiuc.edu/

   Teamworks, the Virtual Team Assistant, is a web site developed to provide support for group communication processes, and especially for design teams in engineering and other practical arts and sciences. Teamworks consists of nine informational modules, each of which contains background information, instruments for self-assessment, lessons to develop team work skills, and links to helpful resources. An overall view of the site can be obtained at the Teamworks Site Map. Help using Teamworks is available through the Teamworks Help Page. A search engine will be available to help locate specific information or concepts. Information about the project is provided in our proposal and technical reports. Links to internet resources on Teamworks topics are provided in the Teamworks WWWebliography.

   * The emphasis in this site seems to be on university science courses, particularly engineering. Lots of nice links, and I love the name of the people who put the whole thing together, "Team Engineering Collaboratory."

4. http://www.uni-leipzig.de/~theolweb/sander/uebung/cooplearn.html

   * This is the text of the following article by Robert Slavin: Slavin, R. E. (1996). Research for the future: Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology, 21*(1), 43-69.

5. http://www.sabes.org/aia101.htm#top

   * This is an article entitled *The connection between cooperative learning and assessment* written by Marta Mangan-Lev. It appears on the website of the System for Adult Basic Education Support (SABES), established by the Education Department of the U.S. state of Massachusetts. The premise of the article is that CL offers many opportunities to do authentic assessment. The article begins with ideas on how to do CL. Next are various ways to do authentic assessment with CL.

6. http://benz.nchu.edu.tw/coop/ideas.htm

   * This web page (in Chinese) from the Taiwan University consists of four main (and brief) sections: (1) What is CL? (2) Principles of CL; (3) Why should we adopt CL? and (4) Ways to organize CL at the classroom level.

7. http://nawel.dcc.uchile.cl/~cscl/ or www.carl.cl/~cscl

   *Here's a site from Chile (in Spanish with some English). The title of the site is *Computer Supported Collaborative Learning*. The site offers background information, including theoretical constructs, and a great many links.

8. http://celt.ust.hk/ideas/CCL/

   *This site was constructed by the Centre for Enhanced Learning and Teaching at Hong Kong University of Science and Technology. Its primary purpose seems to be to help teachers at the university in their use of Collaborative and Cooperative Learning (CCL). Among the features of the site are a video of a talk by David Johnson that introduces cooperative learning, a FAQ section, articles that describe various approaches to CCL, and a 'startup kit' for teachers at the university who want to try CCL.

9. http://www.casa.susx.ac.uk/pal.html

   *This page is from the School of Cognitive and Computing Sciences of the University of Sussex. Here's the entire page. The programme it describes is another example of Out-of-Class Academic Collaboration (OCAC), discussed in two to the articles in the From the Journals section of this issue of the *IASCE Newsletter*.

***Peer Assisted Learning* What is PAL?**

Peer Assisted Learning (PAL) is a series of weekly review sessions run on a drop-in basis for students taking traditionally difficult modules. PAL is for all students who want to improve their understanding of module material and improve their grades. The PAL programme is very motivating, helping good students get excellent course results.

Attendance at sessions is voluntary and confidential. For you, the student, it's a chance to get together with people on your module to compare notes, to discuss important concepts, to develop strategies for studying the subject and to test yourselves so that you're ready when the real tests come. You dictate the agenda for the sessions.

At each session you will be supported by your PAL Leader who is a student who has already successfully completed the module you are studying.

What is a PAL Leader?

Have you ever wished you could benefit from hindsight, knowing what you know now? PAL gives you this opportunity via the PAL Leader, a student who has taken your module in the previous year and can share with you what they have learned. PAL Leaders understand what it is like to be confronted with material that doesn't make sense right away. Where they can, they will also attend your lectures so that you get a chance to meet them and so that they know what was said in the lecture

Their job as Leader is to help you understand and make sense of the information you have heard in lectures or read in books. They do not lecture and are not teachers, but they can help you learn more efficiently.

When do PAL sessions start?

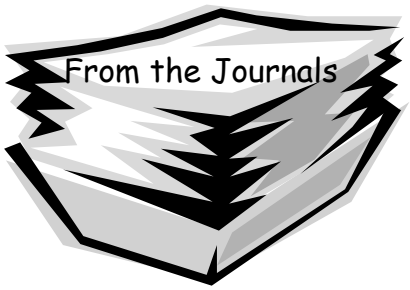
PAL Leaders will be around for you to meet in Week Zero and then from Week One and Two, they will attend your lectures to let you know who they are and when they will be holding sessions. All sessions take place in room 4B9. There may be more than one session per week on a particular module to ensure that you have the opportunity to attend.

What's in it for me?
Attending PAL sessions gives you a strong chance of getting a better grade. You will develop a better understanding of the particular module content as well as more effective ways of studying. By building your confidence PAL sessions will help you to participate more fully in seminars. This will also be a chance for you to make new friends!

Students attending PAL sessions have commented:

'PAL has been great! It is so good to know you are there and to be able to talk about stuff'

'I always come here feeling so stressed and worried, and go away feeling calm and confident.'



***** Indicates that this abstract was specially written; it did not appear with the original article.

1. **This article describes a way of combining the how and the what of learning via collaboration. Students talk in groups about books on the theme of working together.**

Wood, K. D., Roser, N. L., & Martinez, M. (2001). *The Reading Teacher, 55*(2), 102-111. [email: kdwood@email.uncc.edu]

***** This article introduces the term *collaborative literacy* which the authors define as:

> a multidimensional term to describe how engaging students in group activities to read discuss, and analyze literature on the theme of working together can help them learn many of life's important lessons. In turn, this engagement reinforces their ability to work collaboratively.

The authors provide a list of books at various reading levels on the theme of working together. They illustrate the discussions that ensued when these books were used in a Book Club approach. The authors also offer a discussion of the early roots of cooperation, including cooperation among other animals besides humans, as well as advice on how to help students learn to work collaboratively.

2, *This article is already about three years old. We should have spotted it sooner. When any of you reading this column comes across a relevant article, please consider copying the abstract and the APA-style reference and sending it to IASCE at* lbaloche@wcupa.edu.

Springer, L., Stanne, M. E., & Donovan, S. S. (1999). Effects of small-group learning on undergraduates in science, mathematics, engineering, and technology: A meta-analysis. *Review of Educational Research*, *69*, 21-51.

Recent calls for instructional innovation in undergraduate science, mathematics, engineering, and technology (SMET) courses and programs highlight the need for a solid foundation of education research at the undergraduate level on which to base policy and practice. We report herein the results of a meta-analysis that integrates research on undergraduate SMET education since 1980. The meta-analysis demonstrates

that various forms of small-group learning are effective in promoting greater academic achievement, more favorable attitudes toward learning, and increased persistence through SMET courses and programs. The magnitude of the effects reported in this study exceeds most findings in comparable reviews of research on educational innovations and supports more widespread implementation of small-group learning in undergraduate SMET.

3. **This article offers a nice twist on a cooperative learning technique sometimes known as Cooperative Controversy. The authors provide a detailed account of how they use their version of the technique.**

D'Eon, M., & Proctor, P. (2001). An innovative modification to structured controversy. *Innovations in Education and Teaching International, 38*, 251-256. [email: marcel.deon@usask.ca]

'Structured Controversy' (SC) is a co-operative learning activity where students, working in small groups, argue one side of an issue in Round 1 and then another side of the same issue in Round 2. Typically, for Round 2, student teams argue against the same team they heard and spoke with in Round 1. Our innovation is to have student teams matched with a different team for Round 2 (in addition to arguing another side of the issue), in what we call a 'Double Switch'. SC was successfully used in the course, 'Professional Issues', at the School of Physical Therapy, University of Saskatchewan, two years running in October 1999 and again in October 2000. The students reported a high degree of satisfaction with the SC activity and were challenged to think deeply about the issue in question. It appears that the modification we used (Double Switch) made Round 2 effective and as a result enhanced student learning.

4. **The next author kindly contributed this summary of a recent article, as well as information on a relevant book chapter.**

Kalman, C. S. (2002). Developing critical thinking in undergraduate courses: A philosophical approach. *Science and Education, 11*, 83-94. [Email: KALMAN@vax2.concordia.ca]

Students are divided into out of class groups that study either Kuhn, Popper, Lakatos, or Feyerabend and effectively teach the other students about their philosopher. The article includes a peer evaluation form. Students are taught the traditional course material in class. Students really do come to understand all four philosophers as measured in a question on the final exam. The form and a briefer description of my CL methods appears along with other teaching methods that I use such as freewrite-pair-share in "Teaching Science To Non-Science Students Using A Student-Centred Classroom" Calvin S. Kalman chapter in book: "Inspiring Students:
Case Studies in Motivating the Learner" edited by Kemal Ahmet and Stephen Fallows, SEDA-Staff and Educational Development Series (UK-Great Britain, Kogan Page Limited, 1999).

5. **The next two articles are the second and third of three reporting research on how tertiary students in Singapore collaborate outside of class.**

Jacobs, G. M., Hussein, A., Fazilah, M. I., & Crookall, D. (2001). An exploratory study of teacher-required out-of-class academic collaboration among students at a polytechnic in Singapore. *Innovations in Education & Teaching International, 38*, 279-291. [email: aishah@tp.edu.sg]

Academic collaboration among students takes place not only inside classrooms but outside of class as well. This study investigated such out-of-class academic collaboration among students at a polytechnic in Singapore as they worked on assignments on which their lecturers had required them to collaborate. Data were collected via a questionnaire completed by 232 students, interviews were conducted with ten lecturers, observations were done of eight student groups as they collaborated on teacher-required work outside of class, and then interviews were conducted with these eight groups. Suggestions are made for enhancing this collaboration.

Lopez-Nerney, S., Teng, S. M. J., Wu, S. M., Toh, L. S. J. E., Norhayati, M. I., Meyer, L., Jacobs, G. M., & Crookall, D. (2001). An exploratory study of lecturers' views of out-of-class academic collaboration among students. **KATA, 3,** ***109-120. [email: elcsl@nus.edu.sg]***

This article reports an exploratory study of lecturers' perceptions of out-of-class academic collaboration (OCAC) among students at a large Singapore university. Two types of OCAC were investigated: collaboration initiated by students, e.g., groups decide on their own to meet to prepare for exams, and collaboration required by teachers, e.g., teachers assign students to do projects in groups. Data were collected via one-on-one interviews with 18 faculty members from four faculties at the university. Findings suggest that OCAC, especially of a teacher-required kind, is fairly common at the university. Faculty members' views on factors affecting the success of OCAC are discussed for the light they might shed on practices to enhance the effectiveness of OCAC.

6. **Cooperative learning fits well with many other learner-centered methods in education. This article provides one example of this fit.**

Jacobs, G., & Gallo, P. (2002, February). Reading alone together: Enhancing extensive reading via student-student cooperation in second-language instruction. *Reading Online, 5*(6). Available: http://www.readingonline.org/articles/art_index.asp?HREF=jacobs/index.html
[email: gmjacobs@pacific.net.sg]

The article presents a rationale and practical suggestions for adding the element of cooperation among second language learners to the solitary task of silent reading. When extensive reading (ER) is supplemented with cooperative learning (CL), peers may be able enhance ER by: modeling enthusiasm for reading, acting as resources for finding existing reading materials, creating more reading materials, facilitating comprehension, and serving as an interactive audience for sharing about what has been read. A variety of CL techniques are presented with examples of how they can be combined with ER. Photos show a class of upper primary school students in Singapore using some of the CL techniques.

The Asia Pacific Journal of Education (APJE)

The Asia Pacific Journal of Education, published by Oxford University Press, recently had a special issue of cooperative learning, edited by Hanna Shachar of Bar Ilan University (noaga@zahav.net.il), Shlomo Sharan of Tel Aviv University (sharan1@netvision.net.il), and George Jacobs of JF New Paradigm Education (gmjacobs@pacific.net.sg). Ordering information is available at eduweb.nie.edu.sg/apje.

Below are the abstracts for the articles and the email addresses of the authors. An asterisk indicates that the abstract did not appear with the article.

Lee, C. K-E. (clee@nie.edu.sg), Ng, M. (mng@nie.edu.sg), Phang, R. (rphang@nie.edu.sg). (2002). Effects of cooperative learning on elementary school children in Singapore. *Asia Pacific Journal of Education, 22*, 3-15.

* This study involved 595 fifth-grade students from two primary schools in Singapore, 293 in the experimental group and 302 in the control group. The experimental treatment consisted of the use of cooperative learning as one aspect of participants' social studies instruction, while participants in the control group received instruction consisting largely of the traditional whole-class mode. Dependent variables were achievement in social studies, classroom climate, and attitude toward social studies. The results of the study indicate an overall positive effect for cooperative learning.

Abram, P. L. (pabram@stanford.edu), Scarloss, B. (scarloss@stanford.edu), Holthuis, N. (nholthuis@Stanford.edu), Cohen, E. (egcohen@stanford.edu), Lotan, R., & Schultz, S. E. (ses@leland.stanford.edu) (2002). The use of evaluation criteria to improve academic discussion in cooperative groups. *Asia Pacific Journal of Education, 22*, 16-27.

Teachers remark that during cooperative learning the academic nature of group discussions and resulting group products can be disappointing. Often, this may be due to a lack of understanding on the students' part as to the elements that make up an exemplary product. This study examined whether clearly articulated evaluation criteria (EC's) would alter the nature of the group's discussion and, subsequently, improve student learning. Groups using evaluation criteria spent more time evaluating their products, discussing the content of their unit, and discussing their task than students not using evaluation criteria. Evaluative and task-focused talk, at the group level, were modestly, yet significantly correlated with individual scores on an essay test following the unit. These findings suggest that the presence of clear and accessible criteria for evaluation can improve the academic nature of group discussions and individual learning gains. The findings provide a practical way to apply current assessment practices to classrooms using cooperative learning strategies.

Gillies, R. M. (r.gillies@mailbox.uq.edu.au) (2002). The long-term effects of cooperative learning on children's behaviour and interactions. *Asia Pacific Journal of Education, 22*, 28-37.

This study investigated the long-term effects of training in small-group and interpersonal behaviours on children's behaviours and interactions as they worked in small groups two years after they were initially trained. Forty-eight, third grade children who had been trained two years previously in cooperative group behaviours, were assigned to the trained condition and 44, third grade children who had not previously been trained were assigned to the untrained condition. The children in the trained and untrained groups were reconstituted from the pool of students who had participated previously in either trained or untrained group activities. The results showed that there was a long-term training effect with the children in the trained groups demonstrating more cooperative behaviour and providing more explanations in response to requests for help than their untrained peers.

Foley, K. E. (foley@nvnet.org), & O'Donnell, A. M. (angelao@rci.rutgers.edu). (2002). Cooperative learning and visual organizers: Effects on solving mole problems in high school chemistry. *Asia Pacific Journal of Education, 22*, 38-50.

Eighty-seven high school students participated in the study in one of four conditions: 1) Visual Organizer/Cooperative Learning; 2) Cooperative Learning only; 3) Visual Organizer only; and 4) Teacher Directed. Students were taught how to use mole maps to assist them in solving single-quantity and multiple-quantity mole problems. A mole problem involves converting quantities of chemicals to moles, a unit of measurement used in chemistry. Students took tests immediately after instruction and then took midterm examinations that included mole problems. Repeated measures analyses with post-instruction test scores and the midterm scores for single and multiple-quantity mole problems showed that student performance was significantly better immediately after instruction for both kinds of problems. Students who used visual organizers and cooperative learning outperformed students who experienced teacher-directed instruction on single-quantity mole problems and also on the immediate post-instruction test of multiple-quantity mole problems. Cooperative learning resulted in less decay in performance over time.

Sherman, S. J., & Camilli, G. (camilli@rci.rutgers.edu). (2002). Effects of leader and teacher behavior on implementation of cooperative learning in the elementary school. *Asia Pacific Journal of Education, 22*, 51-67.

Structural equation modeling was used in this study to examine interrelationships among change management functions, teacher orientations, and implementation of cooperative learning which were assessed in terms of four latent variables based on teacher self-reports of knowledge, perceived benefits, amount of professional development, and frequency of use. After preliminary modifications, the final structural model suggested four major influences on implementation. First, lower levels of pupil control ideology of the teacher lead to more self-reported knowledge of cooperative learning methods. Pupil control ideology is a measure of how school personnel view their students with regard to control. The higher the pupil control ideology, the more controlled the classroom. Second, higher levels of shared vision and lower levels of pupil control ideology lead to stronger teacher perceptions of the benefits of using cooperative learning. Third, higher levels of principal and resource support -- but lower levels of teacher participation in decision making -- lead to more professional development experiences.

Sharan, Y. (yaels@gezernet.co.il) (2002). Essential features of a teacher education program for cooperative learning. *Asia Pacific Journal of Education, 22*, 68-74.

What are the main features of a successful program for preparing teachers to use cooperative learning methods in their classrooms? In seeking an answer to this question, many researchers and educators focus on cooperation as the primary concept.

(a) Cooperation among faculty members in university or college teacher education programs to ensure consistency, continuity and a common set of goals for pre-service teacher education. Some programs have begun to emphasize the acquisition of competence in the use of cooperative learning methods.
(b) Cooperation between universities and schools to enable novice and experienced teachers to practice cooperative learning in the classroom.
(c) Cooperation among teachers in given schools to provide mutual support and assistance to maintain the long-term use of cooperative learning. Various programs and projects reported in the relevant literature that have implemented these ideas are surveyed and discussed in this paper.

Gan, T. H. (esgan@tm.net.my), & Raja, M. (mgraja@pc.jaring.my) (2002). Exploring the potential of collaboration on cooperative learning between educators from different institutions in Sarawak, Malaysia. *Asia Pacific Journal of Education, 22*, 75-81.

This article reports on a year-long project involving the voluntary participation of 26 mathematics and English teachers from 14 primary schools in Sarawak, Malaysia. The project had the objective of introducing participants to three important concepts in education: cooperative learning among students, cooperation among teachers, and action research by teachers. Components of the ten sessions during which participants met with the project managers were input on cooperative learning and action research, sharing by participants of what they had tried in the classroom, small-group reflection, and planning for future lessons. Data are reported on participants' responses to the project and on their use of cooperative learning.

Sahlberg, P. (pasi.sahlberg@kolumbus.fi). & Berry, J. (J.Berry@plymouth.ac.uk) (2002). One and one is sometimes three in small group mathematics learning. *Asia Pacific Journal of Education, 22*, 82-94.

In recent years, mathematics teaching has been confronted by demands for higher standards and better pupil achievement in several parts of the world. Researchers have suggested the shift from teacher-centred instruction towards more active participatory learning methods as one way to improve the quality of the teaching and learning process. The tension between whole-class teaching versus small group learning in mathematics has been particularly apparent in many education systems. This article analyses the development of mathematics teaching by asking whether small group learning is an effective arrangement in teaching school mathematics. We conclude that although there is not unanimity about the affects of small

group learning on student achievement in school mathematics, it seems that it produces at least equal academic outcomes among all students compared to more traditional methods of instruction, that working in pairs is a particularly effective form of learning mathematics, and that small groups are beneficial for developing mathematical problem solving skills. We also conclude that the present educational policies and increased quality assurance structures in many countries conflict, or are not consistent with scientific-professional thinking and research on the teaching of mathematics.

Johnson, D. W. (johns010@umn.edu), & Johnson, R. T. (johns009@umn.edu.) (2002). Learning together and alone: Overview and meta-analysis. *Asia Pacific Journal of Education, 22*, 95-105.

* This article provides an overview of the Learning Together and Alone method of cooperative learning, including historical notes, basic elements (positive interdependence, individual accountability, face-to-face promotive interaction, social skills, and group processing), and types of cooperative learning (formal, informal, and base groups). Next is a meta-analysis of results of 117 studies on the Learning Together and Alone method conducted over 30 years. Variables considered are achievement, interpersonal attraction, social support, self-esteem, and perspective-taking.

Sharan, S. (sharan1@netvision.net.il). (2002). Differentiating methods of cooperative learning in research and practice. *Asia Pacific Journal of Education, 22*, 106-116.

The various cooperative learning methods overlap but are not equivalent in terms of their theory, procedures and goals. In light of their unique characteristics, they will not necessarily lead to the same goals typically achieved by other methods. Means-ends relationships are neglected too often in educational practice and research, with the result that methods of teaching are applied for purposes which they cannot possibly achieve, or they accomplish only a fraction of what was anticipated. An extensive study of some children's attitudes toward cooperative learning is analyzed here as an example of the inappropriate application of certain cooperative learning methods to the teaching of special groups of students for whom these methods were never intended. Finally, a tentative taxonomy of the chief characteristics, theoretical bases and modes of operation of six cooperative learning methods is presented. Some inferences are drawn from the taxonomy to provide a basis for differentiating the various methods in terms of their means-ends relationships.

From the Book Shelves

Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching* (2nd ed.). New York: Cambridge University Press. [Chapter on Cooperative Language Learning – pp. 192-203]

A sign of the growing prominence of CL is that CL is the subject of one of the new chapters in the second edition of this major work in the field of second language teaching, originally published in 1986.

The new book describes 16 methods and approaches. The format of most chapters in the book is:

- background on the approach being described
- the theory of language that underlies use of the approach in second language instruction
- the theory of learning underlying the approach
- objectives
- syllabus
- typical learning and teaching activities
- learner roles
- teacher roles
- roles of instructional materials
- procedures (how a typical lesson might be conducted)

As to the theory of language underlying CL, the authors list five premises that support the view that interaction promotes language learning.

- Premise 1 – communication is the main purpose of language
- Premise 2 – conversation constitutes a key human activity
- Premise 3 – conversation follows certain cooperative maxims
- Premise 4 – in the native language, these maxims are learned via casual, everyday conversation
- Premise 5 – interaction during cooperatively structured activities helps students understand and utilize these maxims.

Blanchard, K., Bowles, S., Carew, D., & Parisi-Carew, E. (2001). *High five! The magic of working together*. New York: William Morrow.

Last week, I was in the local public library looking for books on cooperation in the workplace, as someone had asked me to consider doing a workshop on teams and work relationships for the entire staff of an educational institution (including non-teachers). Near one of the books I was looking for was a book with a title that grabbed my attention: *High five! The magic of working together*. The book also boasted of an introduction by Spencer Johnson, author of *Who Moved My Cheese?* To my knowledge, Spencer Johnson is no relation to the Johnsons of cooperative learning fame, but I had read *Who Moved My Cheese?* (which is not about groups) last year on the advice of a principal who said that it might help me understand how some teachers feel when innovations, such as cooperative learning, are introduced. The book is a parable about how various mice react when their familiar routine for obtaining cheese is disturbed.
High Five! is also a parable. It tells the story of a high-level corporate executive, Alan Foster, who is fired because although he's an excellent worker, he's not a team player. As the company president explains to Foster (p. 5):

> You do great on your own, but the rest of your team isn't doing very well. I need people who can work together for our goals. … Sure, you'd score less, but the team would score a whole lot more. As president, I have to be concerned with maximizing the contributions of everyone. Fact is, Alan, you're costing us money."

Now that he's unemployed, Foster joins the coaching staff of his ten-year-old son's ice hockey team. The team does poorly, in part because they don't play as a team. The hero of the story is an 85-year-old retired teacher, Weatherby, who comes in and teaches the boys and their coaches about why and how to work together. I don't know much about literature, but I found it to be an enjoyable story. And, although the book, predictably, has a happy ending, it doesn't end exactly as I guessed at the beginning.

So, what are the lessons the book teaches about collaboration? The book's four main points to remember about building high-performing teams are summarized in the acronym PUCK (pp. 172-174). (A puck is the hard rubber disk that ice hockey players try to hit into the goal.) P stands for "**p**roviding a clear purpose with values and goals." This gives people a rationale for putting team before self and gives the team a clear purpose and direction. U stands for "**u**nderstanding and developing skills—continuously building individual skills." These heightened individual skills raise the collective skill level of the entire team. Sports teams often spend time developing these skills, but teams at work (and school) often seem too focused on the product to spend time building skills.

C stands for "**c**reating team power." This involves understanding that "none of us is as smart as all of us" and highlights the synergy achieved from collaboration. As the teacher-hero of the book, Weatherby, explains, once she has realized the power of *none of us is as smart as all of us*, "I've gone from being a relatively powerless individual to being part of something far more powerful, productive, and successful than I could be on my own. It all hangs on ten short words. Only three of them have more than two letters" (p. 60).

The final letter in the PUCK acronym is K which stands for "**k**eeping the accent on the positive … [via] repeated reward and recognition." This is something educators have sometimes been advised to do, to strive to catch our students being good and then give positive reinforcement. (Some educators may be troubled by the behaviorist tone of this view and the analogy the authors make between education of humans and the training of other animals to perform tricks in shows. However, the need for feedback is also acknowledged from a cognitivist perspective.)

That caveat aside, other ideas in the book that CL practitioners may resonate with include:

- The medical doctor explaining that her role is to work as just one part of a medical team rather than as the superstar aided by her supporting staff. The authors use this incident at a hospital to emphasize that the cheese really has moved at the workplace and we all need to adjust. By implication, maybe the cheese has also moved in education.
- Foster's wife telling him that we learn best by teaching others; thus, the best way for him to learn about teamwork is to teach it to the hockey team. Guess what career Foster has taken up, in association with Weatherby, by the end of the book.

As someone who writes articles and books in collaboration with others, I found the book's Afterword, where the authors talk about the process of writing their book, to be particularly interesting. After declaring that the book is a much better one than any of the four of them could have written alone, they talk about some of the down side of collaboration (pp. 183-184):

Where there is team magic, there may also be personal frustration or even pain. … If you're going to be part of a High Five team, you have to be willing to accept some losses. Fight for your ideas certainly. Try to convince others. But if they can't or won't buy in to your thinking, it's time to take a deep breath and let go. … Learning to let go, to put the team's will first, is an empowering experience that leads to the most wonderful of all experiences: being a member of a high-performing, gung-ho, High Five team. I find that many people in education respond positively when I use the existence of groups at the workplace as a rationale for groups at school. This book – and the authors have a couple others on the same topic that I haven't read (*Gung-ho* and *The One-Minute Manager Builds High Performing Teams*) – will help me do this.

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