

Summary of Literature Review Findings

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Why Cooperate/Collaborate?

Improved Academic Performance.

“Cooperative learning and competitive learning are more effective than individualistic methods” (Hattie, 2009, p. 212-213).

Students with low internal marks received higher marks in group assessment, while students with high internal marks received lower marks in group assessment (Almond, 2009).

High ability students were disadvantaged by -9% while low ability students were advantaged by +35% in group assessment (Almond, 2009).

“Students perform best and achieve greatest perceived development in key skills, in group assessment” (Knight, 2004, p. 63.)

“Assessed multicultural group work has, on average, a positive rather than negative effect on the individual average mark of all students, evidence consistent with the synergistic effects expected to emerge in multicultural groups” (De Vita, 2002, p. 153)

The introduction of team-based, creative learning (TBCL) resulted in improved student retention and course pass rates for UP016 and has had positive socio-educational outcomes for both students and teachers (Howland, 2010).

“Students who learn an idea in more than one way are also more likely to transfer their learning to new settings” and “students must challenge their present ideas as they actively consider new ones” (Tjosvold, 2008, p. 78).

Benefits of Group Work (Barfield, 2003, p. 356).

1. Students gain insights into group dynamics
2. Students may attempt more comprehensive and in-depth assignments
3. Students’ interpersonal skills are further developed
4. Students are exposed to others’ points of view
5. Students are more prepared for the commercial world.

Principles of Cooperative Learning (Shimazoe & Aldrich, 2010, p. 53).

1. Positive (outcome) interdependence between members;
2. Individual accountability;
3. Face-to-face interaction (frequently if not all the time);
4. Development and improvement of interpersonal skills;
5. Regular self-assessment of group functioning.

[See Johnson, Johnson & Smith, 2007]

Diversity.

Johnson, Johnson and Maruyama, 1983: “Cooperative experiences promoted more positive relationships among individuals from different ethnic backgrounds, and between handicapped and non-handicapped individuals” (cited in Hattie, 2009, p. 213).

Domestic and international students receive lower individual than group marks, suggesting that multicultural groups promote synergy and have more favourable outcomes than commonly believed by domestic students (De Vita, 2002).

“Diverse groups had more positive appraisals of the cognitive, interpersonal and management aspects of the group assignment than non-diverse groups at the end of the

activity. It appears that diverse groups managed to successfully create a small group climate conducive for productive engagement and management" (Kimmel & Volet, 2009, p. 461).

"The group-work activity appeared to facilitate interpersonal interaction and intercultural understanding, which is an important component of relationship building within many marketing-related activities" (Sweeney, Weaven & Herington, 2008, p. 128).

What does it do?

Johnson & Johnson, 1987: "Cooperation was most effective among adults as it promoted achievement, positive interpersonal relationships, social support, and self-esteem" (cited by Hattie, 2009, p. 213).

What is Important?

Prior experiences of group work and assessment (Knight, 2004).

"Students revealed that they had predominantly pre-existing negative attitudes to group work based largely on prior experiences" (Sweeney, Weaven & Herington, 2008, p. 124).

Don't expect resistance to group assessment to disappear overnight (Stanier, 1997).

Facilitators.

The expectations of students may be moderated by the level of involvement that the instructor has with students throughout the teaching period" (Sweeney, Weaven & Herington, 2008, p. 126).

Facilitation of group assessment by academic staff is important (Hattie, 2009; Hogarth, 2009; Johnson, Johnson & Smith, 1991; Kimmel & Volet, 2009; King, 1995/2003; Kukulsja-Hulme, 2004; Li & Campbell, 2008; Mitchell, 2003; Muukkoen, Hakkarainen & Lakkala, 2004; Pazos, Micari & Light, 2010; Rogers & Langevin, 2000; Swaray, 2011; Sweeney, Weaven & Herington, 2008; Tan, Lee & Sharan, 2007).

Collaborative Learning v Cooperative Learning.

Collaborative Learning.

Collaborative Learning involves working in “a group of two or more to achieve a common goal, while respecting each individual’s contribution to the whole” (McInnerney & Roberts, 2004, p. 205). Collaborative learning usually involves a social learning dimension but with a focus on individual assessments or contributions. Knowledge is shared, students are given autonomy within a topic and teachers act as mediators of knowledge or expert learners (ibid). (Hattie, 2009; Ingram & Hathorn, 2004)

Cooperative Learning.

“Cooperation promotes higher self-esteem” (Johnson, Johnson & Smith, 2007, p. 20).

“Cooperative, group-based experiences seem to result in the (a) internalising perceptions that one is known, accepted, and liked as one is, (b) internalising mutual success, and (c) developing multi-dimensional views of self and others” (Johnson & Johnson, 1989, cited in Johnson, Johnson & Smith, 2007, p. 20).

Positive interdependence, face-to-face interaction, individual and group accountability, interpersonal and small group skills, and Group processing (McInnerney & Roberts, 2004).

Important Factors in Group Work (Frey, Fisher & Everlove, 2009).

Positive interdependence; face-to-face interaction, individual and group accountability; interpersonal and small-group skills; and group processing (p. 14).

Positive interdependence: goals, resources, rewards and roles (p. 15).

Face-to-face interaction is essential for exchanging ideas and deepening understanding, unlike simply dividing the work into tasks (p. 17).

It is important that students recognise and trust the assessment of both the group and the individual work to promote individual and group accountability (p. 18).

Interpersonal and small-group skills involve organisation, coordination and a result-oriented outlook (p. 18).

Group processing and evaluation of what worked and did not work is important for future group assessments both for the teacher and the students (p. 19).

Providing a meaningful task: This must involve a challenge or problem that makes all the principles of cooperative learning come together (p. 20).

Cooperative community, constructive conflict resolution, Civic values (Johnson & Johnson, 2003).

Class Experience Surveys (Maier, 2003).

Class experience surveys should be handed out before group work or assessment is conducted. This is to gauge student experience with group work and assessment, identifying gaps and skills that may need to be taught.

Good Practice (Millis, 1992/2003).

1. Good practice encourages student-faculty contact. Faculty should act as a guide assisting students rather than a sage directing students.
2. Good practice encourages cooperation among students. Positive interdependence and individual accountability are promoted with cooperative learning.
3. Good practice encourages active learning. By using think-pair-share and other tools to aid in the development of critical thinking.
4. Good practice gives prompt feedback. Peers and lecturers/tutors provide informal as well as formal feedback.
5. Good practice emphasises time on task. Group work is seen as being time-consuming and needs definite time allocations for tasks.
6. Good practice communicates high expectations. Using expert groups that feedback to the class requires learners to be competent in their topic.
7. Good practice respects diverse talents and ways of learning. Cooperative learning runs alongside other teaching methods offering a number of ways to learn the material. Also it allows individuals with similar learning styles to be placed in the same group (see Gardner, 2009).

The author recommends groups of four individuals.

Theory and Pedagogical Rationale.

Formal, Informal & Non-formal Learning.

Alheit (2009) recognises three different contexts in which learning occurs: The Formal context of educational institutions resulting in degrees or diplomas; the Non-formal context of workplaces, clubs and other social organisations; and the Informal context of learning that occurs during the course of daily activities and may be unintentional.

Lifewide.

Learning takes place in a variety of locations and what is learnt can have applications to other areas of life and work (Alheit, 2009). Learning involves the whole person (Cooper, 2000).

Knowledge and learning in practice (Lave, 2009):

- "Knowledge always undergoes construction and transformation in use.
- Learning is an integral aspect of activity in and with the world at all times. That learning occurs is not problematic.
- What is learned is always complexly problematic.
- Acquisition of knowledge is not a simple matter of taking in knowledge; rather, things assumed to be natural categories, such as 'bodies of knowledge', 'learners', and 'cultural transmission', require re-conceptualisation as cultural, social products" (pp. 202-203).

Social Learning.

Bandura (1986) sees learning as a social action that involves: Attracting student attention; retention; student reproduction of modelled behaviour; and motivation to use knowledge or the relevance of the learning (cited in Cooper, 2000).

Modelling.

Modelling of desired behaviour and acting as an expert learner, "learning how to learn" (Cooper, 2000, p. 12). The lecturers/tutors' role is to create the context for progressive inquiry where collaboration can occur, as well as acting as an anchor between theory and application.

Social Interdependence Theory.

“Interdependence among members (created by common goals) that results in the group being a dynamic whole”. Social interdependence is when “the accomplishment of each individual’s goals is affected by the actions of others” (Johnson, Johnson & Smith, 2007, p. 16). Positive interdependence involves substitutability inducibility and positive cathexis. Linked with PBL (problem-based learning).

Ecological and Bio-ecological perspectives on Human Development.

Harms (2005).

Inner World: Biological; Psychological; and Spiritual.

Outer World: Social/Relational; Structural; Cultural; and Time.

Communities of Practice.

“Communities of practice are an integral part of our daily lives” (Wenger, 2009, p. 212). Communities of practice are social groups of individuals with a common aim, i.e. families, work teams, classes, sports teams, clubs etc. These communities of practice are often not named and are informal.

Student Engagement.

Gardner (2009). Multiple approaches to understanding.

Entry Point: Narrative; numerical; existential; aesthetic; hands-on; and social.

Telling analogies: draws on existing knowledge.

Approaching the core: deepening understanding.

Scaffolding (Johnston & Cooper, 1999/2003).

Anticipate student errors – Pinpoint specific areas of difficulty for students to focus on.

Partial solutions – complex tasks that are already partially solved so that students can focus on specific ideas and assimilate new information.

Comprehensive checks – brief period with questions for students to assess their understanding and ask clarifying questions.

Think-aloud – verbal modelling of the question-solving process of a professional in the field.

Procedural guidelines – listing a particular series of steps or a checklist of how students can go about answering the question.

Negotiated Learning Contracts (Rogers & Langevin, 2000).

Either class-wide or group-based. This sets the ground rules and expectations. Objectives are set by the faculty; learning activities are set by the students with consultation with tutors/lecturers; and performance indicators are mutually agreed upon ways to assess that the learning objectives match the learning activities. The negotiated learning contract must be a physical document that both the faculty or tutors/lecturers and the students agree upon.

New Zealand Research.

Baker & Clark (2010).

A four-stage model for implementing cooperative learning (CL) group assessments into tertiary education. (pp. 265-6)

Stage 1 – Lecturers are trained in CL techniques. Pedagogical rationale, assessment methods, and support for lecturers.

Stage 2 – Students are prepared for cooperative work. Shared understanding of what effective team work is and why the students are required to work in teams.

Stage 3 – Classes are given the group assignment. Group formation exercises, group developed objectives and rules. [See negotiated learning contracts]

Stage 4 – Groups are debriefed. Reflection on group experiences by both lecturers and students.

This model is useful for our project. The skills required for group assessment need to be taught and perhaps group assessment should only be incorporated for 200-level papers and above. There should be a focus on building group work skills at 100-level rather than group assessments.

Howland (2010).

Tutorial Assignment Groups (TAG).

Tutorial stream dedicated to the sole purpose of group assessment, teams of 6 students selected by tutor with reference to criteria designed to create a heterogeneous group. The tutor acts as a facilitator or expert learner and groups have facilitator and minute-keeper roles which rotate over the course of the assessment. Group assessment, individual tutorial test, and attendance mark. The most able students do not necessarily engage in group assessment.

Retention rate of students increases with the introduction of TAG, and the pass rate of students for this course increased by approximately 20%.

Li & Campbell (2008).

Group work (collaboration) is viewed positively by Asian students, but group assessments with shared marks are perceived negatively.

Identified problems with group assessment: Lack of adequate support; free riding; lack of training; specialisation of tasks; cultural differences; and the influences of prior learning experiences.

Collaborative Learning Models.

Guided peer questioning (King, 1995/2003).

Use of generic questions to probe student understanding and facilitate deep learning.

Think-Pair-Share/Think-Pair-Square (Millis & Cottell, 1995/2003).

Think-Pair-Share is a quick collaborative/cooperative learning strategy. A question is asked and students are given a minute to think about the answer. They then pair up with

another individual and discuss different points of view. The findings from this pair discussion can then be shared with the class.

Think-Pair-Square is a variation where instead of sharing with the whole class, the discussion takes place in a predefined four-person team.

Peer Revision (Johnston, 1998a/2003).

Inform students of benefits of peer revision. These include feedback on drafts.

Review the criteria for success. Talk students' through the marking criteria and how to meet requirements.

Model how to phrase the written comments. Direct and concise as well as complementary.

Structure the interaction. Drafts distributed among the group, a time limit is set for reading and commenting, and then students discuss the comments.

The reading and commenting section should take 45 minutes and feedback 30 minutes.

Progressive inquiry (Muukkoen, Hakkarainen & Lakkala, pp. 35-7).

Creating the context; setting up research questions; constructing working theories; critical evaluation; searching deepening knowledge; generating subordinate questions; developing new working theories; distributed expertise.

Cooperative Learning Methods.

Constructive academic controversy (Johnson, Johnson & Smith, 1991).

This approach requires students to defend a position by working collaboratively to make an argument against their peers. Both sides then discuss the problem and argue for the reverse position. Can be collaborative (without group assessment) or cooperative (with group assessment), individual assignments are written based on the student's view of the problem.

Matussvich & Smith (2009) provide a short overview of constructive academic controversy.

Structure (Johnson, Johnson & Smith, 1993/2003).

1. Students research the issue, organise their information and prepare positions.
2. The two advocacy teams actively present and advocate their positions.
3. Students engage in general discussion in which they advocate their positions, rebut attacks on their positions, refute the opposing positions, and seek to learn both positions.
4. Students reverse perspectives and present the opposing position.
5. The group of four reaches a consensus and prepares a group report.

After the group report students sit an individual exam based on the content from the controversy.

Group Investigations.

(Sharan, 1994/2003).

Group investigation involves the Four I's: Investigation; interaction; interpretation; and intrinsic motivation. The class has a broad topic and small groups (usually 4 individuals) decide on a particular question to focus on within the broader investigation. Interaction focuses on the diverse views and experiences of each individual within the group with the focus being on the positive rewards of group work. Interpretation involves group members drawing on prior experiences and knowledge to contextualise the information. The group investigation is based on students' personal interest and this is an intrinsic motivator.

Six Stages of Group Investigation (Sharan, 1994/2003; Mitchell, Montgomery, Holder & Stuart, 2008):

1. Class determines subtopics and organises into research groups.
2. Groups plan their investigation.
3. Groups carry out their investigations.
4. Groups plan their presentations.
5. Groups make their presentations.
6. Teacher and students evaluate their project.

Problem Based Learning (Hmelo-Silver, 2004).

The goals of PBL include helping students develop:

1. Flexible knowledge,
2. Effective problem-solving skills,
3. Self-Directed Learning skills,
4. Effective collaboration skills, and
5. Intrinsic motivation.

Reflection “helps students to:

1. Relate their new knowledge to their prior understanding,
2. Mindfully abstract knowledge, and
3. Understand how their learning and problem-solving strategies might be reapplied”
(p. 247).

PBL Design (Hung, 2009, pp. 123-8):

1. Set goals and objectives.
2. Conduct content/task analysis.
3. Analyse context specification.
4. Select/generate PBL problem.
5. Conduct PBL problem affordance analysis: Domain knowledge; problem-solving skills analysis; context analysis; and connection analysis.
6. Conduct correspondence analysis: content correspondence analysis; researching and reasoning correspondence analysis; and context correspondence analysis.
7. Conduct calibration processes: Content component calibration; context component calibration; and researching and reasoning component calibration.
8. Construct reflection component.
9. Examine inter-supporting relationships of 3C3R components.

3C3R and PBL (Hung, 2009, p. 122).

3C3R is a model for structuring PBL that comprises of: the core, content knowledge, contextualising domain knowledge, and building a conceptual framework; and the processing components of, research, reasoning, and reflection.

Groups.

Cooper (1996/2003).

Cooper recommends groups of four, depending on task time. Groups with more than four need greater involvement of the tutor/lecturer. Groups should remain together for most of the trimester if working on an assessment.

Free-riding.

Approaches to resolving free-riding (Maiden & Perry, pp. 453-4).

Two-card trick: non-performing individuals are approached by their team, then by their tutor who give a warning (yellow card), and if further non-performance a red card excluding the individual from the group and compelling them to submit an individual assignment.

Viva warning: similar to the *two-card trick* but with the individual's grade adjusted rather than exclusion from the group.

Team-led individual: Group work serves as a foundation for individual assignments. Feedback on group work via written submission that is not graded.

Examination follow-on: Group assessment where all individuals receive identical grades from group assessment but then are required to write an individual exam based on the material from the group assessment.

Divided mark: Group assessment with individual responses to a questionnaire on individual performance. Group assessment graded and marks allocated to individual based on questionnaire results.

80/20 Grading: 1/5th of the group assessment is individual and graded by group members, 4/5th of the group assessment is graded by the tutor.

Examination follow-on after the group assessment and divided mark received the greatest levels of support from students. However, with divided marks most groups gave all members an equal share of the marks (trilled with postgraduate students).

Swaray, (2011).

The author outlines a group assessment design that reduced free-riding and increased participation.

1. One presentation (per group) which accounts for 35% of the project (i.e. 35% of the 25 marks).
2. One report (per group) which accounts for 30% of the project.
3. One short-answer question (per member) which accounts for 20% of the project
4. One reflective piece (per member) which accounts for 15% of the project. (p. 4).

Key to successful group processes in cooperative learning (Shimazoe & Aldrich, 2010, p. 53).

Stage 1: Design and Development Stage.

1. Establish group goals and rewards, e.g. thoroughly explain the process to students, create positive interdependencies.
2. Control group composition, e.g. determine optimal diversity and team size.
3. Develop students' social skills, e.g. via training before classroom activities actually begin, team-building, acting as positive role model.

Stage 2: Operation Stage.

1. Design tasks and transparent reward systems, e.g. start with simple assignments, and clarify expected outputs.
2. Monitor group performance, e.g. through peer evaluations and feedback, and intervene quickly when problems arise, e.g. rearrange groups' memberships.

Stage 3: Output and Disbanding Stage.

1. Provide prompt feedback and take groups' outputs seriously, discuss output in class.

2. Maintain consistency in the reward system: satisfy individual as well as collective needs, e.g. give individualised feedback to each student.

Online learning.

Computer-mediated collaboration (Ingram & Hathorn, 2004).

Facilitator choice of either synchronous or asynchronous (3-5 members) online discussion and work.

Need Facilitators (Kukulsja-Hulme, 2004).

Facilitator sets up expectations and structures with examples. As the online community develops the facilitator moves from a guiding role to that of a moderator.

Online Problem-Based Learning (Zumbach, Hillers & Reinmann, 2004).

Problem-based learning without the face-to-face component.

Student views.

Isolation, difficulty with group formation and work outcomes (Dirkx & Smith, 2004).

Virtual Learning Environments (Hogarth, 2009).

Mixture of online time-specific tutorials administered by a tutor, smaller e-learning circles and a traditional face-to-face drop in tutorial time. Assessment a mixture of online collaboration, blogs and individual reports.

Cross-cultural and Intercultural Contact (Leask & Carroll, 2011).

Contact between domestic and international students is vital for cross-cultural knowledge. The authors note that international students in Australia and the United Kingdom have "relatively low and infrequent interactions with those outside the speaker's own language and cultural group" (p. 650).

To remedy this, a university-wide focus on international contact is needed starting with: Alignment of the formal and informal curriculum; a focus on task design and

management; and new approaches to professional development of academic staff. Early experience of cross-cultural interaction is important, as is following up on any interventions. The time and effort involved in cross-cultural tasks must be recognised appropriately in any assessment, with the task being both relevant and requiring authentic/meaningful intercultural interaction. Appropriate and safe learning spaces need to be created by staff.

Lecturer and Student Views.

Lecturers tend to assess based on their own personal preference for learning and what they have experienced as students (Willcoxson, 1998).

Benefits to instructors (Shimazoe & Aldrich, 2010, p. 53).

- Gives more time to reflect on how well students are learning
- Decreases grading loads

Teachers' resistance to cooperative learning (Panitz, 1997/2003):

- Loss of control in the classroom
- Lack of self confidence by teachers
- Fear of the loss of content coverage
- Lack of prepared materials for use in class
- Lack of familiarity with alternative assessment techniques
- Students' resistance to cooperative-learning techniques
- Lack of familiarity with cooperative learning techniques and class management
- Lack of pedagogical training in cooperative procedures in graduate school
- Large class size and inappropriate classroom setup

Seven assumptions that lecturers make (Johnston, 1998b/2003).

1. Students will apply the content on their own after class.
2. Students don't need instructions or tasks to be structured.
3. Students learn best by hearing the expert version first.
4. Students can integrate new information by just listening.
Students should do their own work during class time.
5. Students don't need much guidance from the instructor. Use scaffolding tasks
(see Johnston & Cooper, 1999/2003).

6. Students can overcome complexity gaps between class work and tests.

Benefits to students (Shimazoe & Aldrich, 2010, p. 53).

- Promotes deep learning
- Helps earn higher grades
- Teaches social skills and civic values
- Teaches higher order thinking skills
- Promotes personal growth
- Develops positive attitudes towards autonomous learning

Students' resistance to cooperative learning (Panitz, 1997/2003):

- Students' lack of familiarity with cooperative techniques
- Fear of loss of content mastery and ability to achieve high grades

Students views on assessment method.

Individual continuous assessment preferred to group assessment (M=4.80 v M=3.57)
(Furnham, Bastey & Martin, 2011).

Students prefer individual assessment (Knight, 2004).

Reference List.

- Alheit, P. (2009). Biographical learning – within the new lifelong learning discourse. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists... in their own words* (pp. 116-28). London: Routledge.
- Almond, R.L. (2009). Group assessment: comparing group and individual undergraduate module marks. *Assessment and Evaluation in Higher Education*, 34(2), 141-8.
- Baker, T., & Clark, J. (2010). Cooperative learning – A double-edged sword: a cooperative learning model for use with diverse student groups. *Intercultural Education*, 21(3), 257-68.
- Barfield, R.L. (2003). Students' perceptions of and satisfaction with group grades and the group experience in the college classroom. *Assessment & Evaluation in Higher Education*, 28(4), 355-70.
- Cooper, J. (1996/2003). Group formation in cooperative learning: What the experts say. In J.L. Cooper, P. Robinson, & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 207-10). Stillwater, OK: New Forums Press.
- Cooper, L. (2000). Teaching and learning in human services fieldwork. In L. Cooper & L. Briggs, (Eds.), *Fieldwork in the human services: Theory and practice for field educators, practice teachers and supervisors* (pp. 10-25). St Leonards, Australia: Allen & Unwin.
- De Vita, G. (2002). Does assessed multicultural group work really pull UK students' average down? *Assessment and Evaluation in Higher Education*, 27(2), 153-61.
- Dirkx, J.M., & Smith, R.O. (2004). Thinking outside of a bowl of spaghetti: Learning to learn in online collaborative groups. In T.S. Roberts (Ed.), *Online collaborative learning: Theory and practice* (pp. 132-59). London: Information Science Publishing.
- Frey, N., Fisher, D., & Everlove, S. (2009). *Productive group work: how to engage students, build teamwork, and promote understanding*. Alexandria, VA: ADSC

- Furnham, A., Batey, M., & Martin, N. (2011). How would you like to be evaluated? The correlates of students' preferences for assessment methods. *Personality and Individual Differences*, 50, 259-63.
- Gardner, H. (2009). Multiple approaches to understanding. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists... in their own words* (pp. 106-15). London: Routledge.
- Harms, L. (2005). *Understanding human development: a multidimensional approach*. Melbourne: Oxford University Press.
- Hattie, J.A.C. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London & New York: Routledge.
- Hmelo-Silver, C.E. (2004). Problem-based learning: What and how do students learn? *Educational Psychology Review*, 16(3), 235-66.
- Hogarth, A. (2009). *Adopting blended learning for collaborative work in higher education*. New York: Nova Science Publishers.
- Howland, P.J. (2010). Team-based, creative learning in bridging education. *Good Practice Publication Grant e-book*. Retrieved from www.akoaootearoa.ac.nz/gppg-ebook.
- Hung, W. (2009). The 9-step problem design process for problem-based learning: Applications of the 3C3R model. *Educational Research Review*, 4, 118-41.
- Ingram, A.L., & Hathorn, L.G. (2004). Methods for analysing collaboration in online communications. In T.S. Roberts (Ed.), *Online collaborative learning: Theory and practice* (pp. 215-41). London: Information Science Publishing.
- Johnson, D.W., & Johnson, R.T. (2003). The 21st century college: The three Cs. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 251-66). Stillwater, OK: New Forums Press.
- Johnson, D.W., Johnson, R.T., & Smith, K.A. (1991). *Active learning: Cooperation in the college classroom*. Edina, MN: Interactive Book Company.

- Johnson, D.W., Johnson, R.T., & Smith, K.A. (1993/2003). Structured controversy/constructive controversy. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 179-82). Stillwater, OK: New Forums Press.
- Johnson, D.W., Johnson, R.T., & Smith, K. (2007). The state of cooperative learning in postsecondary and professional settings. *Educational Psychology Review*, 19, 18-29.
- Johnston, S. (1998a/2003). Peer revision: Sharing the power and the work. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 231-5). Stillwater, OK: New Forums Press
- Johnston, S. (1998b/2003). Supporting student success in the classroom. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 236-45). Stillwater, OK: New Forums Press.
- Johnston, S., & Cooper, J. (1999/2003). Supporting student success through scaffolding. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 135-45). Stillwater, OK: New Forums Press.
- Kimmel, K., & Volet, S. (2009). Significance of context in university students' (meta) cognitions related to group work: a multi-layered, multi-dimensional and cultural approach. *Learning and Instruction*, 20(6), 449-64.
- King, A. (1995/2003). Guided peer questioning: A cooperative learning approach to critical thinking. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 112-21). Stillwater, OK: New Forums Press.
- Knight, J. (2004). Comparison of Student Perception and Performance in Individual and Group Assessments in Practical Classes. *Journal of Geography in Higher Education*, 28(1), 63-81.

- Kukulsja-Hulme, A. (2004). Do online collaborative groups need leaders? In T.S. Roberts (Ed.), *Online collaborative learning: Theory and practice* (pp. 262-80). London: Information Science Publishing.
- Lave, J. (2009). The practice of learning. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists... in their own words* (pp. 200-8). London: Routledge.
- Leask, B., & Carroll, J. (2011). Moving beyond 'wishing and hoping': Internationalisation and student experiences of inclusion and engagement. *Higher Education Research & Development*, 30(5), 647-59.
- Li, M., & Campbell, J. (2008). Asian students' perceptions of group work and assignments in a New Zealand tertiary institution. *Intercultural Education*, 19(3), 203-16.
- Maiden, B., & Perry, B. (2011). Dealing with free-riders in assessed group work: Results from a study at a UK university. *Assessment & Evaluation in Higher Education*, 36(4), 451-64.
- Maier, M. H. (2003). Surveys and cooperative learning: Using student experiences as a basis for small group work. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 311-20). Stillwater, OK: New Forums Press.
- Matusovich, H., & Smith, K. (2009, October). Constructive academic controversy- What is it? Why use it? How to structure it? Paper presented at Frontiers in Education Conference. doi: 10.1109/FIE.2009.5350581. Retrieved from <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5350581&isnumber=5350396>.
- McInnerney, J.M., & Roberts, T.S. (2004). Collaborative or cooperative learning?. In T.S. Roberts (Ed.), *Online collaborative learning: Theory and practice* (pp. 203-14). London: Information Science Publishing.
- Millis, B. (1992/2003). How cooperative learning can fulfil the promises of the 'seven principles'. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 39-43). Stillwater, OK: New Forums Press.

- Millis, B.J., & Cottell Jr., P.G. (1995/2003). A cooperative learning structure for large classes: Think-pair-share. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 99-105). Stillwater, OK: New Forums Press.
- Mitchell, J. (2003). Cooperative learning and service learning: Soul-mates for reflection in higher education. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 267-81). Stillwater, OK: New Forums Press.
- Mitchell, M.G., Montgomery, H., Holder, M., & Stuart, D. (2008). Group investigation as a cooperative learning strategy: An integrated analysis of the literature. *The Alberta Journal of Educational Research*, 54(4), 388-95.
- Muukkoen, H., Hakkarainen, K., & Lakkala, M. (2004). Computer-mediated progressive inquiry in higher education. In T.S. Roberts (Ed.), *Online collaborative learning: Theory and practice* (pp. 28-53). London: Information Science Publishing.
- Panitz, T. (1997/2003). Faculty and student resistance to cooperative learning. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 193-200). Stillwater, OK: New Forums Press.
- Pazos, P., Micari, M., & Light, G. (2010). Developing an instrument to characterise peer-led groups in collaborative learning environments: assessing problem-solving approach and group interaction. *Assessment & Evaluation in Higher Education*, 35(2), 191-208.
- Rogers, G., & Langevin, P. (2000). Negotiated learning contracts. In L. Cooper & L. Briggs, (Eds.), *Fieldwork in the human services: Theory and practice for field educators, practice teachers and supervisors* (pp. 216-26). St Leonards, Australia: Allen & Unwin.
- Sharan, S. (1994/2003). Group investigation in the university classroom. In J.L. Cooper, P. Robinson & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (pp. 183-90). Stillwater, OK: New Forums Press.

- Shimazoe, J., & Aldrich, H. (2010). Group work can be gratifying: understanding & overcoming resistance to cooperative learning. *College Teaching*, 58, 52-7.
- Stanier, L. (1997). Peer assessment and group work as vehicles for student empowerment: a module evaluation. *Journal of Geography in Higher Education*, 21(1), 95-8.
- Swaray, R. (2011). An evaluation of a group project designed to reduce free-riding and promote active learning. *Assessment & Evaluation in Higher Education*, 1-8. DOI: 10.1080/02602938.2010.531246
- Sweeney, A., Weaven, S., & Herington, C. (2008). Multicultural influences on group learning: A qualitative higher education study. *Assessment & Evaluation in Higher Education*, 32(2), 119-32.
- Tan, I.G.C., Lee, C.K.E., & Sharan, S. (2007). Group investigation effects on achievement, motivation, and perceptions of students in Singapore. *The Journal of Educational Research*, Jan/Feb, 100(3), 142-54.
- Tjosvold, D. (2008). Constructive controversy for management education: Developing committed, open-minded researchers. *Academy of Management Learning & Education*, 7(1), 73-85.
- Willcoxson, L. (1998). The impact of academics' learning and teaching preferences on their teaching practices: a pilot study. *Studies in Higher Education*, 21(1), 59-70.
- Wenger, E. (2009). A social theory of learning. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists... in their own words* (pp. 209-18). London: Routledge.
- Zumbach, J., Hillers, A., & Reinmann, P. (2004). Supporting distributed problem-based learning: The use of feedback mechanisms in online learning. In T.S. Roberts (Ed.), *Online collaborative learning: Theory and practice* (pp. 86-102). London: Information Science Publishing.