Small Group Learning (SGL) Workshop

Notes and Handouts

Creating Effective Small Group Learning (SGL)

Jim Borgford-Parnell

Purpose:

This workshop provides an overview of the types, benefits, and key elements of Small Group Learning for implementation in the classroom. Techniques for group selection, task design, problem identification, and assessment are also discussed.

Agenda:

The intended time for this workshop is 120 minutes.

Topics for this workshop include:

- ❑ Types of SGL
- ❑ Key elements of SGL
- ❑ Benefits of SGL
- ❑ Implementing SGL in your course
  - ■ Selecting groups
  - ■ Designing tasks
  - ■ Assessment
  - ■ Common problems

Goals:

1. **Expand your SGL conceptual framework**

2. **Participants leave with something helpful**

Principles for Learning Activity and Instructional Design (PLAID)

The PLAID exercise is a straightforward method for distilling useful and practical ideas from various information sources, and for compiling a personal set of principles for use when designing learning activities. Source information for PLAID comes from learning research, theory, literature, and reflective observation.

PLAID uses research and scholarship to complement and reflect experience teaching. It is a multi-directional tool, meaning you can start by 1) reading teaching and learning research and literature and deriving applications to classrooms and your method of teaching, or 2) search for sources which support your pedagogical methods.

PLAID helps you to plan learning activities and instruction to create more effective pedagogy and to be a more scholarly teacher.

EXAMPLE

Source Information:

"Students come to the classroom with preconceptions that must be engaged or they will leave with the same conceptions."

Source: National Research Council. (2000). How People Learn.

=PLAID:

1. Use knowledge probes to find out what students already know or think about a topic.

2. Small groups can be safe and comfortable environments for discussing different perspectives and/or understanding of particular topics.

Principles for Learning Activity and Instructional Design (PLAID) Worksheet

Source Information:

=PLAID:

Applying the Science of Learning to the University and Beyond

- Practice at retrieval, promotes long-term retention
- Varying the conditions results in better learning
- Re-presenting information in alternative formats enhances learning
- Learning depends on prior knowledge
- Learning is influenced by our ideas about learning
- Experience alone is a poor teacher
- Lectures don't promote deep understanding
- The act of remembering enhances the ability to remember
- Understanding a few things well, beats understanding a lot superficially when it comes to retention.
- How learning occurs determines how and when knowledge may be recalled.

Source: Halpern, D. & Hakel, M. (2003).*Change*

Key findings in *How People Learn*

- Students come to the classroom with preconceptions that must be engaged or they will leave with the same conceptions
- Competence results from: (a) a base of factual knowledge; (b) knowledge built in context of a conceptual framework; and (c) knowledge organized for retrieval.
- A metacognitive approach makes for better learning and better learners.

Source: National Research Council. (2000). *How People Learn.*

SGL Typologies

Types by Use	Fink (2004)	Johnson, Johnson & Smith (1998)	Characteristics
Casual & infrequent	Casual	Informal	Change of pace tool. 2-8 students
Structured & Frequent	Cooperative Learning	Formal	Well planned technique. 2-4 students
Intensive & Course Changing	Team-based Learning	Formal	Well planned strategy. 5-7 students
Long-Term out of class		Base Groups	Study support. 3-5 students

Notes

Criteria for Effective Small Group Learning

Worksheet

Individual Accountability

Positive Interdependence

A Challenging Task

Timely Feedback

Assessment of Contributions of Group Members

At the end of the quarter, it is necessary for all members of this class to assess the contributions that each member of the group made to the work of the group. This contribution should presumably reflect your judgment of such things as:

Preparation – Were they prepared when they came to class?

Contribution – Did they contribute productively to group discussion and work?

Respect for others' ideas – Did they encourage others to contribute their ideas?

Flexibility – Were they flexible when disagreements occurred?

It is important that you raise the evaluation of people who truly worked hard for the good of the group and lower the evaluation of those you perceived not to be working as hard on group tasks. Those who contributed should receive the full worth of the group's grades; those who did not contribute fully should only receive partial credit. Your assessment will be used mathematically to determine the proportion of the group's points that each member receives. Evaluate the contributions of each person in your group *except yourself*, by distributing 100 points among them. *Include comments for each person*.

Group #: ____		**Points Awarded**
1. Name:		
Reason(s) for Points Awarded		
2. Name:		
Reason(s) for Points Awarded		
3. Name:		
Reason(s) for Points Awarded		
4. Name:		
Reason(s) for Points Awarded		
5. Name:		
Reason(s) for Points Awarded		
Your Name:		**TOTAL: 100 Points**

(Adapted from Fink, 2002)

Team Evaluation Form (Course and Term)

Your Name: _____
*Team Name:*_____

Circle the number that best represents your assessment of the team's effectiveness or performance in each category. Please use the following scale:

Strongly Disagree		Neutral		Strongly Agree
1	2	3	4	5

Question	Scale				
The team has a well defined set of goals and objectives.	*1*	*2*	*3*	*4*	*5*
All ideas are encouraged and fully explored.	*1*	*2*	*3*	*4*	*5*
Contributions of all team members are appropriately acknowledged.	*1*	*2*	*3*	*4*	*5*
Team members are able to resolve differences in a professional manner.	*1*	*2*	*3*	*4*	*5*
Team member assignments are given to maximize individual learning and mastery of new material.	*1*	*2*	*3*	*4*	*5*
The team meets deadlines and schedules.	*1*	*2*	*3*	*4*	*5*
Discussions are focused and useful.	*1*	*2*	*3*	*4*	*5*
Team meetings are always productive.	*1*	*2*	*3*	*4*	*5*
All team members contribute fully to team success.	*1*	*2*	*3*	*4*	*5*
Our team is highly productive; we exceed our expectations.	*1*	*2*	*3*	*4*	*5*

Use the space below and on the back of this form for any additional comments that you wish to make about the team.

Small Group Learning (SGL) Bibliography

Barkley, E., Cross, K. P., and Major, C. H. (2004). *Collaborative learning techniques: A practical guide to promoting learning in groups. San Francisco*: Jossey-Bass.

Bruffee, K. A. (1999). *Collaborative learning: Higher education, interdependence, and the authority of knowledge*. Baltimore: Johns Hopkins University.

Cohen, E. (1994). Restructuring the college classroom: Conditions for productive small groups. *Review of Educational Research*, 6, pp. 1-35.

Cooper, J. L., MacGregor, J., & Smith, K. A. (2000). Implementing small group instruction: insights from successful practitioners. *New Directions for Teaching and Learning*, 81, pp.63-76. San Francisco: Jossey-Bass.

Cooper, J. L., Robinson, P. and Ball, D. (Eds.), (2003). *Small Group Instruction in Higher Education: Lessons from the Past, Visions of the Future*. Stillwater, OK: New Forums Press.

Crouch, C. H. and Mazur, E. (2001). Peer instruction: Ten years of experience and results. *American Journal of Physics*, 69 (9), pp. 970-977.

Duch, B. J. Groh, S. E., and Allen, D. E. (2001). *The power of problem-based learning: A practical "how to" for teaching undergraduate courses in any discipline*. Sterling, VA: Stylus.

Felder, R. M. (1995). A longitudinal study of engineering student performance and retention. *Journal of Engineering Education*, 84 (4), pp. 361-367.

Felder, R. M. and Brent, R. (2003). Learning by doing. *Chemical Engineering Education*, 37, (4) pp. 282-283.

Fink, L. D. (2002). *Creating significant learning experiences: An integrated approach to designing college courses.* San Francisco: Jossey-Bass.

Hake, R. (1998). Interactive engagement vs. traditional methods: A six-thousand student survey of mechanics test data for introductory physics courses. *American Journal of Physics*, 66 (1) pp. 64-74.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998). Cooperative Learning returns to college: What evidence is there that it works? *Change*, July/August, pp. 27-35.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998). *Active learning: Cooperation in the college classroom*. Edina, MN: Interaction Book Company.

Johnson, D. W., Johnson, R. T., & Stanne, M. B. (2000). Cooperative learning methods: A meta-Analysis. Downloaded 7/11/2001 from http://www.clcrc.com/pages/cl-methods.html

MacGregor, J. (1990). Collaborative Learning: Shared inquiry as a process of reform, pp. 19-30. In M. D. Svinicki (Ed.), *The changing face of college teaching.* San Francisco: Jossey-Bass.

MacGregor, J., cooper, J., Smith, K., and Robinson, P. (eds.) (2000). Strategies for energizing large classes: From small groups to learning communities. *New Directions for Teaching and Learning*, 81. San Francisco: Jossey-Bass.

Mazur, E. (1997). *Peer Instruction: A user's manual.* Upper Saddle River, NJ: Prentice Hall.

Meyers, and Jones. (1993). *Promoting Active Learning: Strategies for the College Classroom*. San Francisco: Jossey-Bass

Michaelsen, L. K., Fink, L. D., and Knight, A. (1997). Designing effective group activities: Lessons for classroom teaching and faculty development. In D. DeZure (Ed.), *To Improve the Academy*, 16, pp. 373-398. Stillwater OK: New Forums Press.

Michaelsen, L. K., Knight, A. B., and Fink, L. D. (2002). *Team-Based Learning.* Sterling, VA: Stylus Publishing.

Millis, B. J, and Cottell Jr., P., G. (1998). *Cooperative Learning for Higher Education Faculty.* Westport CT: Oryx Press.

Millis, B. J. (2003). How Cooperative Learning Can Fullfill the Promises of the "Seven Principles". Small Group Instruction in Higher Education: Lessons from the Past, Visions of the Future. P. R. James L. Cooper, and David Ball. Stillwater, OK, New Forums Press, Inc.: 39-43.

National Research Council, (2000). *How People Learn: Brain, Mind, Experience, and School.* National Academies Press.

Savin-Baden, M. (2003). *Facilitating Problem-Based Learning: Illuminating Perspectives*. Berkshire, England: SRHE and Open University Press.

Silberman, M. (1996). *Active Learning: 101 Strategies to Teach Any Subject.* Allyn and Bacon.

Smith, K. A. (2000). Going deeper: Formal small-group learning in large classes. *New Directions for Teaching and Learning*, 81, pp.25-46. San Francisco: Jossey-Bass.

Smith, K. A., Sheppard. S. D., Johnson, D. W., & Johnson, R. T. (2005). Pedagogies of engagement: Classroom-based practices. *Journal of Engineering Education*, January. pp. 1-15.

Springer, L., Stanne, M. E., and Donovan, S. S. (1999). Effect of small group learning on undergraduates in science, mathematics, engineering and technology: A meta-analysis. *Review of Educational Research,* 69 (1) pp. 21-51.

Stein, R. F. & Hurd, S. (2000). *Using student teams in the classroom: A faculty guide*. Bolton, MA: Anker Publishing Co, Inc.

Wilkerson, L. & Gijselaers, W. H. (1996). Bringing problem-based learning to higher education: Theory and practice. *New Directions for Teaching and Learning 68***.** San Francisco: Jossey-Bass.