

The Benefits of Collaborative Learning

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* Initial reason for examining collaborative learning:

Societal advances in technology and changes in the organization of infrastructure has placed greater emphasis on teamwork.

* Collaborative Learning Experiment

Experimental Questions:

Will there be a significant difference in achievement on a test on “drill and practice” items between those who learned collaboratively and those who learned individually?

– “*Drill and practice*”: facts and items that pertain to comprehension of the concepts

Will there be a significant difference in achievement on a test of critical thinking items between those who learned collaboratively and those who learned individually?

– “*Critical thinking*”: items that involve analysis, synthesis, and evaluation of the concepts

*Subjects: a total of 48 undergrads in a basic electronics course (1993) – Subjects given pre-test, a learning period, and then a post-test.

* Results:

– For drill and practice: saw slight increase for collaborative vs individual learning group (13.56 vs 11.89 out of 15)

– For critical thinking: saw major increase for collaborative vs individual learning group (12.21 vs 8.63 out of 15)

Student Input:

– Positive Academic Aspects: helped through understanding pooled knowledge and experience; helpful feedback; stimulated critical thinking; new perspectives of ideas

– Positive Social and Emotional Aspects: more relaxed atmosphere; **FUN**; greater sense of responsibility; made new friends

– Negative Aspect: wasted time explaining to other people

* Social benefits:

Helps to develop a social support system which leads to diversity understanding among students and staff; establishes a positive atmosphere; develops learning communities

* Psychological benefits:

Student centered instruction leads to an increase in student self-esteem; cooperation reduces anxiety; develops positive attitudes towards teachers

* Academic benefits:

Promotes critical thinking skills; involves students actively; classroom results are improved; models appropriate student problem techniques; large lectures can be personalized; helps motivate students in a specific curriculum

* Teaching technique benefits:

– Collaborative learning lends itself well to a variety of assessment types

* What do we achieve from learning in collaboration?

– Higher achievement and greater productivity;
– The chief achievement of collaborative learning is to develop social interaction skills;
– *The purpose is to promote deeper learning as opposed to surface learning*

* Personal Examples:

– Course taught by Wendy Hanna-Rose at Fudan University
– The students in our two sections of BMB 398B seem to enjoy communicating with each other about the course material. When discussing problem sets, they actively work towards a solution

* How might these articles inform better facilitation for supplemental instruction staff?

– Do you really need to ask?

Gokhale, Anuradha A. "Collaborative Learning Enhances Critical Thinking." *Journal of Technology Education* 7.1 (1995): n. pag. *Virginia Tech: Digital Library and Archives*. Web. 2 Nov. 2014.

Laal, Marjan, and Azadeh Naseri. "What Do We Achieve From Learning in Collaboration?" *Procedia- Social and Behavioral Sciences* (2013): n. pag. *ScienceDirect*. Web. 3 Nov. 2014.

Panitz, Theodore. "Collaborative versus Cooperative Learning: A Comparison of the Two Concepts Which Will Help Us Understand the Underlying Nature of Interactive Learning." *European Journal of Psychology of Education* 14.3 (1999): 359-73.

Educational Resource Information Center, 1999. Web.