Dealing with Large Class Sizes Large class = >60 students

Small Class Within Big Class One instructor in room per 40-50 students All instructors circulate during active learning Has been effective for up to 1000 student sections Senior undergraduates as 'learning assistants'

Group Work/Cooperative Learning Use CATME to define teams Leader, Questioner, Scribe Informal or formal 1 Positive Interdependence, 2 Individual accountability, 3 Face to face interaction, 4 Appropriate interpersonal skills, 5 Regular self assessment of group function

Surveys

Office hours

Informal or formal but response is needed Start, Stop, Continue Clearest Point, Cloudiest Point

Multiple choice easiest if not "middle" choice Definitions: Just in time teaching (JITT) was the immediate feedback after Sapling and BBQs to start class many

Definitions: Just in time teaching (JITT) was the immediate feedback after Sapling and BBQs to start class many times during the semester.

JITT exercises helped me feel like an active participant during class.	Strongly Agree	Agree	Disagree	Strongly Disagree
JITT exercises are an effective use of class time.	Strongly Agree	Agree	Disagree	Strongly Disagree
The amount of class time used for JITT exercises was	Too much	Just right	Too little	
I like the immediate refresher of difficult material using JITT.	Strongly Agree	Agree	Disagree	Strongly Disagree

Dealing with the crowds Use conference room Have small group office hours

References

Liberatore, to appear CEE 2013

Mega-courses 2011

Johnson, Johnson, Smith 2006 *Active Learning: Cooperation in the college classroom* Published by Interactive Book Co.

Engageengineering.org (NSF sponsor program)