



Enhancing Chemistry Courses for Majors and Non-Majors : Implementation of Simple SENCER Teaching Strategies at the University of Dayton

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Overall Conclusions

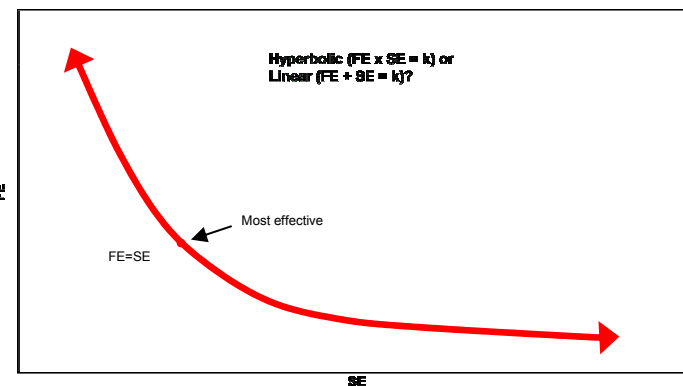
	Experience 5 Years	20 Years	40 Years	65 years combined
Learning Objectives	Helped to better focus individual lectures.	Increases lecturer's confidence	Students understand expectations – "rubric-like"	Timed release facilitates student engagement; prevents "missed" objectives
Comment Cards	Decreased the number of questions asked in class since an anonymous mechanism was available.	Keeps lectures at a student-appropriate level	Students like to provide input to instructors; increased perceived value of course	Highly useful with minimum effort
FE x SE = constant	See 40 years	See 40 years	FE=SE Results in maximum learning	See 40 years
SENCER Tools	Overall positive comments about cards, however a suggestion was made that cards be handed out once a week.	See 40 years	Students appreciate SENCERized learning objectives and comment cards.	SENCER Tools → Positive Pedagogical Impacts
Course Variables	1. Individual student effort 2. See 40 years	1. Difficulty of material 2. See 5 and 40 years	1. Class composition 2. No. of students 3. Semester offered	

Abstract

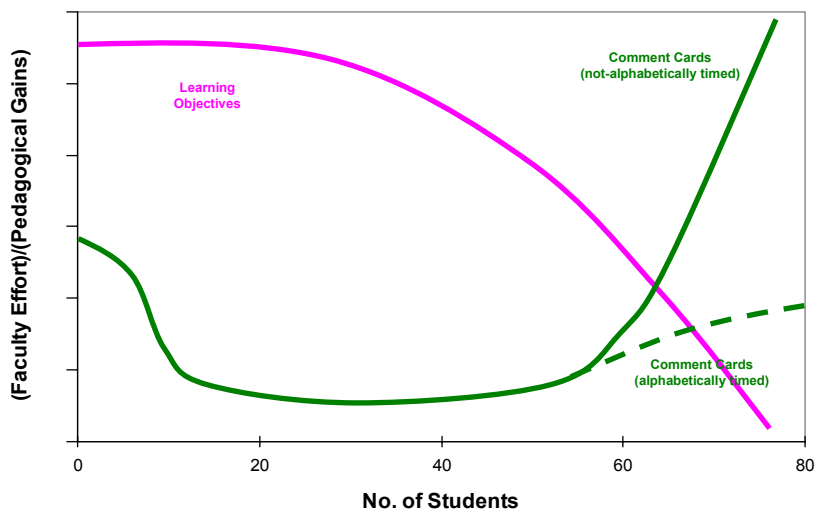
After attending the 2007 SENCER Summer Institute, one of us (Dr. Masthay) began using "three question" comment cards and "SENCERized" the syllabus for his chemistry and non-majors course in accord with suggestions from Drs. Terry McGuire and Barbara Tewksbury, respectively. Both changes had positive pedagogical impacts. As a consequence, Drs. Crosson and Keil implemented similar changes in their physical and general chemistry courses for science majors. The pedagogical impact of these teaching strategies are detailed in terms of course content, class size, and faculty teaching experience in our poster.

Relationship of Faculty Effort (FE) to Student Effort (SE)

$$FE \times SE = k = \text{Constant}$$



Faculty Effort vs. Class Size Pedagogical Gains



Learning Objective Distribution Strategies

