

Student perceptions of the use of a personal response device in a large lecture class.

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In a general education science class we used personal response devices that allow students to answer multiple-choice questions privately to learn about students, conduct opinion polls, enhance class discussions, review quiz questions and assess comprehension of material. Students reported that the devices increase enjoyment, learning and participation, but generally did not support their use to monitor attendance or assign credit for correct responses. Over a semester, instructors learned to use the system more effectively.

I-Clicker



Semester	Participants
Fall 2004	
Early Survey	68
Late Survey	60
Spring 2005	
Early Survey	59
Late Survey	58

Results

Results of the early survey (Table 1) indicated that >90% of the students enjoyed IClickers and >85% believed the devices enhanced their learning. While most students reported that the IClickers were being used at a good frequency during class, about 1/5 thought they could be used more. More students opposed the use of IClickers to either monitor attendance or to assign credit than favored either of these uses.

Results of the late survey (Table 2) were similar to those of the early survey for enjoyment and interest. The frequency of use of the IClickers improved over the course of the semester, with >90% responding "just right". About 3/4 of the students reported that they used their IClickers "often", but regardless of whether or not they used their own device, 95% reported that use of a student response system increased their participation in the class.

Materials and Methods

IClickers were distributed to students on the first day of class. They were used for several purposes throughout the semester:

- to gather information about the students' backgrounds and level of knowledge
- to share students' knowledge
- to poll students' opinions
- to test comprehension of course material
- to review on-line quizzes

IClicker questions with two to five answers were posed at various times during the 80 minute class periods.

Student surveys were conducted twice each semester: early (the second or third week of class) and late (the last week of class). Each survey consisted of five short-answer questions, followed by a space for additional comments.

Table 1. Early Survey Results

		Fall 2004 (%)	Spring 2005 (%)
enjoyment	a lot	43	58
	some	50	39
	not really	7	3
learning	a lot	31	41
	some	54	52
	not really	15	7
use	too rarely	21	17
	just right	75	80
	too often	4	3
attendance	yes	37	37
	no	44	46
	no opinion	19	17
credit	yes	25	19
	no	56	69
	no opinion	19	12

Table 2. Late Survey Results

		Fall 2004 (%)	Spring 2005 (%)
enjoyment	a lot	37	43
	some	55	47
	not really	8	10
learning	a lot	32	45
	Some	60	48
	not really	8	7
use	too rarely	7	5
	just right	91	93
	too often	2	2
own use	often	78	78
	sometimes	20	17
	rarely	2	4
	never	0	1
increased participation	a lot	47	57
	some	48	38
	not really	5	5

Use of personal response devices increased student participation in a relatively large class. They also helped to make student learning more visible to the instructors, and thus enabled us to improve our teaching.