

## **RF Transmitters and Large Classes**

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When I started teaching as a graduate student, I was looking for ways to get students involved in large introductory courses during the lecture. The size of my classes prevented me from using Socratic or round table participation methods, as too many students would be left out. Activities that might be done on paper in a smaller class required too much paper in a larger one and too much grading or assessment time after class. I was looking for a tool that would enable participation for everyone and make grading easier. Then I found the PRS RF transmitters from a company called Interwrite. These transmitters allow students to actively respond to questions in class through a calculator-sized device that sends a signal to a receiver connected to the teacher's computer. The Interwrite software processes these signals and records responses instantly, and can display the results on screen for the class to analyze. As an added bonus, the software features a special module for interfacing with Power Point.

I have used the transmitters to give pop quizzes and record attendance. But the best value comes through their usefulness with demonstrations and exercises in large classes. For example, in my General Psychology course I might show students a Power Point slide with four highly similar faces and then ask students to pick the face that seems most attractive to them. Typically I know which face students will select based on theories of attraction in social psychology. The students can then see for themselves how closely their behavior aligns with predictions made by psychologists. I've used the transmitters for multiple choice and numerical responses (histograms with results can be automatically displayed for the latter).

In class surveys, most students report enjoying the use of the transmitters. There are exceptions, not surprisingly. The transmitters are not cheap (they typically cost roughly the price of a textbook), they occasionally transmit signals too slowly, they make it easier to track attendance and participation (a drawback in the eyes of some students) and like any small piece of technology they can be lost or broken. As with any classroom technology, the teacher can abuse and overuse it. The Power Point integration makes this abuse all the more likely, given the widespread misuse and overuse of Power Point itself.

I usually ask no more than three questions per class period with the transmitters, and I intentionally don't use them in roughly one out of every four class periods. I also don't use them in smaller advanced courses where a consistent interaction with all students is possible. But they are now an important part of my introductory course. In the US, the transmitters are probably used most often in professional and applied science classes, such as business and accounting. They're also widely used in a variety of science and social science courses.

If you're interested, you're welcome to attend one of my General Psychology classes and observe them in action.