


## Further Investigation

Unfortunately, I have not found one great resource for unbiased comparisons of clicker systems. There are some papers that compare systems, but they tend to be old. If you have access to academic research databases (most schools or libraries do), you could search through ProQuest or ERIC. On the Internet use Google and try searching for “clicker systems,” “classroom response systems,” or

“student response systems.” Also, a link that provides a rather good description of clicker systems is [www.vanderbilt.edu/cft/resources/teaching\\_resources/technology/crs.htm](http://www.vanderbilt.edu/cft/resources/teaching_resources/technology/crs.htm).

Here are the web sites for several vendors: H-ITT Classroom Response System: [www.h-itt.com](http://www.h-itt.com); iClicker: [www.iclicker.com](http://www.iclicker.com); iRespond: [www.irespond.com](http://www.irespond.com); PRS Interwrite: [www.interwritelearning.com/](http://www.interwritelearning.com/). 

## Podcasts in the Mathematics Classroom

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### What is a Podcast?

A *podcast* is a way of publishing audio files on the Internet. With a podcast users do not have to check a web site for new episodes. They can subscribe (via an RSS feed) and receive new episodes automatically. A *video podcast*, or *vodcast*, is a podcast that uses video. An *enhanced podcast* is an audio podcast that has pictures associated with it, like a slideshow. Unlike the radio, a podcast is on-demand and can be played and replayed anytime.

There are several ways podcasts can be used by teachers. Students can listen to content-rich podcasts that enhance the curriculum. Teachers can also listen to them to enhance their professional development. Many universities offer their lectures in podcast format, and there are also podcasts on teaching as well.

Finally, teachers and students can create their own podcasts. Teachers can use podcasts to give review sessions, and students can create podcasts to enhance their understanding of material.

### Listening to Podcasts

There are many good mathematics and education podcasts currently available on the Web. But teachers need to remember that there is also podcast content that is not appropriate

for students. Exercise good management and consider banning podcasts with the “explicit” label in iTunes (in Preferences—Parental Control).

Here are some mathematics and education podcast sites that I have found to be worthwhile:

- Mathgrad: Math in everyday life from a mathematics graduate student, a nice little podcast: [www.mathgrade.com/](http://www.mathgrade.com/)
- Math Mutation: Weird corners of mathematics. [www.getapodcast.com/podcast3206.aspx](http://www.getapodcast.com/podcast3206.aspx)
- The nanotechnology podcast (SmallTalk) is at [www.nisenet.org/podcasts](http://www.nisenet.org/podcasts)
- Kidcast—Everything you ever wanted to know about podcasting in the classroom with many examples. [www.intelligenic.com/blog/](http://www.intelligenic.com/blog/)
- Check out the Education Podcast Network at [www.epnweb.org](http://www.epnweb.org) for a slew of educator-related and created podcasts.
- Podcast for Teachers at [www.podcastforteachers.org](http://www.podcastforteachers.org), provides weekly conversations about education and technology.

You may also find podcasts listed on sites like Odeo, Podomatic, Podshow, or many other hosting sites, and listen directly on the Web, or download and subscribe through software, such as iTunes.

## Making Your Own Podcasts

I *highly* recommend listening to some of Dan Schmit's Kidcast, which is about using and creating podcasts in the classroom. His book is in the library at [www.intelligent.com/blog/](http://www.intelligent.com/blog/) and there is an audio of Dan giving an overview of classroom podcasts at [edcommunity.apple.com/ali/item.php?itemID=9973](http://edcommunity.apple.com/ali/item.php?itemID=9973).

There are several things I feel teachers should think about before creating their own podcasts or having students create podcasts.

- Creating a podcast is a good lesson in communication and allows students to take the role of being a teacher. It requires students to organize information and then present it in a meaningful way.
  - Students can be more motivated to create a program that could be heard across the world, rather than just an assignment for the teacher.
  - Concepts are reinforced when students are asked to research a topic, record it, produce it, and play it.
  - Creating a podcast does take time. Start small, and create something you think you can maintain.
  - Consider divisions of labor for student created podcasts (writer, editor, post-producer, etc.).
  - When recording people, be sure to get permission to record them (you may create a permission form).
  - Your students should use a stage name and not give out private details about themselves, since podcasts are publically available.
  - You should spend more time on developing the content (80%) than on production (20%). Good content makes up for poor production, but not vice versa. It is important to plan your podcast well. Good audio does not just happen, it is organized in advance.
- Think about content that lends itself well to audio, such as music, personal stories, drama, history, and other narratives.
  - Do not podcast for the sake of podcasting—see how it fits into your curriculum.

Here are some ideas for possible podcasts.

- Create test review podcasts—students can listen on their own time, and replay parts they did not get. You sound just as enthusiastic the 70th time as the 1st.
- Students can interview people who use mathematics in their careers.
- Drama. Create a skit to perform on podcast.
- Discuss impact of mathematics on society, or how history of mathematics has shaped human history.
- Explore the mathematics of digital audio technology—acoustics, sound compression, etc.
- Pet-casts give a chance to talk about biology, nutrition, etc., which can be linked to mathematics.
- Collaborate with other classrooms via podcast.
- Use science or mathematics in everyday life.
- Overview this day in mathematics history.
- Create a sports news show or sportscaster voice-over, exploring statistics or the mathematics of the physical laws governing the sport.

## Conclusion

Today's students are proficient with a variety of technologies that were nonexistent only a few years ago. By incorporating podcasts in the classroom, teachers can enhance their curriculum and help students learn and understand content through a technology for which they are very aware. I encourage teachers to explore this technology and look for ways of including it in the mathematics classroom. 📺