

# 7 things you should know about...

## Screencasting

### Scenario

Joey is in an atmospheric science class that uses a high-performance modeling application to represent atmospheric conditions and forecast weather events. Because everyone in the class needs to be comfortable using the application—and because it is highly complex—the professor, Dr. Lattner, has created a set of screencasts to establish a baseline familiarity with the application among students in the class. The screencasts, which are about 30 minutes long each, cover the four primary sets of functions in the application.

To create the screencasts, Dr. Lattner simply presses “Record” on his screencast software while running the modeling application on his computer. He manipulates the application and narrates into a microphone connected to his computer, just as if he were lecturing. He demonstrates how the various functions work, using an example with real data to model ocean temperatures and hurricane paths. With the screencast, Dr. Lattner explains as he goes, drawing students’ attention to the weather patterns and to the parts of the application that are most relevant and important to their models. When he is done, he makes minor edits to the screencasts and saves them as Flash movies.

At the beginning of the semester, Joey reviews all four of the screencasts. Not only has he not previously used the weather modeling application, he has never used an application as powerful and complicated as this one. He watches the screencasts at times when he knows he is most likely to absorb the information, which for him is typically late at night. He takes notes as the screencasts play, and he keeps an instance of the weather modeling application open at the same time so he can toggle between the two, using the functions after he sees how Dr. Lattner used them in the screencast. When he gets confused, Joey can stop the screencast, go back to an earlier spot, and replay the difficult parts until he feels confident that he can use the modeling application efficiently. Several times throughout the semester—especially just before the midterm and the final, which use the modeling tool—Joey returns to the screencasts to refresh his memory about how particular functions of the application work.

### What is it?

A screencast is a screen capture of the actions on a user’s computer screen, typically with accompanying audio, distributed through RSS. In the same way that a screenshot is a static representation of a computer screen at a point in time, a screencast captures what happens on a monitor over a period of time. The audio track can be the sound from an application being demonstrated, a narrative from the presenter, or background audio from another application. Screencasts can be produced in various formats, and users generally watch them streamed over a network.

Screencasts can be thought of as podcasts of a computer monitor. Podcasts are easy-to-make audio files that can be edited and distributed online. Screencasts capture the feeling of personal connection that podcasts provide, with the added benefit of video to see what is being discussed. And, like podcasts, screencasts can be easily distributed through blogs and other Web pages. Screencasts can be another component of a user’s news aggregator, along with Web pages, multimedia files, and other resources.

### Who is doing it?

Screencasts have become a regular fixture in distance education programs because they provide a sense of engagement between faculty and students without compromising the ability to access learning materials online whenever and wherever it is convenient. In other cases, faculty have taken advantage of screencasts to provide learning resources to local students. For some students, the technology allows them to learn in a more self-directed fashion, one that suits their style and speed of learning.

Some faculty use screencasts to provide richer feedback on student performance than a marked-up paper offers. A screencast can show students what faculty are marking and let them hear the instructor’s narrative about the reasons behind those marks. Screencasts are well suited to demonstrations of basic concepts, such as showing examples of fundamental equations in math or sciences. They are also showing up on the Web in the form of software tutorials.

### How does it work?

Making screencasts requires special software that captures activity on a screen. With the proper software installed, making a screencast is as simple as pushing a “Record” button and then working

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with an application you want to demonstrate. If a narrative is part of the screencast, you speak into a microphone as you manipulate the actions on the screen. All of the action and sound are recorded and, with most screencast software, can be edited later. Some software lets you add menus or a table of contents for the screencast, allowing users to navigate to different parts of the presentation. Certain tools include captioning functionality, which adds text captions to accompany a presentation. This can be beneficial to visual learners and students with auditory handicaps. Some screencast tools specifically use Tablet PCs. With these applications, instructors use the stylus to “write” on a whiteboard, showing students how to perform calculations, diagramming data in figures and tables, or representing other lessons you might demonstrate by example. Finally, the screencast is saved in the desired format, based on file size, resolution, or compatibility with hardware and software used by the audience.

To watch a screencast, you only need a viewer capable of showing the appropriate file format. For many screencasts, this means nothing more than a Web browser with a media player, such as QuickTime, Flash, or Windows Media Player. Screencasts can be streamed over a network or downloaded and watched later. One option is to save screencasts on a portable device with video capability, such as a video iPod. Although the small screen makes some screencasts impractical for portable devices, others work well, allowing students more freedom in where and when they view recorded sessions.

## Why is it significant?

Screencasts provide students with lessons they can watch at their convenience, as often as they choose, to review class material or to help understand concepts they find difficult. Students can stop and start presentations, giving them control over how a lesson unfolds, which can help accommodate different learning styles and speeds. Even presentations that last an hour or more can be recorded as reasonably sized files. Screencasts can also add a new dimension to embedded learning. Instead of simply consulting a reference book to learn or refresh your memory about a basic concept needed for work on a larger project, you might access a library of screencasts and watch the one that addresses the concept at hand.

The ability to edit screencasts gives instructors the opportunity to create a useful, targeted educational resource. With judicious editing, an instructor can re-sequence the elements of a lesson, eliminate awkward or unnecessary parts, and craft a focused presentation that is easy to follow and uses students’ time efficiently. Another benefit of screencasts is a sense of connection with the instructor. For both distant and local learners, a screencast puts the action of the instructor’s computer on a screen right in front of the student, creating a “look over my shoulder” effect similar to one-on-one instruction.

## What are the downsides?

The most obvious drawback of screencasting is that it is not interactive. Although some lessons lend themselves to fixed demonstration, others do not and should not be taught with screencasts. Moreover, in the same way that watching someone demonstrate a program can include irrelevant information, simply recording the instructor’s screen during a class session can be an inefficient way to transfer information. Good screencasts depend on planning a session with an eye toward its being recorded and on thoughtful editing afterwards.

## Where is it going?

Because the tools used to create screencasts are straightforward and simple to use, they offer a new avenue for individuals who need to share information visually and aurally. This might be students in a course who create tools to help others understand the material, making instructors out of all the students in the class. It might be a student using a screencast as part of an electronic portfolio to fulfill a course requirement or demonstrate a specific proficiency. An individual might use a screencast as an electronic component of a résumé or a CV. Screencasts can personalize any learning experience where students are remote from the instructor. Although screencasts are more likely to be used for rote learning—“skill and drill” types of applications—using the tools for creating and viewing the recordings will build familiarity and comfort with IT tasks in general.

## What are the implications for teaching and learning?

Screencasts provide a simple means to extend rich course content to distance students, students with disabilities (who might have restricted access to certain class sessions or presentations), and anyone else who might benefit from the material but cannot attend a presentation. The technology also offers a simple means of providing a fixed presentation, one that shows the same material in a consistent, repeatable form. Routine training for large numbers of students, such as learning about an institution’s course management system or other campus-wide systems, is an excellent candidate for screencasts. In addition, screencasts represent another tool at the disposal of faculty. The thresholds are low for creating and viewing screencasts, giving instructors broad latitude in deciding when to use the technology, without having to depend on IT staff to make it happen. Screencasts add an active, visual element to resources available outside class. Rather than simply relying on texts or notes, students can replay class sessions or demonstrations, seeing how an application is manipulated while hearing the instructor talk.