

How do I get started?

If you are considering implementing podcasting at your institution, this section will guide you through initial steps.

- *“Position and Perspective” outlines the instructional potential of podcasting and compares it to other instructional technologies.*
- *“Decisions to Make About Podcasting” highlights issues that should be considered before moving ahead with any podcasting program.*
- *“Making the Case for Podcasting” helps you prepare to answer stakeholder questions and concerns about launching a podcasting program.*

Position and Perspective

Podcasting can enhance teaching and learning through mobile, flexible, and easy-to-use audio (and visual) technology. But where does podcasting fit in the contemporary curriculum? Before selecting podcasting, it may be worthwhile to consider it in relation to other technologies.

What Podcasting Can Do

Podcasting is a mobile technology. It is portable, either through personal computers or mobile devices (MP3 player, handheld, cell phone, or laptop). It also enables just-in-time, 24 x 7 access to information. Traditional podcasts deliver only audio, while enhanced podcasting may be multimedia, incorporating images or video.

Delivering course content via audio or video is not new. Mailing audiocassettes or VHS tapes to learners defined one of the earliest forms of distance education. What's new about podcasting is the ease of publication, subscription, and use across multiple environments. For example, you can listen to podcasts over computer speakers, on a car stereo, and over headphones—all while you are moving, whether walking or exercising or driving or traveling. Creating and subscribing to podcasting “feeds” makes listening and viewing much easier than ever before—for the developer and end user.



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Perhaps the most significant attribute of podcasts is the ability to provide a rich, self-paced learning environment that is accessible anytime, anywhere. Whether for delivering content to

*This section is part of the **EDUCAUSE Learning Initiative Discovery Tool: Guide to Podcasting**. The guide is designed to help you know what to expect of podcasting's abilities and limitations, where it fits in the broader context of teaching and learning in higher education, and how you might approach implementation. Each section can be used as a stand-alone resource, or all sections can be combined and into a handy compendium. Find the complete Guide to Podcasting at www.educause.edu/ELIDiscoveryTools/10564.*

ELI Discovery Tools are practical resources designed to support the development and implementation of teaching, learning, and technology projects or processes on campus. They are available to ELI members only.

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free up face-to-face class time or for reviewing archived material, podcasts are relatively easy to access, create, and distribute. The uses of podcasts include:

- *Content distribution:* Whether the information is new or for review, podcasts can be used to distribute
 - archived lectures for student review
 - tutorials for lab work or other common processes
 - video or audio to demonstrate difficult concepts
 - travel experiences for educational use
 - research findings with colleagues
- *Guest speakers:* A convenient way to introduce guest speakers to a course is to provide interviews of experts or recordings of talks.
- *Reports or journals:* For class reports or journals, podcasts provide students a simplified, multimedia approach for reporting.
- *Language learning:* Recordings make it possible for students to review vocabulary, syntax, and speech. Students can also record their own audio sessions for review or archiving.
- *Authentic assessment:* Students can record their reflections or provide samples of their work that are evaluated by faculty or archived in an e-portfolio.

Beyond academic uses, colleges and universities are finding podcasts are useful for:

- *Student orientation:* Podcasts can help students locate campus services, navigate the library, learn how to connect to the campus network, or explore virtual city/town tours. Podcast campus tours have multiple uses—from recruitment to “precampus visits.” They can be tailored for the audience—high school students considering an application, admitted students, parents. Campus departments can use podcasts to orient students to specific services—for example, an introduction to the IT help desk, library reference services, student success centers, or financial aid services.
- *Retelling history:* Institutional, departmental, and program histories are part of the campus culture and are used for student recruitment and alumni engagement. Involving students, administrators, athletic boosters, and alumni in retelling histories through podcasts can provide a media-rich outlet for expressing and archiving this important institutional resource.
- *Professional development:* Available anytime, podcasts can provide staff with “click-into” access to information ranging from human resources, technology tips, health and wellness, and targeted faculty development.

How Does Podcasting Fit the Technology Landscape?

In selecting podcasting for a learning activity, it is important to address questions focused on where it is positioned across the audiovisual technology spectrum and how it relates to other technologies in terms of mobility, platform neutrality, instructional flexibility, and accessibility (see Table 1).

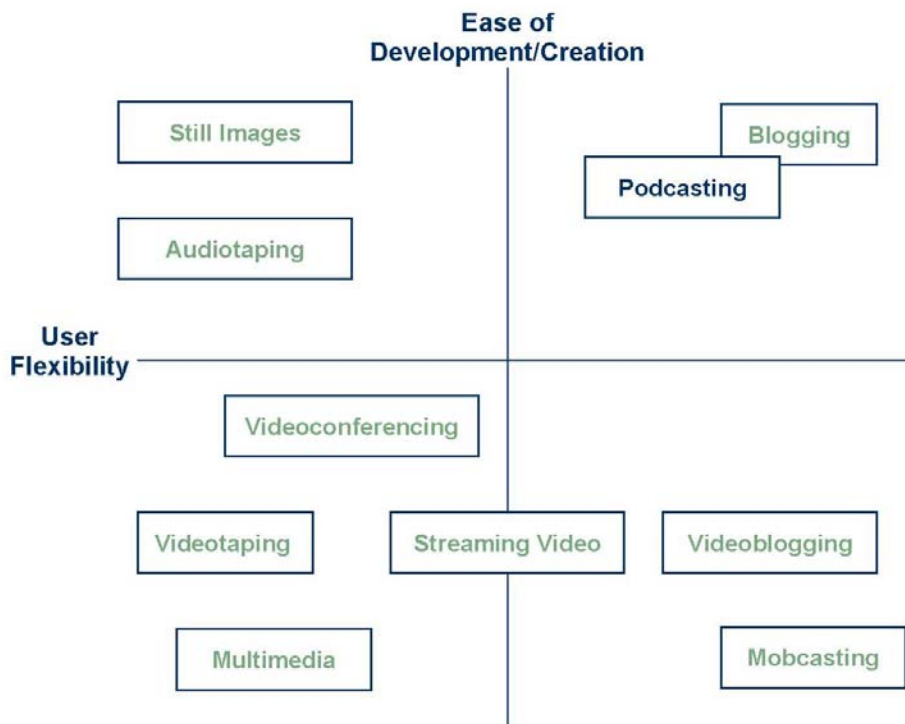
Table 1. Attributes of Podcasts

Attribute	Yes	No
Mobile	x	
Platform neutral	x	
Readily accessible anywhere, anytime	x	
Easy to use	x	
Easy to create	x	
Instructional flexibility	x	
Can be used for a variety of purposes (e.g., introduce content, document accomplishments)	x	
Supports universal design		x
Easy to post individual podcasts	x	
Easy to establish an institution-wide hosting service		x

The figures below represent a general categorization of podcasting. Use them as a starting point for discussing podcasting at your institution.

Figure 1 represents where podcasting fits in the overall landscape of audiovisual-based technologies; the landscape is defined by how easy the technology is to develop (create) and how flexible it is for users to access and/or manipulate. It shows that, compared to other audiovisual technologies, podcasting is relatively easy to develop and create and provides a high degree of user flexibility, especially when compared to more traditional A/V formats (e.g., video and audio taping).

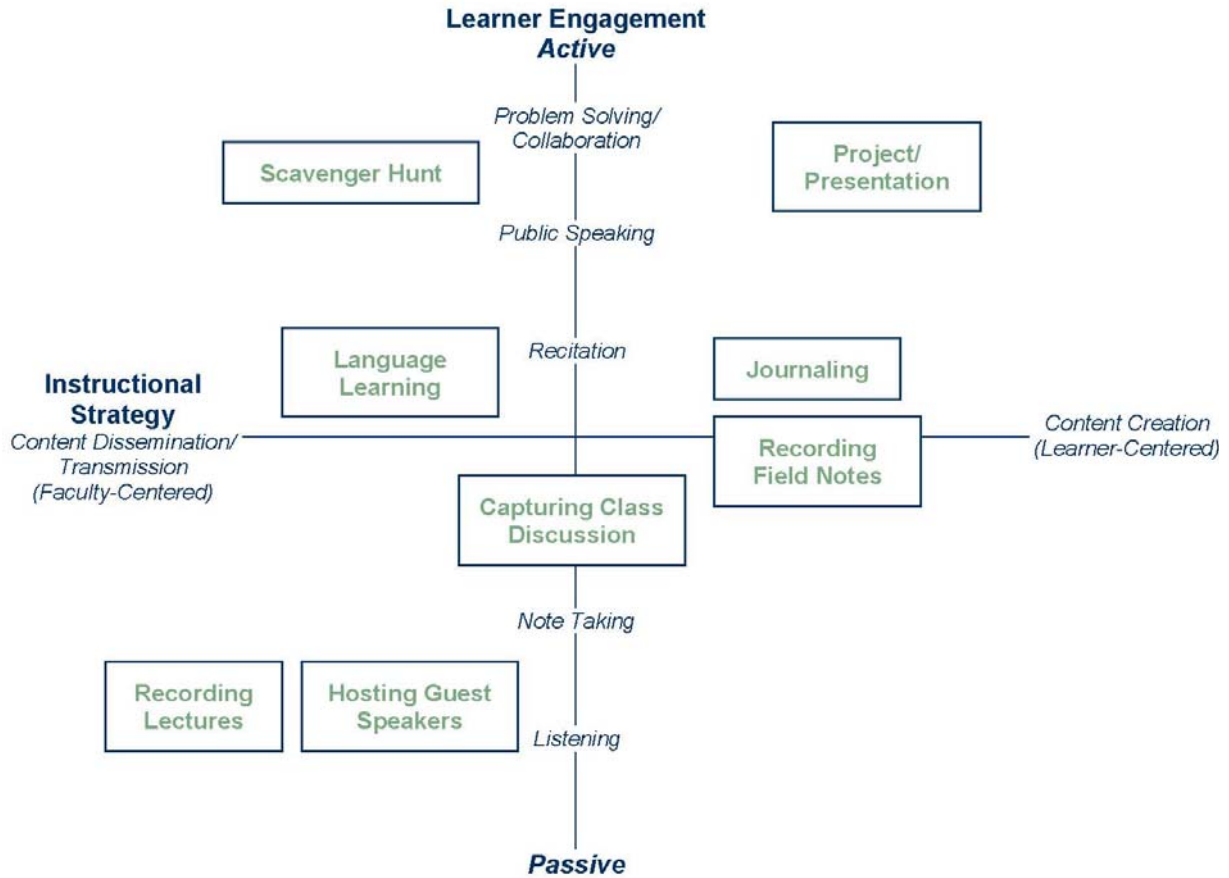
Figure 1. Development and Delivery of Audiovisual Technologies



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Figure 2 represents specific uses of podcasting and defines those uses through flexibility as an instructional strategy (faculty-transmission to learner-created) and degree of learner engagement (passive to active).

Figure 2. Podcasting: Instructional Flexibility and Learner Engagement



As you think about podcasting and the diagrams above, the following questions may stimulate dialogue about where podcasting fits at your institution:

- Is podcasting a good match for your instructional goals? What kinds of instructional problems could podcasts solve?
- Would you use podcasting as a delivery technology or as an active learning tool?
- Do you have the necessary technology, expertise, and support to ensure that podcasting is successful?

Decisions to Make About Podcasting

Initial Considerations

Podcasting is an audio-capture and dissemination mechanism often used to deliver information. Among the reasons for podcasting's popularity are its simplicity and the fact that students are already familiar with the technology.

When podcasts present course content, they can:

- be a form of distance learning
- allow students to review material at their own pace and convenience
- provide remedial materials
- provide additional content or enrichment material, such as presentations by guest speakers
- provide examples and practice for language learning



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Although podcasting may seem like one-way communication, especially since it is often used for recording lectures, it can be used to facilitate greater communication between students and faculty. One of the primary ways it can do that is by shifting the delivery of noninteractive content outside the classroom, freeing up class time for interaction.

A common concern is that podcasting lectures will reduce class attendance. Although this is a possibility, faculty we interviewed suggest that students with a strong interest in the course continue to attend class even if podcasts are available; those in attendance had greater interest in course content, making for greater faculty-student exchange. Assumptions about attendance should be tested. Although students at one institution reported their attendance was not affected by podcasting, faculty perceived that attendance decreased. Data are not available to clarify if there was any change, positive or negative.

Perhaps the best insurance for keeping class attendance high is judicious use of podcasting—not to deliver content but as a tool for active learning. Active learning options include using podcasting:

- as a reporting tool for team-based presentations
- as a living journal for students in international exchange programs
- as an archive for learning experiences that can be built on by other students
- for authentic assessment

If attendance is a concern with the implementation of podcasting, consider some the following options:

- provide supplementary materials via podcast to augment in-class lectures
- develop a different course structure, such as offering lectures via podcast and using class time for discussion or other activities

Before You Begin

Before you advocate podcasting, there are several questions you may want to answer:

- What do you hope to achieve?
- Are your users (students and faculty) receptive?
- Do you have the necessary infrastructure and support?
- What policies may be necessary?
- What options should you consider?

What do you hope to achieve?

Whether you use podcasting to archive lectures or for active learning, it is important to be clear about what you hope to achieve through the use of the technology. Will podcasts be used to enhance or replace existing pedagogical practices? For example, are you using podcasts to reinforce concepts presented elsewhere? To free students from note taking? To allow them to make up for missed classes?

Technology alone will not improve learning. However, it can support the learning process by making access more convenient and enabling new activities. As you consider what you hope to achieve, you may want to ask:

- Is your goal to automate lecture capture so students can listen again to class discussions anyplace and anytime?
- Do you want to augment class sessions with additional audio material?
- Is podcasting a tool that will allow students to collect authentic content (such as interviews) for use in class projects?
- Are you hoping to reach audiences that are less inclined to read than listen?

Are your users receptive?

There are two groups who must be receptive to podcasts for implementation to be successful: students and faculty. Although we often assume that all students have iPods and are comfortable downloading material from the Web, it is important to test this assumption, especially for your user population. For example, while many students have downloaded music or movies from the Web, fewer have downloaded podcasts. Among those students who do use podcasts, many listen to them on their computers rather than on a mobile device.

But it isn't just students who must be receptive to podcasting; the faculty must share that interest. Faculty are more likely to be interested in podcasting if they have been shown the various ways podcasts can be used to enhance learning, particularly within their discipline. (See the Examples and Case Studies sections for suggestions.) Adequate support must be available, as well.

You may survey potential faculty and students about their interest in podcasting. However, if they have never experienced good educational use of podcasts, their responses may not indicate the potential success of a program.

Do you have the necessary infrastructure and support?

Podcasts are audio files that have been captured and posted to a Web site for downloading. The distinction between a simple audio file and podcasting is that a podcast has an accompanying RSS feed that supports enclosures so that podcatchers can automatically receive them. Getting started may require little more than a microphone, some software, and a computer, but scaling podcasting to dozens—or hundreds—of students requires an infrastructure for uploading, hosting, and downloading institutional resources.

Faculty and students will need support. Faculty workshops on how to develop a podcast are probably essential. Help desk support for students who are unfamiliar with podcasting may be necessary. High-quality productions may require an audio studio.

What policies may be necessary?

Podcasting is unlikely to be part of existing campus policies, so you may want to consider questions such as:

- Are podcasts considered the intellectual property of the institution or of the individual faculty member or student who created them?
- Will all podcasts be made available at no charge to students, or will a fee be assessed?
- Do guidelines for copyright and fair use apply to podcasts as well as other works (e.g., articles)?
- If listening to podcasts is required for a course, must all students own an MP3 player or a computer, or will the institution provide the means for listening?



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Just as many policies had to be revisited when face-to-face courses migrated online, the same may be true as lectures and student work moves from print to podcasts.

What options should you consider?

Before you begin podcasting, there are a number of options to consider. Although this is not an exhaustive list, it illustrates some of the choices available.

Access

- Will podcasts be available only to students registered in a course? To any student at the college or university? To anyone (student, faculty, staff, or alumni) at the institution? To anyone, irrespective of whether they are associated with the institution?
- Will podcasts be available before class? After class? Will there be a planned delay before they become available?
- Will the podcasts be available after the end of the term? To whom?

Required or optional

- Is the material in the podcasts required for all students?

Level of production

- Is simple recording of audio sufficient, or is a higher production quality needed?
- Is the podcast just recorded ad lib, or is it scripted and professionally produced? Or somewhere in between?
- Is the podcast audio only, or is it augmented with images?
- Are external resources required (e.g., music, images, voice talent)? If so, what are the copyright and budget considerations?

Length

- Are podcasts short (e.g., 10 minutes), or are they full class length (e.g., 50 minutes)? What is the length of podcasts that will most likely be used?

User Support

- What are faculty and student computer skill levels for creating, uploading, and downloading podcasts?
- What types of hardware (for production and playback) and devices (for playback) can be supported?
- If using podcasts is required, do all students have the technology needed to access the podcasts?
- What considerations are in place for accessibility concerns?

What It Takes to Podcast

Creating the audio for a podcast will likely involve recording voices but may also include images, music, or voice-overs. But creating the audio is just part of the process. The audio must be converted to the appropriate file format (e.g., MP3), posted, and made available through RSS. Below are some of the steps involved in podcasting as well as examples of the tools you might use.

Creating a podcast

There are a number of steps to creating a podcast. Table 2 highlights the major steps, as well as the tools needed. Note that you may need some additional hardware, such as a noise-canceling microphone, audio mixer, audio/MP3 recorder, or headphones. In addition, you may want a device such as an instreamer that converts the received analog and digital audio to MP3 format.

Decisions to Make About Podcasting

Table 2. Creating Podcasts

Step	Description	Software Options
Capture/edit	Collect content through an input device directly to a computer or digital recorder. Make adjustments to the recorded information using editing software.	Audacity < http://audacity.sourceforge.net/ > GarageBand < http://www.apple.com/ilife/garageband/ > ProfCast < http://www.profcast.com/public/index.php >
Encode	Encoding software and hardware convert the captured content to MP3 or, if video, MPEG-4 format. Conversion options may be available in some editing software.	LAME < http://lame.sourceforge.net/index.php > MediaCoder < http://sourceforge.net/projects/mediacoder/ >
Post file	The MP3 file can be posted to a Web site or published in a blog.	Drupal < http://drupal.org/ > MoveableType < http://www.moveabletype.org/ > WordPress < http://wordpress.org/ >
Distribute file	RSS (Really Simple Syndication) enables the syndication of the podcast file, creating a feed. The feed's code contains tags for title, description, publication date, and file location on the server.	Easypodcast < http://www.easypodcast.com/ > XML editor
Play	Aggregators, RSS newsreader clients, and Web-based readers are used to subscribe to podcast feeds and download podcasts. Aggregators provide a navigable user interface and can be set up for automatic download of feeds.	iPodder < http://www.ipodder.org/directory/4/ipodderSoftware > Juice < http://juicereceiver.sourceforge.net/ > NewsGator < http://www.newsgator.com/Home.aspx > Pluck < http://www.pluck.com/ >

Podcasting resources

It isn't necessary to create your own podcasts; a number of sites provide podcast lectures for public use. You may also want to augment your podcast with music, audio, images, or other resources. And, if your campus does not have a formal solution for hosting podcasts, you might want to take advantage of one of the fee-based Web services that will host material for you. Table 3 highlights some of the many resources available.

Table 3. Podcast Resources

External Resources	Description	Source
Higher education resources	These sites are higher education podcast repositories. Though some podcasts at these sites are freely shareable, thus useable for instruction, review any noted copyright information regarding use.	College and University Feed Directory < http://directory.edufeeds.com/index.php?c=2 > ed-cast: The Higher Education Podcast Repository < http://ed-cast.org/ >
Music and audio resources	Music and other audio can be used to enhance the presentation of your podcast. The noted sites provide free and copyrighted samples.	Audiobag < http://audiobag.com/ > OkayToPlay < http://www.okaytoplay.com/wiki/Legal_Music_Providers > Podcast Alley < http://podcastalley.com/podcast_genres.php > thefreesoundproject < http://freesound.iua.upf.edu/ >
Images	Images can be integrated into your podcast to visually enhance the material.	clipart.com < http://www.clipart.com/ > (royalty-free) FreeFoto < http://www.freefoto.com/ > (review use guidelines) FreeMediaGOO < http://www.freemediagoo.com/ > (royalty-free)
Voice-over	As the importance of the content increases, so should the quality of the delivery. Voice-overs can provide lead-ins and introductions within the podcast to improve the professionalism of the production.	PodcastVoiceGuys < http://www.podcastvoiceguys.com/ > VoiceOpolis < http://www.voiceopolis.com/ >
Hosting services	If you do not have access to a media server, free and fee-based hosting services are available. You can upload your podcasts to these services to make them available.	AudioBlog < http://www.audioblog.com/ > iTunes < http://www.apple.com/itunes/ > LiberatedSyndication < http://www.libsyn.com/ > OurMedia < http://www.ourmedia.org/ > PodBus < http://podbus.com/ >

Distributing podcasts

Individual podcasts can be uploaded to any course management system as a multimedia file. However, providing students, faculty, and staff access to institutional resources requires a separate infrastructure for uploading, hosting, and authentication. Both external services like Apple's iTunes U or campus-based systems can easily incorporate your institutional brand and access considerations. However, inviting input from IT, libraries, faculty, and public relations will ensure an interface and technical design appropriate for your institution.

Making the Case for Podcasting

As you make a case to adopt a specific technology, such as podcasting, you should anticipate questions that address purpose, cost, value, and control. Below is a list of common questions you should be prepared to answer as you make the case for podcasting.

Priorities

What problem does this technology help us solve?

Few people will adopt a technology unless you can convince them that it solves a problem they consider a priority. For example, rather than telling the provost that you want to use podcasting because all students have iPods, consider talking about how podcasting allows you to address the problem of interaction in large courses (i.e., students can listen to lectures via podcast then spend class time in discussion). As you address the problem the technology helps solve, be prepared to convince listeners that this is a problem worth solving. If the problem isn't an institutional priority, you may not convince anyone.

Remember that not all problems are instructional. Sometimes the problem to be solved is gaining media attention or convincing potential students that the campus is a cool place to be.

How does this relate to the institution's priorities?

With ever-present resource constraints and accountability questions, a project has a better chance of success if it explicitly relates to the institution's priorities. Is podcasting part of making your campus more student-centered? Is it a mechanism of making learning more flexible for commuting students? Consider your institution's priorities, and help stakeholders make the connection between those priorities and your project.



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Effectiveness

Who else is doing podcasting?

There are almost always questions that focus on due diligence—have you done your homework? Developing a list of others who are using podcasting, particularly among peer institutions, will be helpful. (However, if your institution wants to capitalize on being an early adopter, you won't find many others to list.) Beyond the list, be prepared to provide information about their experiences and lessons learned. For suggested guidelines, see the ELI Applying Technology to Teaching and Learning Tool at <http://www.educause.edu/11816>.

How do we know this works?

If you know what problem podcasting is being used to solve, then you are positioned to provide evidence of effectiveness.

How much will it cost?

All projects require resources, so be prepared to detail how much the project will cost, in terms of dollars, staff support, faculty time, and so on.

What are the other options for doing this?

Once you have defined the problem you are trying to solve, you should be prepared to address other options that might work. Looking at other options allows people to consider the trade-offs. As you consider other options, be sure to include implementation issues that may make other options more (or less) attractive.

Alignment

How does this fit in the curriculum?

For most teaching and learning activities, the assumption is that the technology will be integrated into a course (or series of courses). This means that it must be perceived to “fit” into the curriculum. Its fit may be determined by the learning activity it enables or by faculty adoption. If faculty won’t use the technology, it probably won’t fit into the curriculum.

Remember that not all learning occurs in classes; informal and implicit learning can occur at any time and in any place. If your use of podcasting doesn’t hinge on the curriculum, make this clear.

Is this the way we want our students to learn?

Any time technology is introduced, there are questions about the value of an alternative approach and whether that aligns with the culture of the institution. An institutional culture that strongly values traditional instruction may not be as good a fit for podcasting as an institution that promotes a tech-savvy image.

Are your assumptions correct?

Assumptions are made without ever being conscious of them. For example, when we talk about using a technology (e.g., instant messaging), it is often assumed that it replaces something else (e.g., talking face-to-face). In fact, one tends to augment the other rather than replace it. As you consider a project, are there assumptions that should be addressed (e.g., podcasting must be used by everyone)?

Risks and Returns

What do we gain if this works? What do we lose if it doesn’t?

As you answer this question, remember that different stakeholders will be listening for different responses. Students may be interested in the additional flexibility they have for studying. The president may be looking for a PR advantage. Alumni may be concerned about academic rigor.

Who are the supporters? Who are the skeptics?

As you weigh the potential risks and returns of podcasting, consider not just who is likely to support the initiative and who is likely to be skeptical, but their relative influence. If the faculty senate is adamantly opposed, for example, it may be hard to convince the provost to champion the initiative.

What are the PR implications?

Colleges and universities are very public institutions. What kind of coverage will podcasting likely receive from the student newspaper? The alumni magazine? The local media? Will the initiative fly under the radar, or will it be seen as dehumanizing the college?

Remember that some of the most influential PR comes from satisfied (or dissatisfied) individuals talking to each other. Even if it never reaches the newspaper, TV, or radio, what will be the tone of the chatter? Will it lead to the president's receiving a complaint from a trustee?

What are the organizational and policy implications?

Although technology may be the vehicle, content, institutional image, and policy implications may complicate a podcasting project. For example, will podcasting be centralized in the CIO's office, or will it belong to the provost? Is the content owned by the faculty? The department? The institution? Are podcasts available just to currently enrolled students, or can anyone access them?

Policy implications can be extensive. For example, are there issues around privacy? Security? Do users need to be authenticated? You may need to consider policies about the device itself. For instance, are students required to purchase their own device? If so, must they adhere to institutionally mandated standards, or can they purchase (or borrow) whatever they want? If students can't afford the device, will the institution provide it? What about compliance with the Americans with Disabilities Act?

What happens if we do nothing?

Remember that there are risks from action and risks from inaction. For example, will the institution be perceived to be behind the times if it does not use podcasting?