

Lecture Capture at the UW: Results from 2013-2014 Needs Assessment and Panopto Pilot

Overview

In an attempt to identify a single technology solution to meet the lecture capture needs of faculty, staff, and students across the University of Washington, UW Information Technology (UW-IT) undertook two related projects in Autumn Quarter 2013:

1. an assessment of existing needs for lecture capture
2. an initial pilot study of the Panopto lecture capture system

The Panopto pilot continued in Winter Quarter 2014, targeting specific use cases identified in the needs assessment. Results of those studies are summarized here. Findings indicate that Panopto is able to meet the full range of identified needs regarding lecture capture and provides an extremely positive user experience for both faculty and staff. Based on these results, *UW-IT recommends Panopto as the enterprise solution for lecture capture.*

Needs Assessment

Researchers from UW-IT spoke to 14 faculty and staff in 12 schools and departments — including the iSchool, the School of Law, the School of Medicine, and the Foster School of Business — in order to understand the range of needs with regard to lecture capture. The study identified requirements for a lecture capture system that would effectively meet the needs of:

- faculty requesting automatic recording of classroom lectures (all class sizes)
- faculty recording lectures outside of class
- faculty asking students to create recordings as an assignment
- faculty needing to provide in-line feedback on recordings
- administrators scheduling automatic recordings of courses and events
- administrators working with faculty to create recordings for distance education
- staff creating recordings for training purposes
- students viewing recordings for learning and review
- individuals wishing to collaborate on recordings and/or share them with others within and outside the institution

Results of the needs assessment were used to target specific use cases for the Winter Quarter pilot, and informed discussions with the Panopto development team.

Panopto Pilot

In Autumn, the Panopto lecture capture system was installed in four general access lecture classrooms, replacing the existing CourseCast auto-recording equipment. Eight instructors scheduled to teach in these rooms chose to pilot the auto-recording system with Panopto.

For the Winter pilot, instructors and staff were recruited to represent specific use cases. The seventeen participants included faculty auto-recording classroom lectures as well as recording lectures outside of class, faculty who asked students to make recordings, and staff making recordings for training purposes. All participants in the Autumn and Winter pilots, as well as students from their classes, were invited to complete an end-of-quarter survey about their use of and experience with Panopto.

Survey Respondents

	Autumn	Winter	Total
Faculty	7 of 8 (88%)	10 of 17 (59%)	17
Students	41 students (from 7 courses)	531 students (from 8 courses)	572

Survey Results

Because the survey and the Panopto system remained fairly consistent from Autumn to Winter, and there was little difference in survey responses between the two pilot groups, results were combined where possible for ease of reporting.

Instructors

Use of Panopto and its features varied among pilot participants depending on their needs and their interest in experimenting with the new technology. Regardless of how they had used the technology during the pilot quarter, all instructors reported that there was more that they would have liked to do with Panopto, indicating specific activities.

	Did during pilot	Would have liked to do
Recorded classroom lectures (either automatically or manually)	13 (77%)	—
Experimented with Panopto in my “sandbox” (private recording space)	6 (35%)	6 (35%)
Recorded lectures outside of class OR recorded a training video	5 (29%)	4 (24%)
Edited my recordings	3(18%)	9 (53%)
Reviewed analytic data on how often/by whom/how long recordings were viewed	3(18%)	10 (59%)
Asked students to record and submit videos as an assignment	1 (6%)	3 (18%)
Added comments to my recordings	0 (0%)	9 (53%)
Collaborated on a recording with someone who was not co-located*	0 (0%)	1 (10%)
Requested captioning on recordings*	0 (0%)	4 (40%)
Provided feedback (within Panopto) on videos submitted as an assignment*	0 (0%)	2 (20%)

*These items were not included in the Autumn survey

When asked about challenges to using Panopto, most frequently mentioned (4 of 17 instructors) were a lack of time to learn the new technology and inadequate training/experience. Other challenges were

minor and mentioned by only 1-2 instructors. These included log-in issues, difficulty using the editing deck, slow upload speed, problems with camera positioning, and delay in video posting.

When asked if they would recommend Panopto to colleagues interested in recording lectures, fourteen instructors (82%) said “yes.” The remaining three instructors selected “Maybe/It depends,” explaining that they had limited experience with Panopto’s features. None indicated they would not recommend it.

Overall, instructors appeared very satisfied with Panopto. Open-ended comments (“Is there anything more you would like to tell us...?”) were positive:

It is awesome. Super-easy to use both in class and in my office. I also liked having one type of video in the class, rather than a mixture of Coursecast and something else. And, knowing who is watching the videos and for how long is useful...

For colleagues interested in pursuing a ‘flip the classroom’ approach to instruction, Panopto serves as an excellent platform through which to provide students access to material prior to in-class meetings.

I liked how easy it was to record from multiple video sources.

Panopto is very robust and overall a great product, with all the features that I need...

I appreciate the flexibility of Panopto — even though I did not use those features within this course. Being able to integrate multiple video sources is an excellent option, which Tegrity does not offer. In addition, the ability to edit, insert notes/annotations, and collaborate with others are great options that I suspect I will use in future courses.

Students

Of the 572 students who responded to the survey, 386 reported viewing at least one recording in Panopto. (In many courses, auto-recorded classroom lectures were available through Panopto as a resource for review.) Of those 386 users, 182 (47%) reported viewing “substantial sections of several recordings,” and another 72 (19%) reported viewing “substantial sections of most of the recordings.”

Panopto includes a variety of features intended to improve students’ experience of viewing and learning from recorded presentations. However, only 19% of students who viewed lectures in Panopto reported learning about these features from their instructors. When asked to describe their use of specific features, between one- and two-thirds of these students indicated that they “did not know about” each feature. The top five most frequently used features were used by only 20-30% of students. These included the ability to:

- Choose quality of recording playback (depending on Internet speed) 30%
- Return to exact section of recording by clicking on any note or bookmark 26%
- Take personal notes, automatically time-stamped, while recording is playing 25%
- Quickly review last 10 seconds of recording (with one click) 24%
- Search for particular words (text) in presentation 21%

An additional seven features, including the ability to bookmark any point in a recording and comment/ask questions within a recording, were used by less than 20% of students.

In regard to challenges, most frequently mentioned (55 of 386 viewers) were problems with buffering:

Sometimes, it would load slowly or be buffering, but I'm pretty sure that was my computer or the Internet struggling.

It is slow sometimes and lags when you try to click on a previous or later part of the lecture.

The buffering occurred frequently and it was difficult to near impossible to navigate through a lecture without actually watching it in real time.

These comments appear to reflect problems with students' Internet connection (speed or quality) power of their computer, or perhaps lack of knowledge of certain features (the ability to choose the quality of recording playback depending on Internet speed). Likewise, the three next most frequently mentioned challenges were not with the Panopto system itself, but problems with the recording equipment or setup, or instructor error. These challenges included inconsistencies across lectures (e.g., PowerPoint slides or lecture notes missing), poor audio, or poor video quality/camera issues:

Some of the videos did not display the lecture slides on the screen in addition to the video of the lecture hall.

Sometimes the volume changes due to teacher moving or background noise blocking her voice.

Camera angle made board hard to read.

Additional challenges included navigating the viewer, compatibility issues, and poor user interface:

You can't see the whole screen, and, using Safari, sometimes the slides would not transition along with the lecture.

I wish the video scrubbing would work better.

Many of these issues are addressed with the redesign of the Panopto user interface this spring.

Despite these expressed frustrations, students appeared to find these challenges minor in relation to their viewing experience as a whole. When asked to rate their overall satisfaction with Panopto, 284 students (74% of those who used the technology) reported being "satisfied" or "very satisfied." Only 30 students (8%) indicated that they were "dissatisfied" or "very dissatisfied" with their experience.

Students were also informed about Panopto's features for recording presentations, since this option would be available to them as well as faculty and staff. Many students responded enthusiastically to the possibility of submitting recorded presentations as assignments (and receiving feedback in-line) as well as creating recordings for their own purposes.

Summary

The needs assessment study conducted in Autumn Quarter 2013 identified a wide range of needs in regard to lecture capture for faculty, staff, and students across the UW community. Some of these

needs are met through a combination of lecture capture systems currently in use at the UW (CTE Coursecasting, Tegrity), but Panopto meets the full range of these needs and offers a single technology solution for lecture capture across the UW. In addition, Panopto offers a variety of desirable features for faculty and students to improve the quality of recordings, the quality of students' viewing experience, and students' ability to learn from the recordings.

The pilot study results from both Autumn and Winter indicate that the large majority of faculty and student participants were satisfied or more than satisfied with their experience using Panopto. Though faculty pilot participants reported not doing all that they would have liked to do with Panopto in one quarter, and though students were unaware of many of the features to available in regard to viewing, comments suggest that both faculty and students were impressed with Panopto's range of features and eager to try them in the future. With the latest release of Panopto addressing many of the challenges reported by students in the pilot, we believe Panopto offers a superior user experience.

Based on these results, UW-IT recommends Panopto as the enterprise solution for lecture capture at the University of Washington.