TRANSFORMING EDUCATION WITH TECHNOLOGY
IN VCU CENTRALLY MANAGED CLASSROOMS

In the Fall of 2023, the Academic Technologies' Classroom Support team conducted a survey to collect feedback regarding faculty use of technologies in centrally managed classrooms. Survey feedback is analyzed and used to gauge the effectiveness of our classroom technology, as well as the support of this technology in meeting instructional needs. This feedback plays a significant role in the assessment and planning for future classroom technology upgrades.

102 faculty responded to the survey, representing 86% of VCU Colleges/Schools.

51% of VCU academic buildings contain centrally managed classrooms.

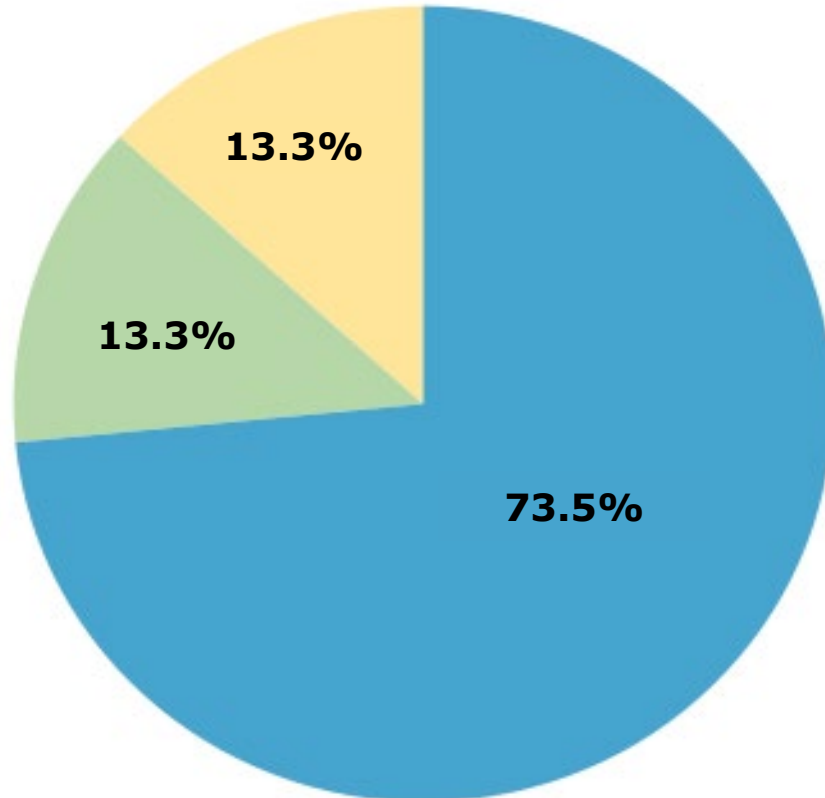There are 162 centrally managed classrooms: 110 MP Campus and 52 MCV Campus.

VCU | Academic Technologies
Technology Services

THE FOUNDATION...

CLASS SIZES

Instructors were asked what size classroom they typically use.

102 Respondents, 113 Answers, 3 Categories

- 13.3%
- 13.3%
- 73.5%

- 20 - 50 Student Seats (Standard Presentation)
- 51 - 75 Student Seats (Small Lecture Hall)
- 76 - 400 Student Seats (Large Lecture Hall)

INSTRUCTIONAL STYLE

Face-to-face (100%) and hybrid (in-person and remote attendees) modalities involve classroom technology. The style of teaching affects the technology requirements. We have defined these teaching styles as Lecture, Interactive, and Collaborative. Faculty were asked to select their modality and teaching style. Some submitted multiple answers which are included in these results.
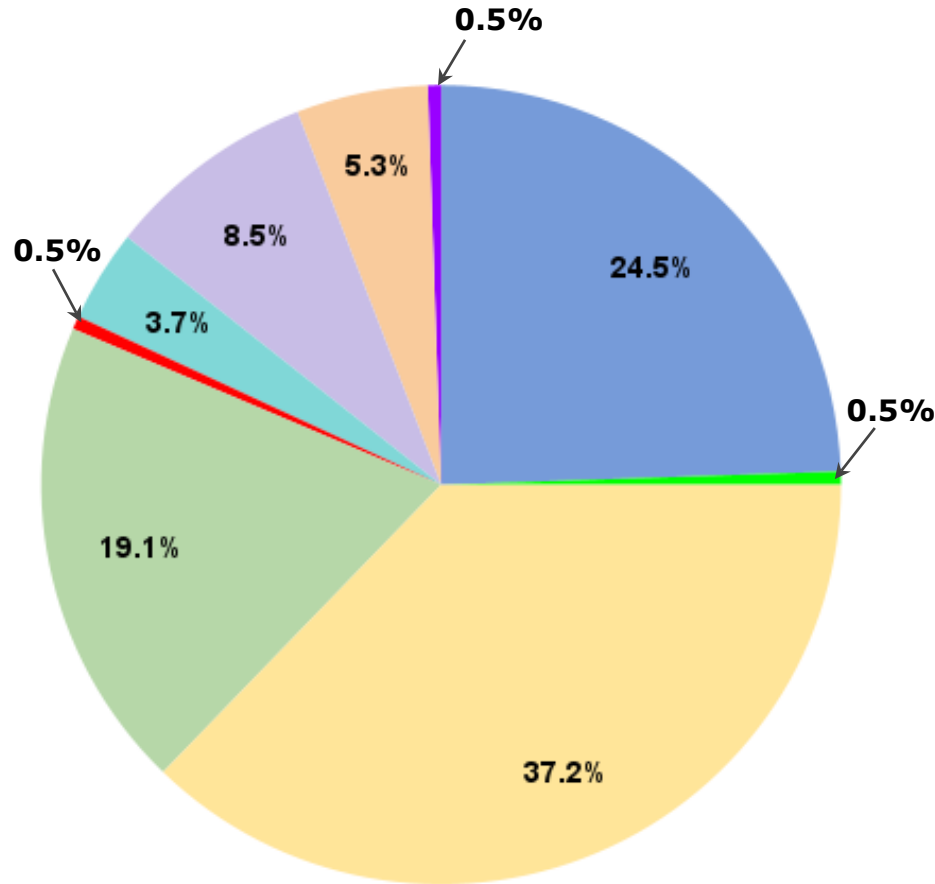

102 Respondents, 188 Answers, 9 Modalities/Styles

Pie chart values: 0.5%, 24.5%, 0.5%, 37.2%, 19.1%, 0.5%, 3.7%, 8.5%, 5.3%

Legend:

- Face-to-face collaborative - In-person only discussions and activity-based interaction primarily student to student.
- Face-to-face collaborative where every student needs access to outlets 100% of the time.
- Face-to-face Interactive - In-person only where discussion and activity are between the instructor and students.
- Face-to-face Lecture - In-person only where material is presented from instructor to students with minimal interaction.
- Hybrid - remote asynchronous content online and in-person, face-to-face sessions for group discussions and activities.
- Hybrid collaborative - In-person and remote attendees where discussion and activity based interaction primarily student to student.
- Hybrid Interactive - In-person and remote attendees where discussion and activity are between instructor and students.
- Hybrid Lecture - In-person and remote attendees where material is presented from instructor to students with minimal interaction.
- Hyflex

CLASSROOM TECHNOLOGY SUPPORT

Survey feedback regarding technical support and training for central classrooms.

Left pie chart

1.6%
4.1%
5.7%
14.6%
17.9%
35.8%
20.3%
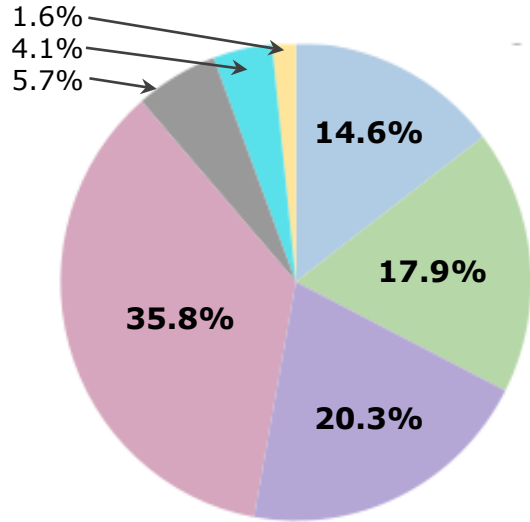
Training type most beneficial to you:

- One-on-one system demo/practice windows (30-60 minutes)
- One-on-one system demo/practice window (10-15 minutes) between class sessions
- Group Training Sessions (30-60 minutes)
- Online Webinar System training session (30-60 minutes)
- Nothing, None, n/a
- Written or online guide
- Asynchronous webinar, Youtube video

Center

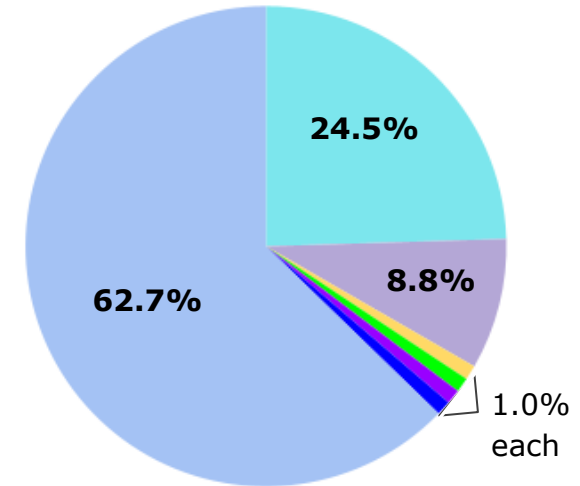**80.4%** Aware of Hotline phone numbers for assistance

66.7% Have contacted our support team

Timeliness of resolution

67.6% - very timely
5.9% - timely
2.9% - average
62.7% - did not answer

Knowledgeable & courteous technician

30.4% - very
5.9% - yes
1.0% - average
62.7% - did not answer

Right pie chart

24.5%
8.8%
62.7%
1.0% each

How you contacted our support team:

- Hotline
- Ticket
- Requested training
- School/Dept IT support
- Contacted staff who called hotline
- Went to the office
- No Response (on survey)

THE TECHNOLOGY...

PRESENTATION TECHNOLOGY USAGE

90%   Podium Control Panel

49%   Wired network connection

45%   Podium Microphone

38%   Dual Monitors

33%   Document Camera

32%   Auxiliary HDMI Input

26%   Classroom Instructor Camera

16%   Wireless Microphone

16%   Annotation Monitor

14%   Wireless Presentation

9%   Auxiliary VGA input

PODIUM SOFTWARE USAGE

84%   Canvas LMS

77%   Microsoft Office

75%   Google Drive, Slides, Docs

37%   Zoom

26%   Visualizer for document Camera

21%   Kaltura Lecture Capture

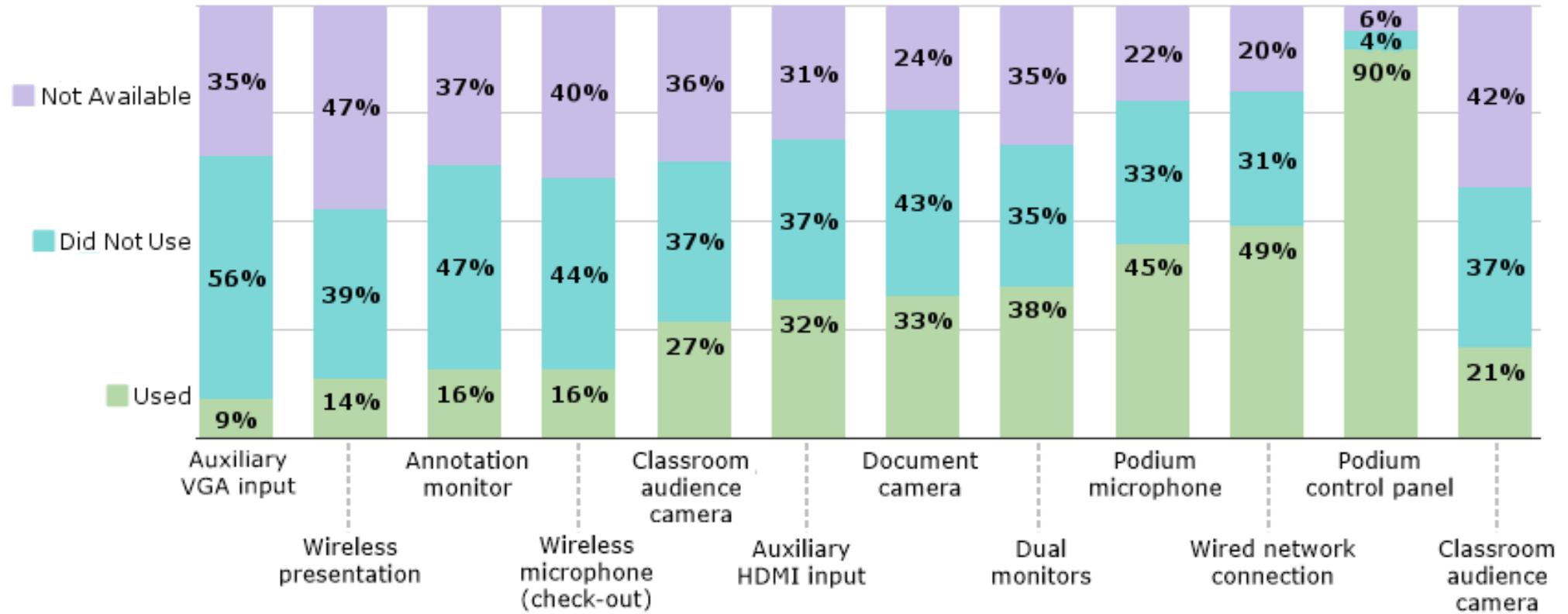17%   Annotation Monitor

16%   Top Hat

PRESENTATION TECHNOLOGY USE

Instructors were asked to rate how well the existing system capabilities met their instructional needs during the Fall 2023 semester.

102 Respondents, 9 Technologies

Technology	Not Available	Did Not Use	Used
Auxiliary VGA input	35%	56%	9%
Wireless presentation	47%	39%	14%
Annotation monitor	37%	47%	16%
Wireless microphone (check-out)	40%	44%	16%
Classroom audience camera	36%	37%	27%
Auxiliary HDMI input	31%	37%	32%
Document camera	24%	43%	33%
Dual monitors	35%	35%	38%
Podium microphone	22%	33%	45%
Wired network connection	20%	31%	49%
Podium control panel	6%	4%	90%
Classroom audience camera	42%	37%	21%

HYBRID TECHNOLOGY

FOUR LEVELS OF HYBRID CLASSROOMS (in VCU central classrooms)

Hybrid courses allow for lecture, interactive or collaborative instructional style while having students attend remotely as well as in person. We currently have 4 levels of Hybrid classrooms in our central classrooms. We are actively working to update our Basic Hybrid classrooms to our Standard Hybrid capability listed below, with the ultimate goal of having all spaces meet the Advanced Hybrid standards below.

ADVANCED HYBRID	*Cameras*: Two room cameras, instructor and student facing as well as a document camera are available. *Audio*: One podium microphone, ceiling microphone and (in lecture halls) wireless microphone receivers.
STANDARD HYBRID	*Cameras*: An instructor camera located in the back of the room capturing the front of the room. Also a document camera is available. *Audio*: One podium microphone and ceiling microphone.
BASIC HYBRID	*Camera*: One document camera for content and/or classroom view, with setting options in Zoom. *Audio*: One podium microphone available.
PODIUM MIC ONLY HYBRID	*Audio:* One Podium microphone only. No built-in video option. (very few, very small spaces.

HYBRID TECHNOLOGY USAGE

Instructors were asked to rate how well these specific resources met their instructional needs in a hybrid teaching environment. Of 102 survey participants, 8 provided responses about their hybrid technology usage.

USAGE and RATINGS

8 Respondents, 9 Technologies Rated

87.5% Podium Microphone, For Zoom Or Capture Software
62.5% rated "very well"
25.0% rated "well"

75.0% Student Ceiling Mic
50.0% rated "very well"
12.5% rated "well"
12.5% rated "poorly"

50.0% Instructor Camera
37.5% rated "very well"
12.5% rated "poorly"

37.5% Student Camera
25.0% rated "very well"
12.5% rated "well"

37.5% Document Camera - for whiteboard
12.5% rated "very well"
25.0% rated "ok"

37.5% Document Camera - show presenter
25.0% rated "very well"
12.5% rated "very poorly"

25.0% Document Camera - show classroom
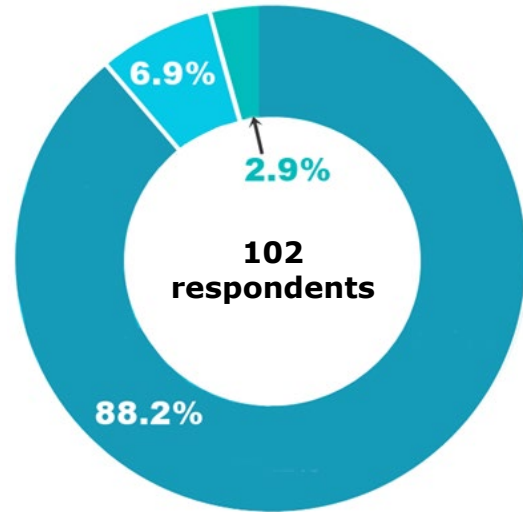12.5% rated "very well"
12.5% rated "very poorly"

12.5% Wireless Microphone - checked out
12.5% rated "very well"

12.5% Document Camera - content or annotation
12.5% rated "well"

PRESENTING & RECORDING HYBRID COURSES

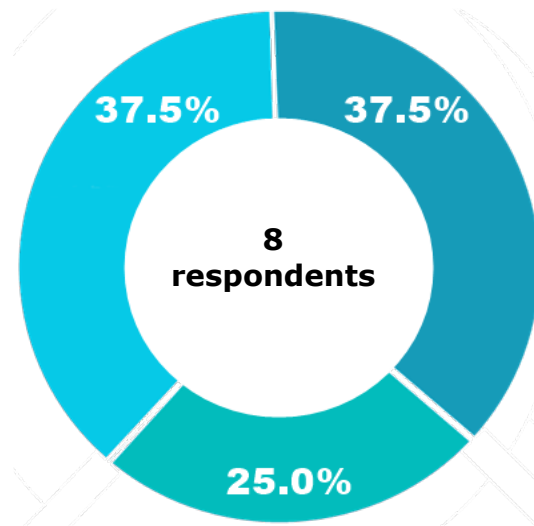**102 respondents**

6.9%

2.9%

88.2%

Presenting in Hybrid Classes

Of 102 survey participants, 100 provided a response about presenting to hybrid classes.

88.2% use the podium computer screen and Zoom

6.9% use a laptop screen, as a guest presenter

2.9% use the document camera for live, written content and/or physical artifacts
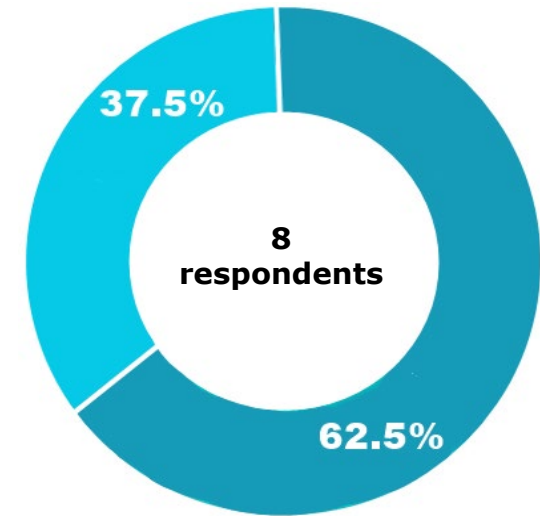
8 respondents

37.5%

37.5%

25.0%

Recording

Of 102 survey participants, 8 provided a response about recording hybrid classes.

37.5% occasionally record

37.5% do not record at all

25% record every class

8 respondents

37.5%

62.5%

Recording Method

Of 102 survey participants, 8 provided a response about the method used for recording hybrid classes.

62.5% use Zoom session recording

None use Kaltura Classroom
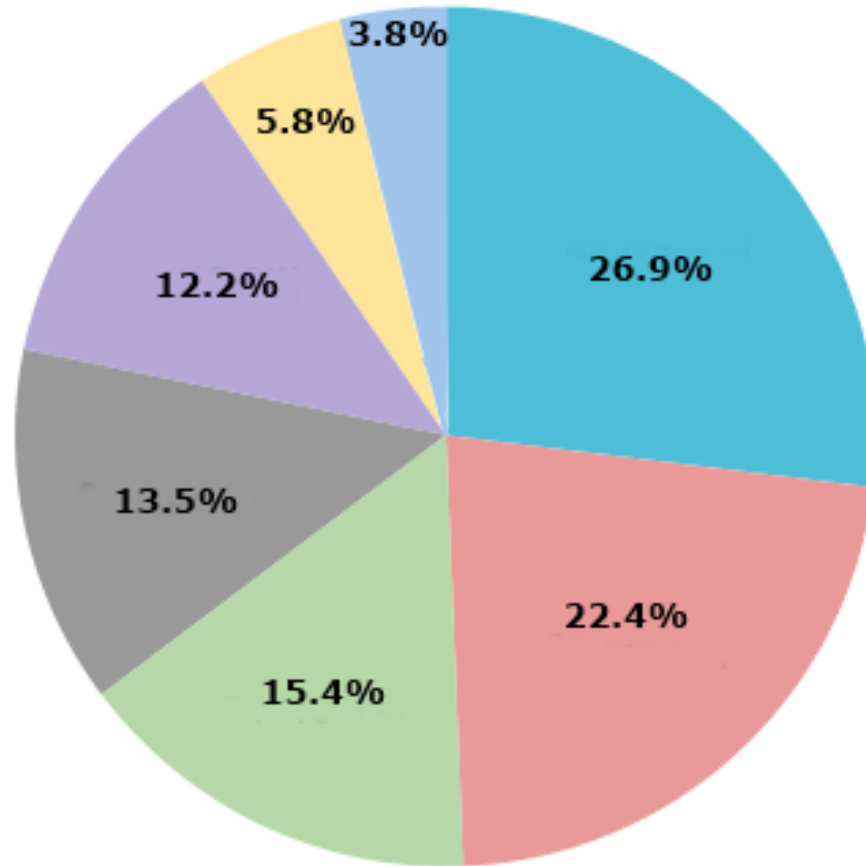
37.5% do not record at all

THE FUTURE...

IN-PERSON/REMOTE NEEDS

Instructors were asked which resources they expect to use for future classroom sessions.

102 Respondents, 156 Answers, 7 Categories

- 26.9% Zoom - Guest Lecturers only
- 22.4% Zoom - Remote and in-person attendance/class participation
- 15.4% Zoom - Lecture Capture
- 13.5% None or N/A
- 12.2% Kaltura Classroom - Lecture Capture
- 5.8% Zoom - Instructor in classroom, all students attend remotely
- 3.8% Other

WIRELESS PRESENTATION

Wireless Presentation in classrooms would allow users to wirelessly connect their portable devices to display content on the classroom presentation display. Wireless presentation systems have been deployed in several classrooms and lecture halls on both campuses, though not campus wide.

Instructors were asked if they would be interested in using Wireless Presentation for their courses; and if so, how would they use it.

How Wireless Presentation Would Be Used
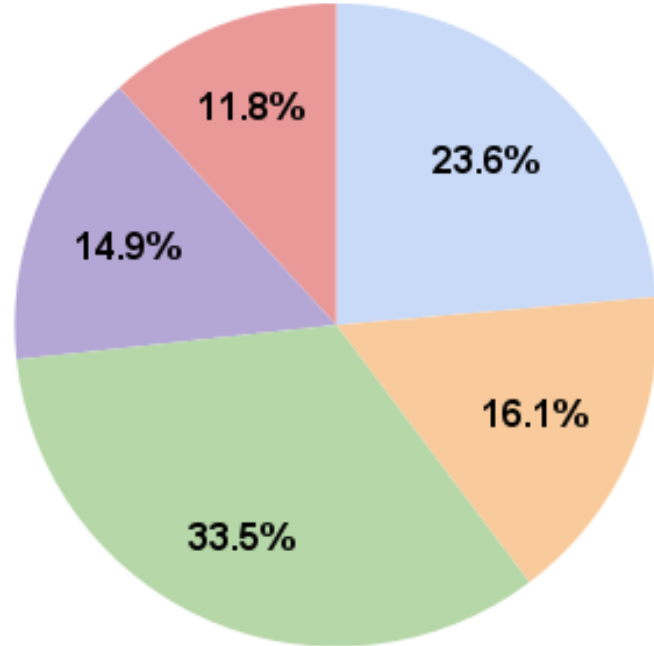
- 23.6% — Only present files (photos, documents, pdfs) from my mobile device.
- 16.1% — Show specific apps on my tablet, not just files like photos, documents and pdfs. (screen mirroring)
- 33.5% — Control my PowerPoint (or equivalent) presentation away from the podium.
- 14.9% — Annotate over my PowerPoint (or equivalent) presentation.
- 11.8% — Use my tablet as a wireless notepad to project written notes, equations, or examples to the class.

55.9% Interested

20.6% Very Interested

37.3% Slightly Interested

Previously Used

2% have previously used rated the experience:
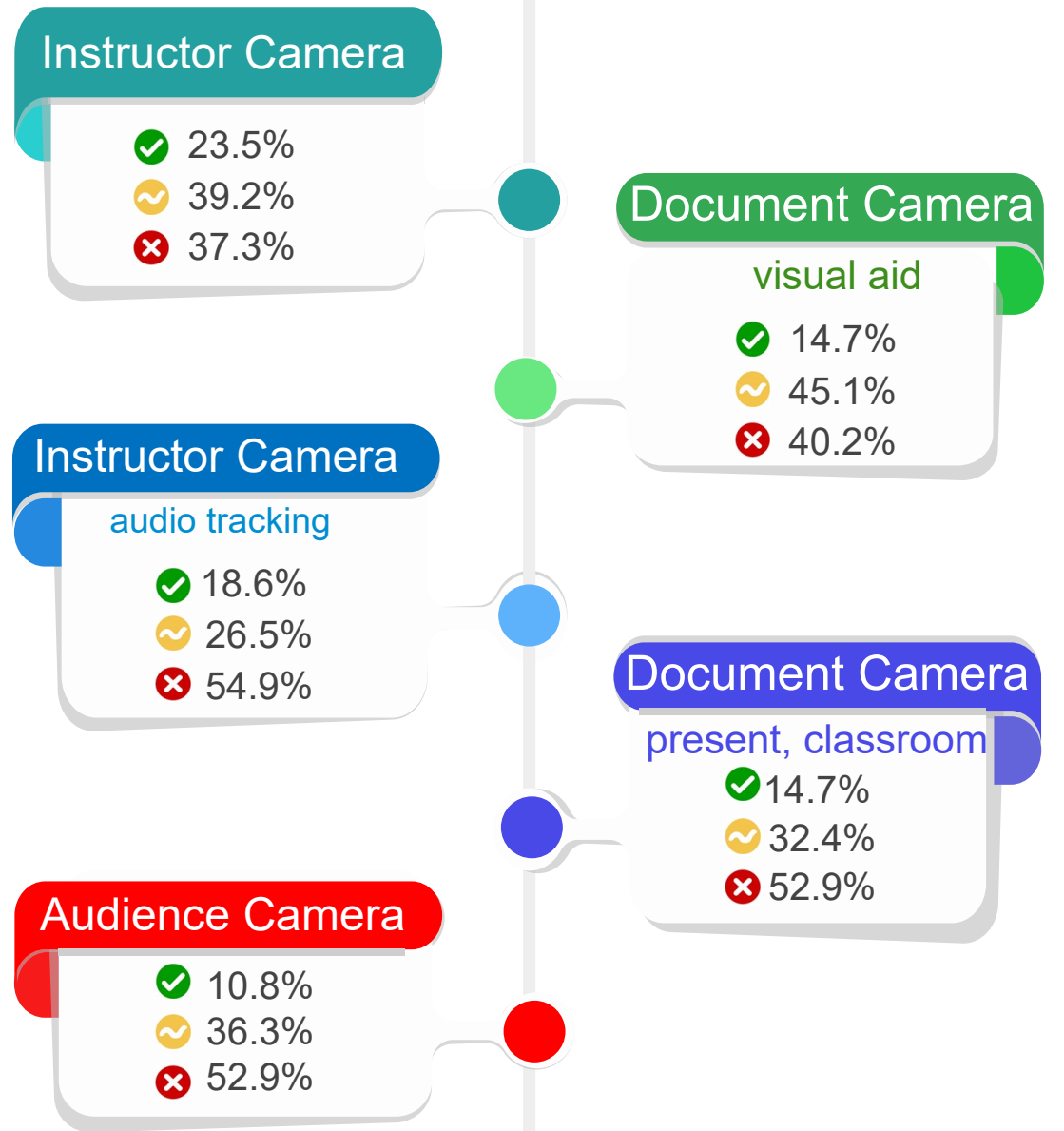
8.8% very positive
11.8% somewhat positive

POTENTIAL CLASSROOM TECHNOLOGY NEEDS

The following technologies/tools are available in few spaces, but what if they were available in all central classrooms?

102 survey participants lend some insight to what classroom technologies may be needed in the future. They rated how often they would use these technologies if they were available.

- ✅ would use daily
- 〰️ would use some
- ❌ would not use

Instructor Camera
- ✅ 23.5%
- 〰️ 39.2%
- ❌ 37.3%

Document Camera
visual aid
- ✅ 14.7%
- 〰️ 45.1%
- ❌ 40.2%

Instructor Camera
audio tracking
- ✅ 18.6%
- 〰️ 26.5%
- ❌ 54.9%

Document Camera
present, classroom
- ✅ 14.7%
- 〰️ 32.4%
- ❌ 52.9%

Audience Camera
- ✅ 10.8%
- 〰️ 36.3%
- ❌ 52.9%

POTENTIAL CLASSROOM TECHNOLOGY NEEDS

Continued from previous slide.

✅ would use daily
🟡 would use some
❌ would not use

Audience Microphone
ceiling
✅ 29.4%
🟡 24.5%
❌ 46.1%

Wireless Presentation
capability
✅ 29.4%
🟡 27.5%
❌ 43.1%

Instructor Microphone
podium integrated
✅ 36.3%
🟡 25.5%
❌ 38.2%

Wireless Microphone
for checkout
✅ 22.5%
🟡 18.6%
❌ 58.8%

Need to be able to schedule recordings via Kaltura

Better projection, better sound/speakers to output audio during guest zooms Blu-ray and DVD - film courses cannot rely on streaming alone

Functioning speaker system to use with wireless microphone.

HDMI connections

All classrooms should have two monitors.

All monitors should be touch screen.

The ability to write on my slides using a stylus to write on the monitor.

USB- C connectors

We need FM "loop" systems in place for people who use assistive listening devices. We REALLY need the ability to provide HyFlex

If students, from their laptops, could interact with the instructor's whiteboard (on the instructor's laptop) it would be great.

Podium computers should have the ability to do digital inking, or the projection should not cover the whiteboard. As is, except in few classrooms, it is very hard to actively teach mathematics when the projection covers almost all the whiteboard.

Students often have charging issues, especially as we work with documents during most of class. Any increased access to opportunities for students to charge their devices would be great; most of my classes have about 2-3 unreliable wall outlets and the very reliable outlet in the tech podium, and often all the functional outlets are in use in any given class.

ADDITIONAL FEEDBACK

STAY TUNED...