



2010 Academic Technology Survey Report

Fall 2010

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Executive Summary

The Academic Technology survey is sent out bi-annually to faculty, instructional staff, and teaching assistants to determine the state of instructional technology adoption on our campus and current and future instructional technology needs. Academic Technology (AT) continually examines how technology can address identified teaching and learning challenges on campus. The 2010 Academic Technology survey was designed to gather data to inform AT on how to best align services and support in ways that will meet the teaching needs and technology preferences of campus clients.

The survey was sent out to a random sample of faculty, instructional staff and teaching assistants in early October 2010. Thirty percent of the total population for each group (1811 people) were selected for the sample. Six hundred seventy three people responded to the survey, with 579 complete responses. This gives a 37.2% response rate overall, and a 32.0% response rate for completed surveys. Respondents of the 2010 Academic Technology Survey represented tenured and tenure-track faculty, non-tenure track instructors, lecturers and faculty associates, and teaching assistants from 18 schools and colleges on the UW-Madison campus.

- **The top 5 most used technologies for teaching in the 2009-2010 academic year**
 1. *Desktop presentation tools* (69%)
 2. *Course Management systems* (58%)
 3. *Video sharing applications* (29%)
 4. *MyWebspace* (24%)
 5. *Online collaborative tools* (18%)
- **The top 5 most used technologies for research in the 2009-2010 academic year**
 1. *Desktop presentation tools* (65%)
 2. *Online, library-licensed journals, databases* (63%)
 3. *Online collaborative tools* (38%)
 4. *Collections of digital media and/or data* (33%)
 5. *Data collection software* (32%)
- **The top 5 teaching challenges:**
 1. *Making lecture more interactive and engaging* (53%)
 2. *Providing students with practice or reinforcement* (24%)
 3. *Demonstrating complex concepts* (23%)
 4. *Focusing students on real world problems or tasks* (22%)
 5. *Giving prompt feedback* (21%)
- **The top 5 current teaching needs:**
 1. *Technology equipped classrooms* (55%)
 2. *Supplementing a course with online resources* (39%)
 3. *Putting course and/or lecture content online* (38%)
 4. *Creating effective presentations and/or using presentation technology* (31%)
 5. *Technologies to help administer a course* (27%)
- **The top 3 most important areas for Academic Technology to focus its efforts:**
 1. *Communication of available technology resources, support and solutions* (39%)
 2. *Faculty and instructor technology training sessions* (36%)
 3. *Disseminating best teaching practices with technology* (32%)
- **The top 5 topics respondents would be interested in learning more about:**
 1. *Pedagogy of technology-enhanced learning* (53%)
 2. *Course management tools* (39%)
 3. *Evaluation of technology-enhanced learning* (30%)
 4. *Online collaboration tools* (29%)
 5. *Instructional games and simulations* (27%)

Introduction

The Academic Technology survey is sent out bi-annually to faculty, instructional staff, and teaching assistants to determine the state of instructional technology adoption on our campus and current and future instructional technology needs. Academic Technology (AT) continually examines how technology can address identified teaching and learning challenges on campus. Therefore, the 2010 Academic Technology survey was designed to gather data to inform AT on how to best align services and support in ways that will meet the teaching needs and technology preferences of campus clients.

The survey was sent out to a random sample of faculty, instructional staff and teaching assistants in early October 2010. Thirty percent of the total population for each group was selected for the sample. Two reminders to complete the survey were sent out one and two weeks after the initial email. The survey was closed at the end of October. Six hundred seventy three people responded to the survey, with 579 complete responses, out of 1811 possible respondents. This gives a 37.2% response rate overall, and a 32.0% response rate for completed surveys. Results are summarized below.

Throughout the survey, you will see comparisons to past AT Survey results. In 2010, the percentage of Teaching Assistant/Graduate Student respondents was more than twice the percentage of the 2008 survey. This difference occurred because the 2008 sample was selected in August, before all of the Teaching Assistants for the 2009-2009 academic year were in the system. For this reason, comparisons between the 2010 and 2008 survey are broken down by UW-Madison position. 'Faculty, instructional staff, and other' are grouped together and 'Teaching Assistants/Graduate Students' are grouped together.

Demographics

I. UW-Madison Classification

Respondents were asked to select the term that best described their current position. Thirty-seven percent of the respondents were *tenured or tenure-track faculty*, 22% were *non-tenure track instructors, lecturers, or faculty associates*, 39% were *teaching assistants* and 2% choose *other* (CHS/ Clinical Faculty (12), Post doc, Fellow, Academic staff, Professor Emeritus).

Figure 1.1 - Current UW Madison Position

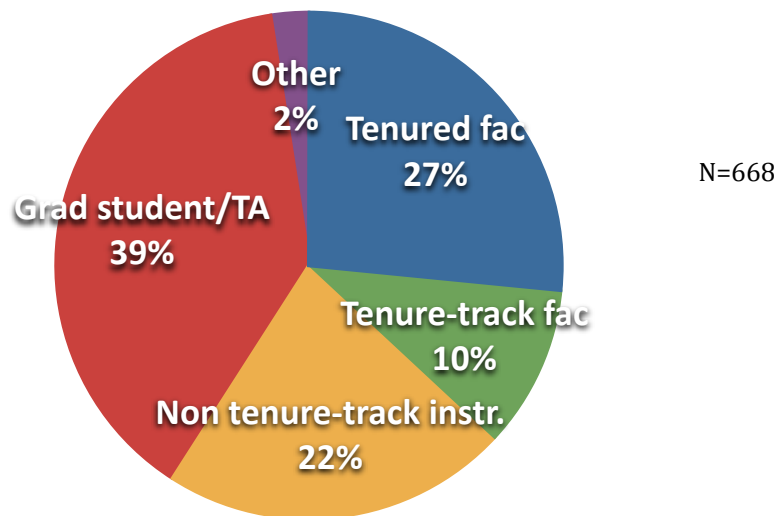


Table 1.1 - UW-Madison Position Comparison	2008 (N=255)	2010 (N=668)
Graduate student/ Teaching Assistant	17%	39%
Tenured faculty	33%	27%
Non-tenure track instructor, lecturer, faculty associate	31%	22%
Tenure-track faculty	11%	10%
Other	8%	2%

II. School/College Affiliation

Respondents were asked to select the school or college of their primary appointment. The graph (Figure 1.2) and table (Table 1.1) below show the distribution of the survey respondents.

N=637

Figure 1.2 - School/College Affiliation

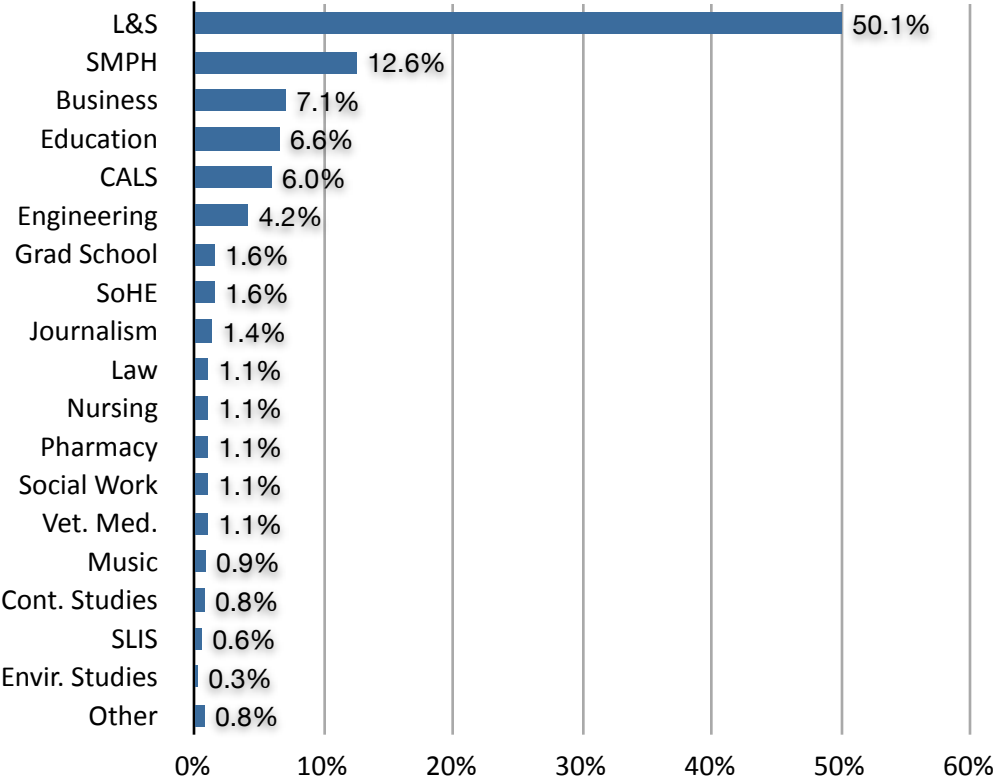


Table 1.2 - School/College Comparison	2008 (N=255)	2010 (N=637)
Letters and Sciences	40.1%	50.1%
Medicine and Public Health	19.4%	12.6%
Business	4.4%	7.1%
Education	7.6%	6.6%
Agriculture and Life Sciences	8.7%	6%
Engineering	6.0%	4.2%
Graduate School	----	1.6%
Human Ecology	1.6%	1.6%
Journalism	-----	1.4%
Law	2.0%	1.4%
Nursing	2.8%	1.1%
Pharmacy	1.2%	1.1%
Social Work	-----	1.1%
Veterinary Medicine	2.4%	1.1%
Music	-----	0.9%
Continuing Studies	-----	0.8%
Library and Information Studies	-----	0.6%
Environmental Studies	-----	0.3%
Other	3.6%	0.5%

III. Technology Adoption Profile

Faculty willingness to adopt new techniques in teaching and learning was addressed by Rogers¹ (1983). He identified five categories of adopters distributed along a bell curve: *Innovators* (3%), *Early Adopters* (14%), *Early Majority* (34%), *Late Majority* (34%), and *Reluctant* (16%) (also known as Laggards). Geoghegan² (1997) extended Rogers’ conceptual framework to the adoption of technology, distinguishing innovators as those fascinated and eager to use technology in teaching and learning, early adopters as those interested enough to try using technology, the majority requiring more incentive and

¹ Rogers, E.M. (1983) *Diffusion of Innovations*. (3rd Ed.) New York, NY: Free Press

² Geoghegan, W.E. (1994) “Whatever Happened to Instructional Technology”, paper presented at the 22nd Annual Conference of the International Business Schools Computing Association. Baltimore, MD.

support to venture into use of technology, and reluctant who refuse to use technology in teaching and learning.

In order to categorize the respondents based on Rogers' Adoption of Innovation framework, respondents were asked to respond to the following question:

Which of the following best describes you?

- *I am usually skeptical of new technologies and use them only when I have to.*
- *I am usually one of the last people I know to use new technologies.*
- *I usually use new technologies when most people I know do.*
- *I like new technologies and use them before most people I know.*
- *I love new technologies and am among the first to experiment with and use them.*

Respondents were then categorized as Reluctant, Late Majority, Early Majority, Early Adopters, and Innovators, respectively. The overall distribution is summarized in Figure 1.3 below. Figure 1.4 shows the adoption profile distribution for each UW-Madison position.

Figure 1.3 - Technology Adoption Profile

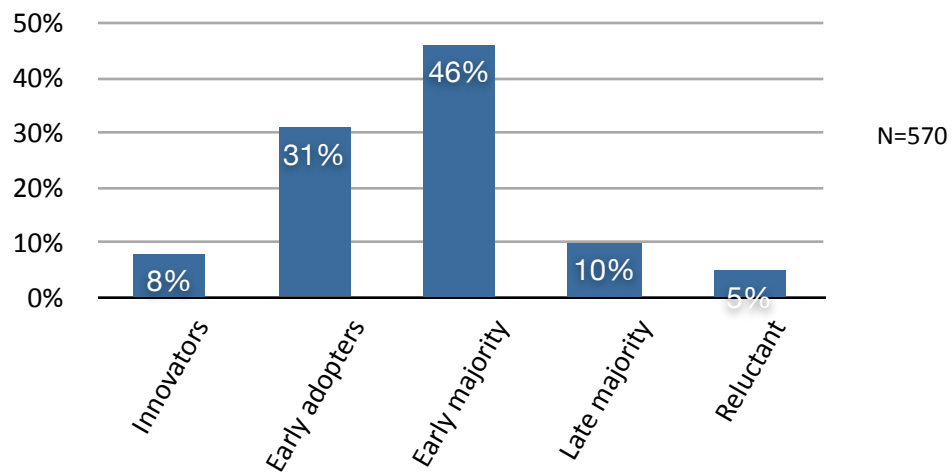
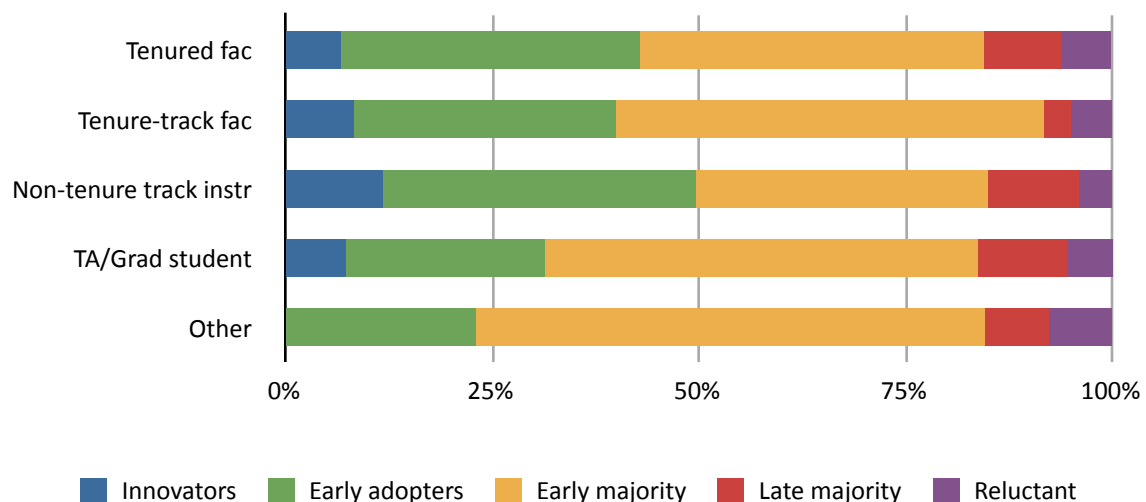


Figure 1.4 - Adoption Profile/UW-Madison Appointment



Technology Use

I. Teaching

Respondents were asked whether or not they had taught during the 2009-2010 school year. Those who answered yes were prompted to indicate which of the following technologies they used in their teaching in the 2009-2010 academic year. The table below (Table 2.1) shows the percentage of respondents who used each technology in their teaching. The quoted language in the table appeared in the survey if the respondent rolled over the technology term.

Table 2.1 - Technology Use in Teaching (N=522)	% Used in 2009-2010
Desktop presentation tools (e.g. PowerPoint, Keynote)	69%
Course management system (e.g. Learn@UW, Moodle)	58%
Video sharing applications (e.g. YouTube, Vimeo)	29%
MyWebspace "Web-space hosting and online file storage"	24%
Online collaborative tools (e.g. Wikis, Google Docs, VoiceThread)	18%
Virtual meetings/web conferencing (e.g. Adobe Connect,lluminate, Skype)	12%
Social networking sites (e.g. Facebook, Linked In)	12%
Video production/editing software (e.g. iMovie, MovieMaker)	11%
Podcasting (e.g. iTunes U)	9%
Digital image collections (e.g. Minds@UW, Flickr, Picassa)	9%
Games and/or simulations	9%
Audio production/editing software (e.g. Audacity, GarageBand)	9%
Clickers/Response Systems "Personal remote devices that allow instructors to pose questions and gather student responses during lecture or class."	8%
Blogs	8%
Instant messaging	8%
Lecture capture software (e.g. Jing, Captivate) "Lecture capture is an umbrella term describing any technology that allows instructors to record their lectures during or outside of class."	7%
Online presentation tools (e.g. Prezi, VuVox, Slideshare)	4%
ePortfolios "Personalized, web-based collections of work, responses to work, and reflections that are used to demonstrate key skills and accomplishments."	3%
Mashups "A webpage or application that uses or combines data, presentation, or functionality from two or more sources to create new services."	2%

Table 2.1 - Technology Use in Teaching (N=522)	% Used in 2009-2010
<p>Other</p> <ul style="list-style-type: none"> •Adobe illustrator/photoshop (2) •Classlists (2) •HTML (2) •Audio streaming •Course website on department server •Critical Reader/Case Scenario Builder •Department webpage •Digital video recording and playback •Direct lectures •Document camera •Electronic databases •Email distribution of scanned pdf's for outside reading •Flash based presentations •Individual web server •Interactive whiteboards •iTunes •iWeb •Latex •Music Notation Software - Finale Print Music •MyUW •Overhead projector •Online course •Photograph the blackboard and post to Learn@UW •Post lecture notes on the web •Projector •Quicktime Pro •Video streaming to LSS Digital Services •Resources for research on the web •SPSS and R •Stata •SSCC Winstat •WisLine Web •Word Processing Programs 	<p>6%</p>

Table 2.2 compares the 2010 survey results to the 2008 survey results. In the 2008 survey, respondents indicated how often they used each technology for teaching on a scale from *daily* to *never*. In the 2010 survey, respondents only indicated in they had used the technology in teaching during the past academic year. The top 4 most used technologies (*desktop presentation tools, course management system, video sharing applications, and MyWebspace*) remained the same from 2008 to 2010.

Table 2.2 - Technology Use in Teaching Trends by UW Madison Position	Faculty/Instr Staff		TA's/Grad Students	
	2008 (N=186)	2010 (N=352)	2008 (N=30)	2010 (N=170)
Desktop presentation tools +	75% ¹	80%	67% ¹	47%
Course management system	59%	61%	67%	54%
Video sharing applications	27%	29%	43%	32%
MyWebspace +	31%	26%	43%	20%
Online collaborative tools +	19% ²	20%	23% ²	15%
Virtual meetings/web conferencing	16%	16%	0%	5%
Social networking sites +	12%	13%	17%	9%
Video production/editing software	15%	13%	13%	8%
Podcasting	9%	13%	3%	2%
Digital image collections * +	27%	12%	7%	3%
Games and/or simulations *	22%	10%	7%	7%
Audio production/editing software	---	11%	---	5%
Clickers/Response Systems	9%	10%	3%	5%
Lecture capture software	8%	10%	3%	3%
Blogs *	16%	9%	3%	6%
Instant messaging *	13%	8%	3%	7%
Online presentation tools	---	6%	---	1%
ePortfolios	2%	4%	3%	2%
Mashups	5%	1%	3%	2%

¹ The 2008 Survey said 'Presentation Technologies'

² This value represents the union of 'Wikis' and 'Online Collaborative Tools' which were 2 separate items in the 2008 survey.

* Indicates a significant difference at $p < 0.05$ for faculty and instructional staff

+ Indicates a significant difference at $p < 0.05$ for teaching assistants/graduate students

II. Student Skills

Respondents were asked what technology skills their students needed for their courses. The graph and table below show the results from the 2010 survey.

Figure 2.1. Skills students need for coursework

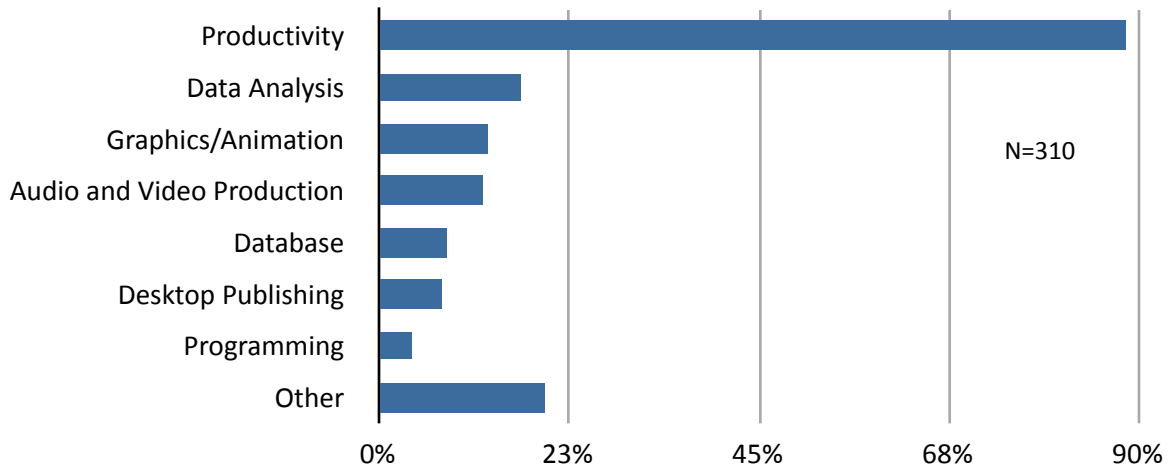


Table 2.3 - Skills Students need for coursework	2010 (N=310)
Productivity (e.g. Excel, PowerPoint, Word)	88%
Data Analysis (e.g. SAS, SPSS, nVivo)	17%
Graphics/Animation (e.g. Flash, Illustrator, Photoshop)	13%
Audio and Video Production (e.g. iMovie, MovieMaker, Final Cut Pro, Audacity)	12%
Database (e.g. Access, SQL)	8%
Desktop Publishing (e.g. InDesign, LaTeX, Scanning)	7%
Programming (e.g. JavaScript, PHP)	4%

Table 2.3 - Skills Students need for coursework	2010 (N=310)
Other (from 2010) <ul style="list-style-type: none"> •Course management system (7) •Math Software (6) •Online research and databases (4) •Adobe CS (2) •AutoCAD (2) •Internet (2) •Online collaborative tools (2) •Social media skills (2) •Adobe reader/PDF •basic calculator •bloomberg •cartography •Concept mapping •Data acquisition/control •DICOM •Digital video recording and playback •Dreamweaver •Eclipse IDE •EPIC •Finite element analysis •garment pattern software •Interactive whiteboards •iTunes •Linux command line •Navigate, search internet •Online conferencing •Online news consumption •Quicktime Pro •RefNotes •Root •Solid modeling •TechSmith •Jing •TPRO •Visual studio •WaSP •Wind Farmer •WiscMail 	20%

The table below shows the trends in student technology skills by UW-Madison position. Faculty and instructional staff are compared with Teaching Assistants/Graduate Students. *Productivity* continues to be the most needed skill. *Data Analysis* was the second most needed skill according to faculty and instructional staff while *audio and video production* was the second most needed skill according to TA's and graduate students.

Table 2.4 - Student Skills Trends	Faculty/Instr Staff		TA's/Grad Students	
	2008 (N=186)	2010 (N=221)	2008 (N=30)	2010 (N=91)
Productivity (e.g. Excel, PowerPoint, Word)	56%	87%	43%	88%
Data Analysis (e.g. SAS, SPSS, nVivo)	14%	19%	3%	8%
Graphics/Animation (e.g. Flash, Illustrator, Photoshop)	11%	15%	3%	7%
Audio and Video Production (e.g. iMovie, MovieMaker, Final Cut Pro, Audacity)	4%	13%	10%	11%
Database (e.g. Access, SQL)	5%	10%	3%	2%
Desktop Publishing (e.g. InDesign, LaTeX, Scanning)	4%	7%	3%	8%
Programming (e.g. JavaScript, PHP)	4%	4%	0%	4%

III. Research

Respondents were asked whether or not they had engaged in research or scholarship activities during the 2009-2010 school year. Those who answered yes, were prompted to indicate which of the following technologies they used for research or scholarship activities. The table below (Table 2.4) shows the percentage of respondents who used each technology for research/scholarship. The quoted language in the table appeared in the survey if the respondent rolled over the technology term.

Table 2.4 - Technology Use in Research (N=446)	% Used in 2009-2010
Desktop presentation tools (e.g. PowerPoint, Keynote)	65%
Online library-licensed journals, databases	63%
Online collaborative tools (e.g. Wikis, Google docs, Voicethread)	38%
Collections of digital media and/or data	33%
Data collection software "Software that produces digital recordings or measurements of events or things."	32%
Virtual meetings/ web conferencing (e.g. Adobe Connect,lluminate, Skype)	31%
MyWebspace "Webspace hosting and online file storage."	31%
Data analysis software (e.g. Transana, SPSS, SAS)	29%
Social networking sites (e.g. Facebook, Linked In)	25%
Data visualization software "Software for creating visual representations of data."	23%
Database applications "Tools for building or managing databases."	20%
Online survey tools (e.g. Qualtrics, SurveyMonkey)	19%
Video sharing applications (e.g. YouTube, Vimeo)	19%
Blogs	16%
Instant messaging	14%
Video production/editing software (e.g. iMovie, MovieMaker)	11%
Audio production/editing software (e.g. Audacity, GarageBand)	8%
Online presentation tools (e.g. Prezi, Vuvox, Slideshare)	5%
High throughput computing "Systems that distribute complex computing tasks over multiple processors."	5%
Metadata standards "Specified sets of information that describe or provide contextual details about data."	4%
Electronic lab notebooks "Software with an interface analogous to traditional lab notebooks for documenting lab experiments and data."	4%

Table 2.4 - Technology Use in Research (N=446)	% Used in 2009-2010
Mashups "A webpage or application that uses or combines data, presentation, or functionality from two or more sources to create new services."	2%
Other, please specify <ul style="list-style-type: none"> •Adobe Creative Suite (3) •Email (2) •High Performance Computing (2) •editing tools •Custom editorial software •LaTex •Google Calendar •word processing •Quicktime pro •Student papers •Notetaking software •PDF annotators 	3%

Table 2.5 compares technology use in research across the 2010 and 2008 surveys. In the 2008 survey, respondents indicated how often they used each technology for research on a scale from *daily* to *never*. In the 2010 survey, respondents only indicated in they had used the technology in the past academic year.

Table 2.5 - Technology Use in Research Trends	Faculty/ Instr Staff		TA's/Grad Students	
	2008 (N=113)	2010 (N=278)	2008 (N=23)	2010 (N=162)
Desktop presentation tools (e.g. PowerPoint, Keynote) *	65% ¹	68%	83% ¹	60%
Online library-licensed journals, databases * +	77%	65%	83%	60%
Online collaborative tools (e.g. Wikis, Google docs)	27% ²	36%	26% ²	42%
Virtual meetings/ web conferencing (e.g. Adobe Connect,lluminate, Skype) *	25%	36%	17%	23%
Data collection software	35%	35%	26%	29%
Collections of digital media and/or data *	60%	33%	52%	33%
Data analysis software (e.g. Transana, SPSS, SAS) *	47%	33%	39%	22%
MyWebspace	24%	31%	39%	30%
Data visualization software	33%	26%	26%	18%
Social networking sites (e.g. Facebook, Linked In)	14%	22%	17%	30%
Database applications *	49%	22%	26%	16%
Online survey tools (e.g. Qualtrics, SurveyMonkey)*	31%	21%	22%	15%
Video sharing applications (e.g. YouTube, Vimeo)	11%	17%	30%	23%
Blogs	19%	14%	26%	20%
Instant messaging	18%	12%	22%	17%
Video production/editing software (e.g. iMovie, MovieMaker) *	23%	9%	22%	14%
Audio production/editing software (e.g. Audacity, GarageBand)	----	8%	----	10%
Online presentation tools (e.g. Prezi, Vuvox)	----	5%	----	4%
High throughput computing *	14%	4%	17%	6%
Metadata standards *	12%	5%	4%	4%
Electronic lab notebooks	----	3%	----	5%
Mashups * +	8%	3%	13%	2%

¹ The 2008 Survey said 'Presentation Technologies'

² This value represents the combined usage for 'Wikis' and 'Online Collaborative Tools' which were 2 separate items in the 2008 survey.

* Indicates a significant difference at $p < 0.05$ for faculty and instructional staff

+ Indicates a significant difference at $p < 0.05$ for teaching assistants/graduate students

Benefits, Challenges, and Barriers

I. Teaching Challenges

Respondents selected their top three teaching challenges from the list below (Table 3.1). The same top 5 teaching challenges were identified in the 2008 Academic Technology Survey.

Table 3.1 - Teaching Challenges (N=468)	Rank
Making lecture more interactive and engaging	1
Providing students with practice or reinforcement	2
Demonstrating complex concepts	3
Focusing students on real world problems or tasks	4
Giving prompt feedback	5
Facilitating student collaboration outside of class	6
Increasing access to course materials	7
Providing an engaging online component to face to face courses	8
Using alternatives to traditional assessment	9
Dealing with increasing course enrollments	10
Creating online tutorials for student use	11
Communicating with students	12
Creating a virtual, simulated experience	13
Managing class logistics (e.g. groups, schedules, etc.)	14
Making lectures available at anytime	15
Making connections with outside partners (e.g. Wisconsin Idea)	16

Table 3.1 - Teaching Challenges (N=468)	Rank
<p>Other, please specify</p> <p>Student Skills/Behavior (11)</p> <ul style="list-style-type: none"> •Getting students to turn off electronics in class and focus (2) •Fostering critical thinking skills (2) •Engaging students to reflect on their own thinking •training students in reading complex texts •students with low personal expectations and poor study habits •Helping students to become familiar with social networking for professional communication use •reading and analytical writing (sharpening their skills) •reading in a scholarly way •openness and engagement with unfamiliar ideas and thoughts <p>Technology (11)</p> <ul style="list-style-type: none"> •Moving from various media (music, video, youtube, keynote) •without disrupting lecture flow •new software/technologies and how they interact with other technologies •Showing audio/video examples in discussion sections, making it possible for students to do the same easily. •Getting immediate feedback from students (would love clickers) •Using more technology; web sites •teaching EPIC •Listservs that work with outside email accounts •do not know to create an interactive blog •Producing video materials •powerpoint •getting images on line for student access <p>Course Design (10)</p> <ul style="list-style-type: none"> •Making lectures more effective learning experiences •Presenting the material in an understandable and accessible fashion •covering everything I'd like to •course design •effectively reaching a diverse set of students •making boring material interesting •Increasing direct student-student interaction •facilitating discussion •My only challenge is to explain ideas clearly and compellingly so that students learn to think through ideas, challenge them with evidence, and eventually become, some of them, cogent and provocative intellects. •time to prepare <p>Assessment (7)</p> <ul style="list-style-type: none"> •Grading (3) •student assessment •Reading and assessing large quantity of student writing •Devising fair and equitable methods of assessment •teaching the physical exam 	

Table 3.1 - Teaching Challenges (N=468)	Rank
Other, continued: Classroom Space (7) <ul style="list-style-type: none"> •Lack of tech-equipped classrooms (5) •Inadequate physical classrooms for group work & using tech •A Smart Board Other (7) <ul style="list-style-type: none"> •No challenges (2) •Having TAs who are partners in the classroom; who take their positions seriously and are willing to collaborate •keeping up to date on developments in field •time spent on communication with the students •Wish I had small recitation groups to go along with the large lectures •balancing teaching and administrative tasks 	

The table below shows the 2010 teaching challenges by UW-Madison position. Faculty, instructional staff, and other are compared to Teaching Assistants/Graduate Students.

Table 3.2 - Teaching Challenges	Faculty/ Instr Staff		TA's/ Grad Students	
	2008 (N=186)	2010 (N=319)	2008 (N=30)	2010 (N=149)
Making lecture more interactive and engaging	57%	57%	43%	61%
Providing students with practice or reinforcement	27%	25%	27%	32%
Demonstrating complex concepts	33%	25%	27%	26%
Focusing students on real world problems or tasks	21%	23%	10%	28%
Giving prompt feedback	14%	20%	23%	29%
Facilitating student collaboration outside of class	14%	16%	13%	18%
Providing an engaging online component to face to face courses	10%	16%	10%	5%
Increasing access to course materials	9%	13%	3%	13%
Dealing with increasing course enrollments	---	12%	---	8%
Creating online tutorials for student use	10%	12%	3%	5%
Using alternatives to traditional assessment	16%	11%	7%	13%
Creating a virtual, simulated experience	10%	11%	10%	6%
Managing class logistics (e.g. groups, schedules)	9%	8%	7%	9%
Communicating with students	8%	7%	20%	14%
Making lectures available at anytime	6%	7%	0%	4%
Making connections with outside partners (e.g. Wisconsin Idea)	8%	4%	7%	3%

II. Teaching Needs

Respondents rated the importance of each of the items below (Table 3.3) for their current and future teaching. *Technology-equipped classrooms, supplementing a course with online resources, putting course and/or some lecture content online, creating effective presentations; using presentation technologies, and technologies to help administer a course* were the top 5 most important items. Table 3.4 shows trends in teaching needs over the past 2 AT surveys.

Table 3.3 - Teaching Needs (N=437)	Less Imp. (1)	Imp. (2)	Very Imp. (3)	Mean
Technology equipped classrooms	15%	26%	55%	2.41
Supplementing a course with online resources	14%	48%	39%	2.25
Putting course and/or some lecture content online	21%	38%	38%	2.18
Creating effective presentations; using presentation technology	21%	42%	31%	2.11
Technologies to help administer a course (i.e. managing assignments, grades, content, communications)	23%	45%	27%	2.04
Improving teaching and learning in large enrollment courses	38%	30%	24%	1.85
Collaboration tools for students	35%	43%	14%	1.77
Creating digital audio and/or video	49%	30%	14%	1.62
Using alternative assessment strategies	45%	31%	11%	1.61
Instructional simulations or games	54%	28%	10%	1.52
Putting full lectures online (i.e. audio and/or video recordings)	60%	20%	13%	1.49
Live online meetings/classes/seminars	61%	22%	8%	1.43
Student-produced audio and/or video	63%	20%	8%	1.40
Improving teaching and learning in courses delivered entirely online	64%	19%	8%	1.39
Offering public access to course materials	67%	20%	6%	1.34
Creating instructional materials for mobile devices (e.g. Smartphones)	70%	17%	4%	1.28
Other, please specify <ul style="list-style-type: none"> •creating technology assisted tools for complex text interpretation •curriculum development utilizing new media •Not being required to utilize technology where unnecessary •Do you really think the poor education at the middle and high school level can be made up with cartoons and games? •Smart classrooms •advanced scientific computing infrastructure for student project use •help in training students to use specific online applications •I would love to use clickers in my class, for example, if I knew how to do it, if they were available to use with students. I think it would be fun and would add a lot 			4%	

Table 3.4 - Teaching Needs by UW-Madison Position	Faculty and Instr. Staff		TA's/GradStudents	
	2008 Rank (N=114)	2010 Rank (N=292)	2008 Rank (N=16)	2010 Rank (N=134)
Technology equipped classrooms	1	1	1	1
Supplementing a course with online resources	3	2	4	2
Putting course and/or some lecture content online	2	3	7	4
Creating effective presentations; using presentation technology	4	4	5	5
Technologies to help administer a course (i.e. managing assignments, grades, content, communications)	5, 10 ¹	5	2, 3 ¹	3
Improving teaching and learning in large enrollment courses	14 ²	6	11 ²	6
Collaboration tools for students	11	7	10	7
Creating digital audio and/or video	8 ³	8	8 ³	9
Using alternative assessment strategies	12	9	9	8
Putting full lectures online (i.e. audio and/or video recordings)	6	9	11	14
Instructional simulations and games	7	11	13	10
Live online meetings/classes/seminars	15	12	15	16
Improving teaching and learning in courses delivered entirely online	13 ⁴	13	14	13
Student-produced audio and video	----	14	----	12
Offering public access to course materials	9	15	6	11
Creating instructional materials for mobile devices (e.g. Smartphones)	---	16	---	15

¹ In the 2008 survey, *Managing assignments* and *Automating or managing grades* were two separate items

² In the 2008 survey, this item read *Teaching and managing courses with large enrollments*

³ In the 2008 survey, this item read *Using digital audio and video*

⁴ In the 2008 survey, this item read *Teaching and managing courses delivered entirely online*

VII. Barriers

Respondents were asked to select the items which are 'significant barriers' to their use of technology in teaching. The graph (Figure 3.5) below shows the percentage of respondents who selected each barrier. Table 3.9 provides the 'Other.'

Figure 3.5 - Significant Barriers to using Technology in Teaching

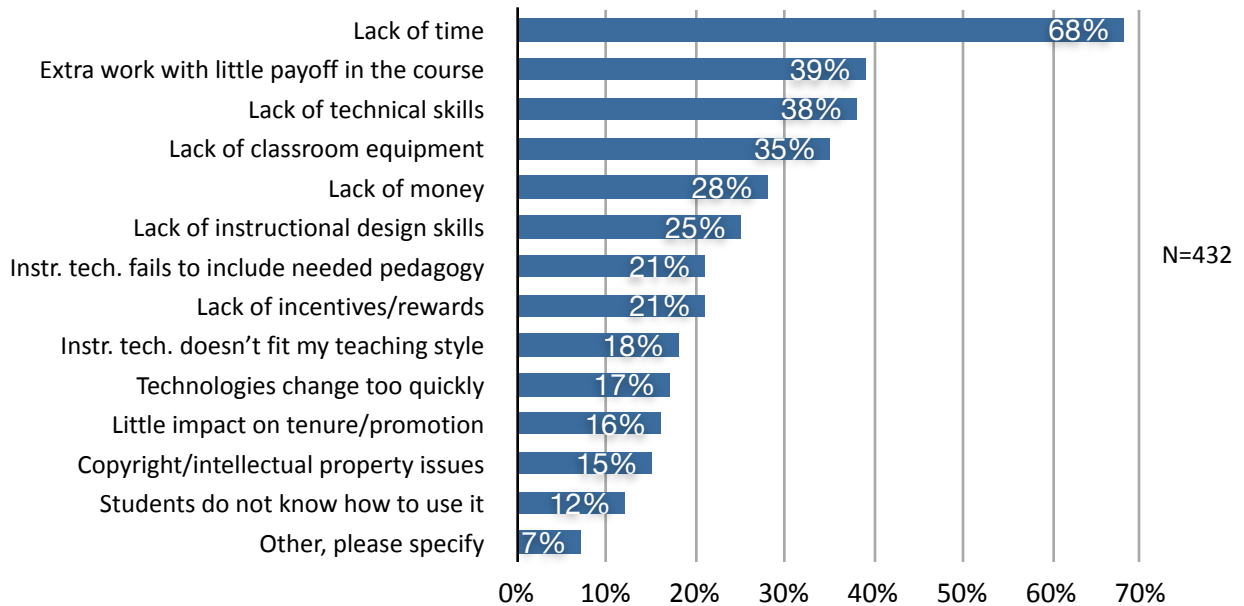


Table 3.9 - Barriers to using Technology in Teaching - 'Other' Comments

Little Impact on Teaching and Learning (9)

- big promises little outcomes
- Lack of faith that it will make a difference
- Use of classroom technology seems to reduce learning outcomes
- You might consider it a barrier, but there are times that I don't think technology would improve my skills as an educator. For example, if I used power point would that make me a better teacher?
- questionable impact on student learning
- I mostly do one on one teaching
- It is inferior to the traditional components it is trying to replace augment (is slower, is less dependable, students will not use it, etc)
- Students do not use it
- subject of my course is direct face-to-face human interaction (psychotherapy) -- it requires face-to-face instruction

Outdated classrooms (6)

- technology existing in classroom spaces is not conducive to use in teaching; e.g. should be able to view doc cam/powerpoint with lights on; projector should not be aimed at podium, etc.
- Lack of classroom equipment is a huge problem; I teach a TV course in Vilas and I regularly have to borrow a slide projector from the IMC. This makes it extremely difficult to deliver a quality experience to these students.
- We don't have much technology in our classrooms, most updated devices are CD players
- more smartboards!
- outdated or poorly maintained equipment
- we have only one teaching computer lab for our whole department and no computers in our studios. We can not include computer work in our classes because we have no lab to access

Technology is inadequate (6)

- Technology is not advanced enough to be useful
- Learn@UW software is pretty crappy, but I use it anyway
- Lack of sufficient bandwidth for video assignments
- Linux compatibility with many presentation formats
- Technology fails too easily and can waste valuable classroom time
- inst. tech poorly implemented

Lack of Support (3)

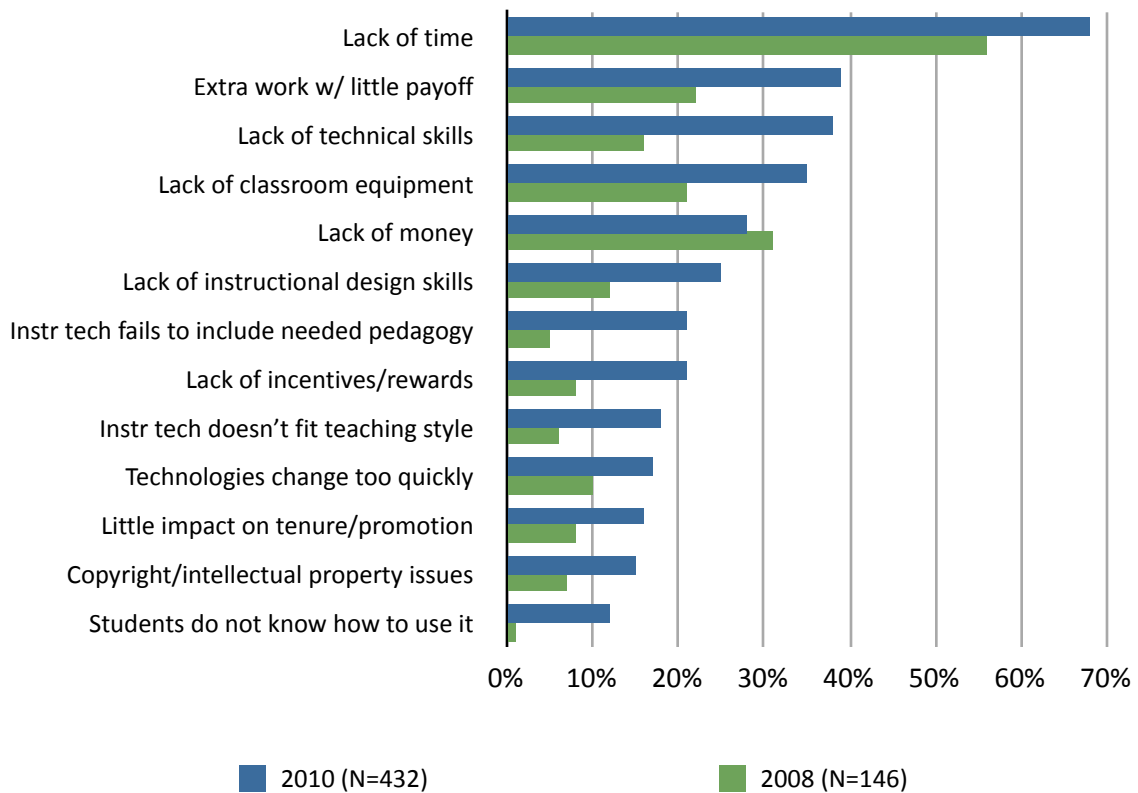
- Non-technical support
- Doit help desk staff are not always able to answer faculty's questions about Learn@UW
- lack of technology support that could develop what is needed.

Other (7)

- not needed
- lack of standardization
- Lack of need & desire
- students know more than i do, so i try to outsource
- withdrawn funding for the on-line course I did spend a lot of time & money developing (despite its demonstrated success)
- I cannot emphasize enough: little impact on tenure/promotion. The time it would take for me to adapt these technologies is not worth it for me, quite frankly.
- Don't know all of what is available

Figure 3.6 shows the trends in barriers over the past 2 Academic Technology Surveys. In the 2008 survey, respondents were asked to rank each barrier on a 4-point scale from *Not at all a barrier* to *Large Barrier*. In the 2010 survey, respondents selected all items which were significant barriers to their use of technology in teaching.

Figure 3.6 - Trends in Barriers



The table below shows trends in barriers over the past 2 AT surveys. *Lack of time* continues to be the most significant barrier to instructional technology use for faculty and instructional staff, while *lack of time* and *lack of classroom equipment* continue to be the top 2 most significant barriers for TA's and graduate students.

Table 3.10 - Trends in Barriers	Faculty/Instr Staff		TA's/Grad Students	
	2008 Rank (N=114)	2010 Rank (N=292)	2008 Rank (N=16)	2010 Rank (N=134)
Lack of time	1	1	1	2
Lack of technical skills	5	2	5	4
Extra work with little payoff in the course	3	3	4	3
Lack of money	2	4	3	6
Lack of instructional design skills	6	5	6	8
Lack of classroom equipment	4	6	2	1
Lack of incentives/rewards	9	7	8	9
Technologies change too quickly	7	8	7	13
Little impact on tenure/promotion	13	9	13	12
Instructional technology fails to include the pedagogy needed for my subject matter	8	10	10	6
Instructional technology does not fit my teaching style	11	11	9	5
Copyright/intellectual property issues	10	11	11	11
Students do not know how to use it	12	13	12	9

Academic Technology Services

Respondents were asked to rank where Academic Technology should focus future efforts. *Communicating available resources, Technology training sessions, and Disseminating best practices* were the top 3 areas to focus. The results are displayed in Table 4.1.

Table 4.1 - Academic Technology Focus (N=429)	Less Imp (1)	Imp (2)	Very Imp (3)	Mean
Communication of available resources, support, and solutions	8%	52%	39%	2.32
Faculty and instructor technology training sessions	15%	48%	36%	2.21
Disseminating best practices of teaching with technology	13%	51%	32%	2.20
Tracking new and emerging technologies	15%	59%	22%	2.07
Award and funding opportunities to help you use technology in your teaching	27%	38%	31%	2.04
Evaluation methods to support the scholarship of teaching and learning with technology	24%	47%	24%	2.00
Online course delivery	29%	46%	22%	1.93
Development and customization of instructional technology tools (e.g. tutorials, animations, games, simulations)	28%	47%	21%	1.93
Other, please specify	---	---	8%	---
Other, comments: Update Classrooms (15) <ul style="list-style-type: none"> •Update classrooms with basic equipment and make them available to more faculty •provide all classrooms with media cart •Having technology in each classroom •Making technology available for all by updating classrooms •Refit classrooms so both computer projector and blackboard can be used simultaneously •Encourage UW to provide Classrooms where using tech is typical •making sure there is an overhead projector or a data projector in EACH classroom. •Getting technology accessible in all the classrooms. Teaching with an overhead projector can be a real handicap. •Equalizing the number of smart classrooms. •Upgrade technology in classrooms; Bardeen classrooms are way behind the times •more smart classrooms •Installing more smart classrooms. Particularly in Vilas and Humanities. •Having technology in each classroom •equipping classrooms well and equally •greater accessibility of technology in all classrooms Improve IT Services and Support (10) <ul style="list-style-type: none"> •make Learn@UW more usable •learn@uw, etc. •making existing technologies like Learn@UW or the on line faculty resources more user friendly and intuitive •managing enrollments and waiting lists for courses 				

Table 4.1 - Academic Technology Focus (N=429)	Less Imp (1)	Imp (2)	Very Imp (3)	Mean
<p>Other, comments continued:</p> <ul style="list-style-type: none"> •transferring points/grades from graded online quizzes to Learn@UW gradebooks when they are not just percentages (i.e. if a student gets 5 points for taking a practice quiz whether or not they got all answers correct. •I need more space on MyWebSpace!!! •IT support at dept level •centralizing tech resources and services available to instructors to enhance media presentations •ease of use (one password) •digital humanities applications <p>Provide Training and Assistance (6)</p> <ul style="list-style-type: none"> •access to free training like the students get with Software training for students, let's have software training for faculty that is online/available anytime. •providing individualized assistance for instructors if requested •disseminating UW-Madison ideas and products beyond the campus •providing individualized assistance for instructors if requested •I don't know where to go to get training on using these technologies so I never use them making the system stable •be available to provide assistance <p>Other (10)</p> <ul style="list-style-type: none"> •maximizing efficient use of technology •Trying to Update the systems in departments •given research and grant writing duties in addition to teaching there is little time to focus on new technologies. I also think a blackboard and piece of chalk works just fine. •Pretty much none of these, or any other; I don't care for technology in the classroom beyond, maybe, chalk and an occasional wall map. I teach exclusively by talking, whether in a lecture format or seminar. •Ensuring that "technology" chosen not inferior to the traditional component it is replacing/augmenting •Please also keep in mind that technology is secondary - i.e., cannot take the place of nurturing face to face teaching time. So please be careful to not let technology overwhelm interaction. •release time to develop applications of technology for classes •Not pestering instructors who don't use technology with surveys such as these •Designing surveys that are unbiased in nature •standardizing operating procedures 				

The table below shows the trends over the past 3 AT Surveys in where Academic Technology should focus it's efforts.

Table 4.2 - Academic Technology Focus Trends	2006 Rank (N=176)	2008 Rank (N=167)	2010 Rank (N=429)
Communication of available resources, support, and solutions	2	1	1
Faculty and instructor technology training sessions	1	4	2
Disseminating best practices with technology	2	2	3
Tracking new and emerging technologies	4	3	4
Award and funding opportunities to help you use technology in your teaching	5	5	5
Evaluation methods to support the scholarship of teaching and learning with technology	7	8	6
Online course delivery	6	6	7
Development and customization of instructional technology tools (e.g. tutorials, animations, games, simulations)	---	7 ¹	8

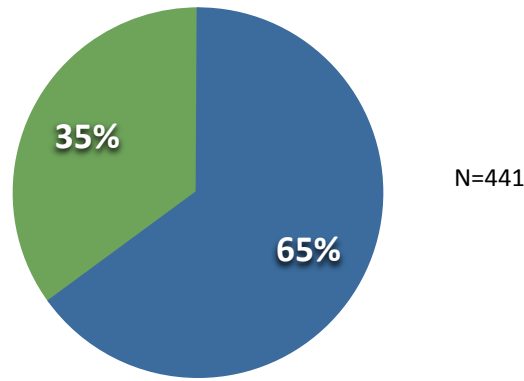
¹ In the 2008 survey, this item read, *e-learning tools (i.e. animation, games/sims, video/audio production, online collaborative apps)*

Instructional Technology Assistance Preferences

I. Use of Campus Services

Respondents were asked if they seek campus services for their instructional technology needs. The results are displayed in Figure 5.1.

Figure 5.1 - Use of Campus IT Services



II. Assistance Preferences

Respondents were asked to indicate the top 3 places they go for assistance with their instructional technology needs. The results are displayed in Figure 5.2.

Figure 5.2 - Top Places for Instructional Technology Assistance

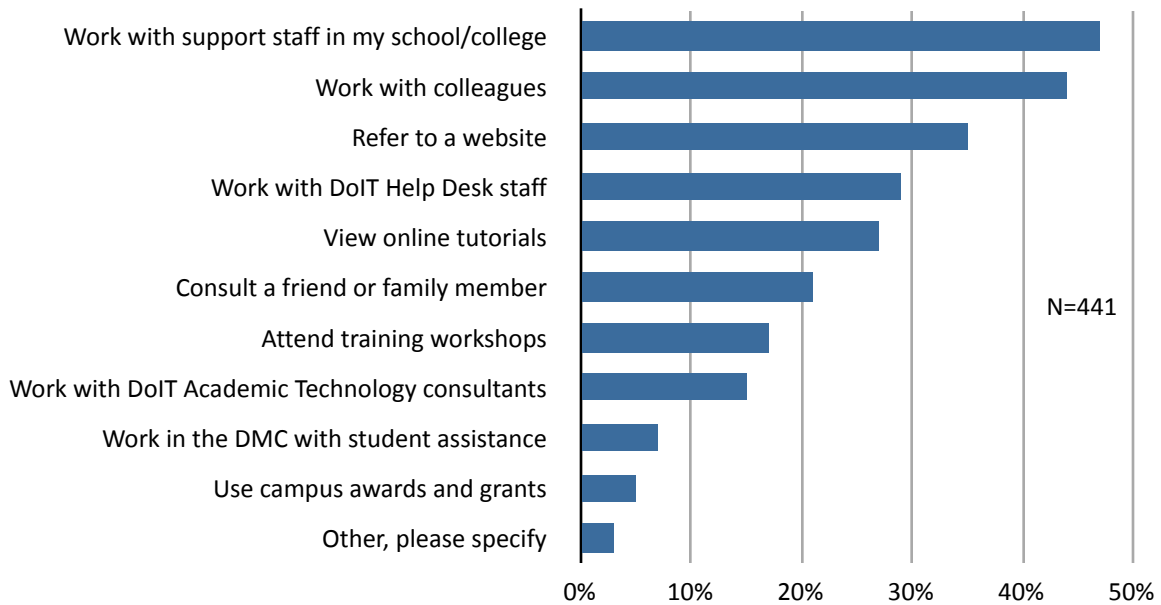


Table 5.1 shows the trends in the top places respondents go for assistance with their instructional technology needs. In the 2008 survey, respondents selected the top place they go for assistance and in the 2010 survey, respondents selected the top 3 places they go for assistance. *Work with support staff in school/college* continues to be the top choice for faculty and instructional staff, and *Work with colleagues* continues to be the top choice for TA's and graduate students.

Table 5.1 - Top Places for Instructional Technology Assistance	Faculty/ Instr Staff		TA's/ Grad Students	
	2008 Rank (N=114)	2010 Rank (N=292)	2008 Rank (N=16)	2010 Rank (N=134)
Work with support staff in my school/college	1	1	3	4
Work with colleagues	2	2	1	1
Refer to a website	5	3	6	2
Work with DoIT Help Desk staff	6	3	2	5
View online tutorials	3	5	6	3
Consult a friend or family member	6	6	6	5
Work with DoIT Academic Technology consultants	3	7	5	7
Attend training workshops	7	8	3	8
Work in the Digital Media Center with student assistance	---	9	---	9
Use campus awards and grants	7	10	6	10
Other, please specify				
Other, comments (2010): <ul style="list-style-type: none"> •Vendor •res hall staff •text book support staff •ICBE •outside funding •figure it out myself •doit help desk is not useful •Course professor •None 				

Instructional Technology Learning and Awareness

I. Topics of Interest

Respondents were asked to indicate what they would be interested in learning more about, if they had a block of time set aside to do so. This item was new to the AT Survey this year. The results are summarized in Table 6.1.

Table 6.1 - Topics of interest (N=426)	
Pedagogy of technology-enhanced learning	53%
Course management tools (e.g. Learn@UW, Moodle)	39%
Online collaboration tools (e.g. wikis)	30%
Evaluation of technology-enhanced learning	29%
Instructional games and simulations	27%
Graphics and Animation (e.g. Fireworks, Photoshop)	26%
Digital video or audio editing software (e.g. iMovie, MovieMaker, Audacity)	26%
e-textbooks	20%
Online journaling tools (e.g. blogs)	18%
Web conferencing software (e.g. Adobe Connect, Illuminate, Skype)	18%
Animation/modeling software (e.g. Flash)	17%
Copyright/intellectual property issues	15%
ePortfolios	12%
Instructional materials for mobile devices (e.g. Smartphones)	11%
Social Networking sites (e.g. Facebook, Linked In)	6%
Other, please specify	3%
Other, comments <ul style="list-style-type: none"> •R- statistics •This won't happen--instead it will be "squeezed in" •assessing different evaluation methods •Online help for Learn@UW should be better; requires about 10 clicks to find any ref material •screen capture/screen casting •clickers •I'm not at all interested in educational technology, though I'm certain it is highly useful for some other people. •Electronic lab notebooks •more engaging lectures •power point 	

The following table shows topics of interest by UW-Madison position. Faculty and Instructional Staff are compared to Teaching Assistants/Graduate Students. Both groups chose *Pedagogy of technology-enhanced learning* and *Course management tools* as their top 2 topics of interest.

Table 6.2 - Topics of interest	Faculty/Instr. Staff (N=288)	TA's/Grad students (N=121)
Pedagogy of technology-enhanced learning	50%	57%
Course management tools (e.g. Learn@UW, Moodle)	38%	40%
Evaluation of technology-enhanced learning	30%	25%
Online collaboration tools (e.g. wikis)	30%	31%
Instructional games and simulations	29%	22%
Graphics and Animation (e.g. Fireworks, Photoshop)	27%	22%
Digital video or audio editing software (e.g. iMovie, MovieMaker, Audacity)	26%	22%
e-textbooks	20%	21%
Online journaling tools (e.g. blogs)	18%	17%
Animation/modeling software (e.g. Flash)	18%	14%
Web conferencing software (e.g. Adobe Connect, Illuminate, Skype)	21%	11%
Copyright/intellectual property issues	14%	17%
ePortfolios	11%	13%
Instructional materials for mobile devices (e.g. Smartphones)	12%	10%
Social Networking sites (e.g. Facebook, Linked In)	7%	4%

II. Communication Preferences

Respondents were asked how they prefer to receive communications regarding new academic technology services and solutions, training workshops, award programs, and other technology-related information. Table 6.3 shows the results from the 2010 survey. Figure 6.1 shows trends over the past 3 Academic Technology Surveys.

Table 6.3 - Communication Preferences (N= 415)	
Email with links to websites	84%
DoIT Website	25%
Brochure in campus mail	16%
Computing@UW	10%
Wisconsin Week	8%
Subscription to RSS feeds	6%
Other, please specify	2%
Other, comments: •staff discussion •I don't care about technology services. Please don't bother me. •none •conference or "tech fair" •departmental technology division •I don't visit websites unless I must, and I never read emails that seem to be about irrelevant subjects. Brochures would go right in the trash. Maybe the website idea is the best. That way people who are interested will go there and the rest of us won't be bothered. •my wisc •Via a push notification on a smartphone	

Figure 6.1 - Trends in Communication Preferences

