Technology and Pedagogy Expectations for an In-Person Course

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Executive Summary

The evolving, ever-expanding array of increasingly sophisticated online tools for teaching and learning and the explosion of online information resources have transformed instructor and student expectations about good teaching. Outstanding "in person" courses are expected, by both students and instructors, to incorporate a wide range of online support and online learning activities. Furthermore, in person course instructors are expected to organize and link to online external readings and relevant external web sites, interactive problem sets, simulations, and games. Instructors are expected to structure and guide online discussions and blogs outside of class, in addition to their teaching role during the in person class time. Students expect to receive regular emails from their instructors, to be able to access syllabi, grades, and class lists outside of class, and ideally, to view slide shows or lectures presented during live class online.

In fall 2009, 165 Michigan State University instructors and 735 students completed surveys about their technological and pedagogical expectations for a high quality, in person course in their discipline. Each respondent chose whether to answer about a 100-200 level course, a 300-400 level course, or a graduate level course. This report presents overall instructor ratings of the expected ideal role of 44 pedagogical approaches and classroom and online technologies to support in person courses. Overall instructor and student ratings are compared. Differences by course level and by college are examined.

Myriad online tools were seen as essential components of in person courses by large majorities of instructors and students across most disciplines. Tools that are more specialized were linked to more specialized pedagogical approaches. The internet and computer and interactive technologies have profoundly impacted instructor and student expectations about how in person teaching and learning should happen. A classroom, a blackboard, and a textbook no longer come close to sufficing.

Class discussion was the pedagogical approach rated essential by the largest number of instructors (64%), followed by live lectures (53%), and group work (38%). Only 14% of instructors envisioned student computer and internet use during live class as essential to high quality teaching. However, 39% indicated it was essential that their students have access to a computer lab with specialized software outside of class.

Many different online technologies were widely considered essential for a top-notch in person course. Almost every instructor considered regular emails from the instructor a critical aspect of great teaching. Student access to electronic library resources was also a universal necessity, as was offering external web links related to course content. At least nine in ten instructors rated online assigned readings and online course packs or electronic textbooks essential for in person courses. Eighty-four percent believed in person instructors should post a class list with student email addresses online, so that students could contact each other.

Interactive software comprised the next tier of essential tools: for 75% of instructors, online quizzes or exams were essential; 73% relied on Google Docs; 58% would use games or simulations; 51% would use portfolio software; and 48% would use LON CAPA or other interactive online problem sets.

Class discussion extends beyond the classroom to online technologies, even for in person courses. Sixty-four percent of instructors considered a blog, wiki, or forum a critical component of a great in person course; 60% felt that online chat or Skype was necessary. Considerably fewer (37%) also relied on Twitter, Face Book, or other social networking.

A majority of instructors (57%) felt that password-protected online space was necessary for an in person course, and 55% believed it essential to post the class syllabus online. Online drop boxes were a necessity for 41%, weekly online announcements for 38%, and an online gradebook for 37%.

A subset of instructors (20%) placed high value on custom design online course space to accompany in person classes. One fourth felt that accessible online content was essential.

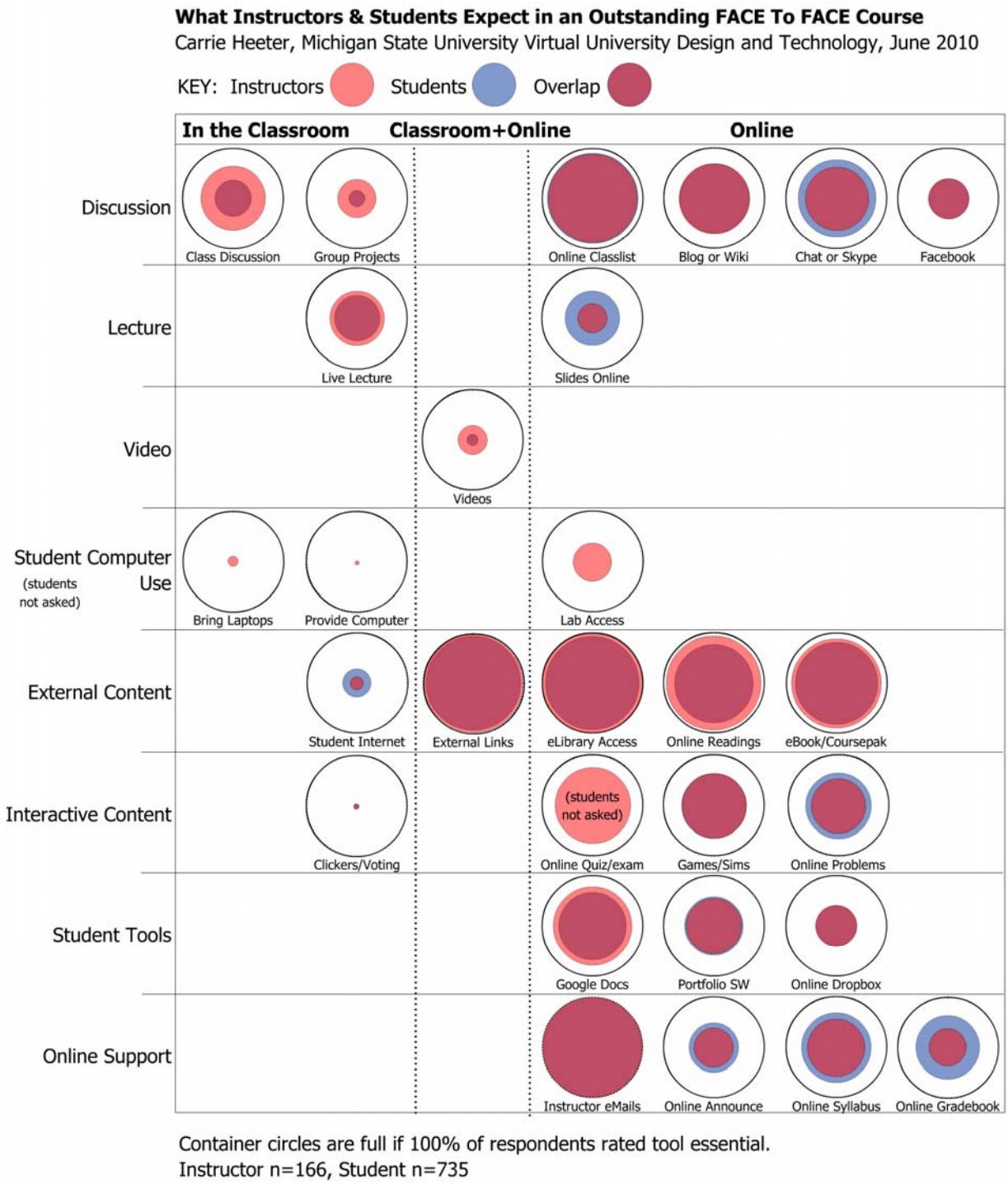
Students were much more likely than were instructors to expect their in person class instructors to provide an online gradebook, online syllabus, and online weekly announcements. Students were more likely to want interactive online problem sets. Students were considerably less enthusiastic about class discussion and group work in the classroom than were instructors; students were more amenable to online discussion than they were to live classroom discussion. Student interest in blogs and social networking paralleled that of instructors. Students were somewhat more interested in online chat or Skype than were instructors.

Some significant differences by class level were observed. Graduate level course expectations tended to be different from lower level class expectations. Some significant differences were also found by college. What constitutes great in person instruction does vary by discipline and course level.

Respondents were asked what they thought would be an ideal mix of live and online learning, selecting among the options of 3 hours live, 3 hours online, a mix of both, or offer both and let students choose. The least popular alternative for both instructors and students was fully online courses. However, the traditional 3 hours of live instruction option was selected by fewer than half of instructors and students. Students were much less favorable towards 3 hours of live classroom time than were instructors and were much more likely to want to be given a choice of either live or online.

Summary Diagram

This diagram on the next page summarizes instructor and student ratings of 8 groups of tools and pedagogies (discussion, lecture, videos, student computer use, external content, interactive content, and online support). The first two columns refer to components used in the classroom during live class. Column 3 may be used either in the classroom, online, or both. And the final four columns are online only tools used in support of in person instruction. Instructor opinions are represented in red, students in blue, and to the extent instructor and student enthusiasm overlaps, circles appear purple (a mix of red and blue).


What Instructors & Students Expect in an Outstanding FACE To FACE Course
Carrie Heeter, Michigan State University Virtual University Design and Technology, June 2010
KEY: Instructors Students Overlap
In the Classroom
Classroom+Online
Online
Discussion
Class Discussion
Group Projects
Online Classlist
Blog or Wiki
Chat or Skype
Facebook
Lecture
Live Lecture
Slides Online
Video
Videos
Student Computer Use
(students not asked)
Bring Laptops
Provide Computer
Lab Access
External Content
Student Internet
External Links
eLibrary Access
Online Readings
eBook/Coursepak
Interactive Content
Clickers/Voting
(students not asked)
Online Quiz/exam
Games/Sims
Online Problems
Student Tools
Google Docs
Portfolio SW
Online Dropbox
Online Support
Instructor eMails
Online Announce
Online Syllabus
Online Gradebook
Container circles are full if 100% of respondents rated tool essential.
Instructor n=166, Student n=735

Introduction

Each year, Virtual University Design and Technology surveys instructors and students about a topic intended to inform the support we provide and to advance understanding of online teaching and learning. In fall 2009, the survey focused on technologies and pedagogies in support of live, in person courses. This may seem like an odd focus for Virtual University, but as we enter the second decade of the 21st century, technology is pervasive in daily life and powerful tools for teaching and learning abound. This survey measures the extent to which even live, in person courses are expected to incorporate online tools. We asked instructors and students to envision" an ideal in person class" in their discipline (for instructors) or their major (for students). Because lower level undergraduate classes, advanced undergraduate classes, and graduate classes tend to have different class size and pedagogical approaches, respondents were asked to choose a particular course level, and to answer the survey questions with an ideal course at that level in mind. Our results do not describe everyday practices. Instead, we consider expectations about ideal in person classes. We ask about what tools and techniques *should* be used.

The goals of this "ideal world" survey were to establish baseline expectations among instructors to help MSU Libraries, Computing, and Technology better serve MSU instructors, to compare and contrast student and instructor expectations, to examine differences based on course level and discipline/college. Instructors were asked about the importance of 41 pedagogical approaches, classroom technologies, and online technologies for a high quality course in their discipline. Students were asked about the same items, except for classroom technologies. These items are grouped into classroom and online technologies to support live lectures, classroom and online technologies to support group discussion, student computer access, interactive software, course management technologies to support live classes, and custom course content design. Within each group, overall instructor ratings are presented. Next, student and instructor ratings are compared, both overall and by course level. Finally, comparisons are made among instructors from different colleges.

Sample and Demographics

MSU instructors were invited by email to take the anonymous online instructor survey. A total of 166 instructors completed a survey. For MSU's 48,626 students, the student survey showed up as a group on their Angel home page. Students might get curious and click to enter and take the survey, or they could easily ignore the group. This method of recruiting yielded 735 student responses. 58% of the students were female. 51% were 18 to 21, 30.7% were 22 to 30, and 18.1% were over 30. By year 30% were freshman or sophomores, 33% were juniors or seniors, 19% MA and 5% PHD students as well as 10% lifelong learning or other.

Student Respondents, by Year

Year	%
Freshman	17%
Sophomore	13%
Junior	19%
Senior	17%
MA	19%
PhD	5%
Lifelong	4%
Other	6%

By college, Social Science had the largest proportion of respondents among both instructors (23%) and students (17%). Instructors from A&L, CAS, NS and SS each comprised 9% or more of the instructor sample; students from BUS, ED, NS, and SS comprised 10% or more of the student sample.

Instructor and Student Respondents, by College

College	Instructors	Students
A&L	13%	3%
ANR	8%	8%
BUS	7%	12%
CAS	10%	6%
CHM	3%	3%
COM	3%	3%
DCL	1%	
ED	4%	10%
EGR	3%	6%
JMC	2%	2%
LBC	1%	4%
MUS	2%	1%
NS	9%	12%
NUR	2%	6%
SS	23%	17%
VET	2%	2%
None listed	7%	4%

Course Level

Pedagogy and technology tools for an ideal course are likely to depend upon the nature of the content being taught, the level of the students and enrollment size.

Before responding about their expectations for a quality course, instructor and student participants were asked to choose a course level (100 to 200, 300 to 400, or graduate) and to answer all subsequent course expectation questions about that level of course, in their department or major. Between 29% and 40% of responding instructors selected each course level; between 30% and 37% of students elected to respond about each course level.

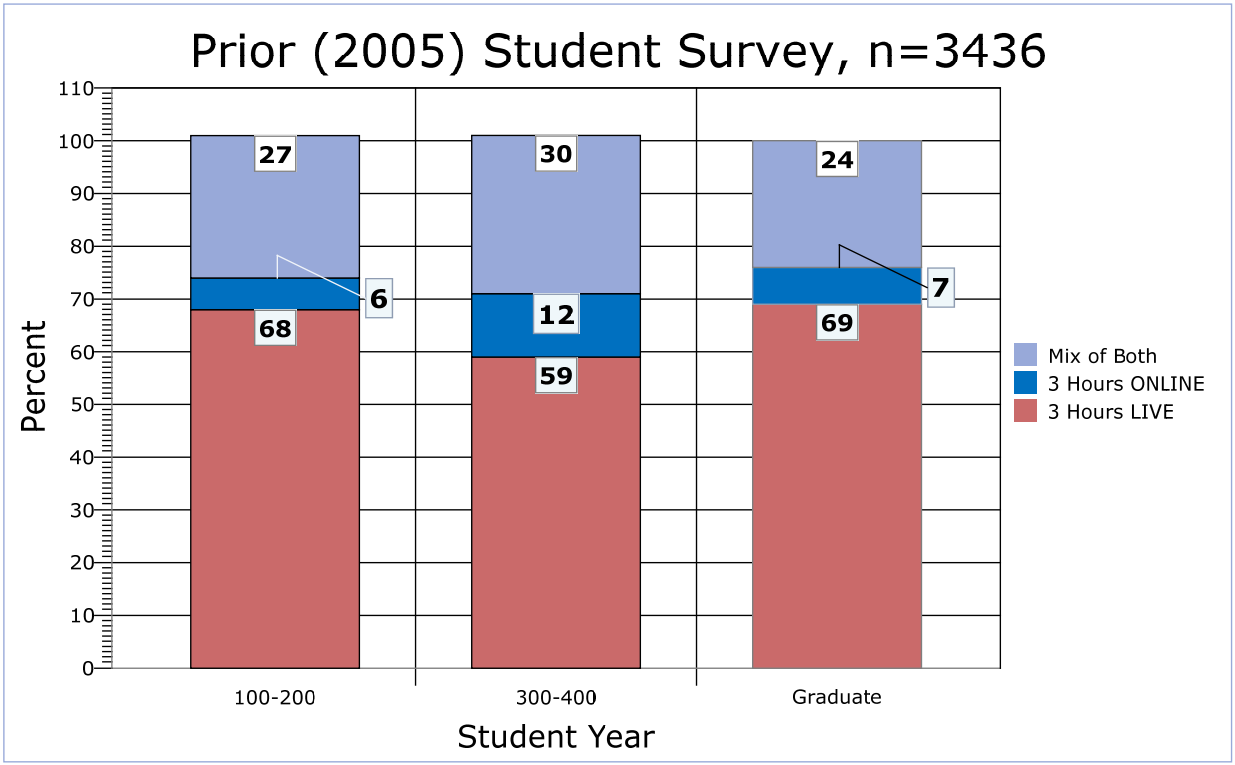
Percent of Instructors & Students Choosing Different Course Levels for the Survey

Course Level	Instructors	Students
100 to 200 level courses	31%	37%
300 to 400 level courses	40%	30%
Graduate courses	29%	32%

Ideal Mix of In Person and Online

The results of this survey have already shown that instructors and students expect even live, in person classes to make use of a range of online learning technologies. Traditionally, a 3 credit course is scheduled for 3 hours per week of face to face classroom time. When Virtual University Design and Technology surveyed students in 2005 about their preference for fully online, fully in person, or blended instructional mode, a strong majority preferred in person classes. Sixty-eight percent of freshmen and sophomores, 69% of graduate students, and 59% of juniors and seniors said they would choose an in person class over a blended or fully online class. Blended was next most popular, selected by 27% of freshmen and sophomores, 30% of juniors and seniors, and 24% of graduate students. Fully online classes were the least popular class modality, chosen by 6% of freshmen and sophomores, 12% of juniors and seniors, and 7% of graduate students.

2005 Student Preference for Live, Online, or Mixed Instruction



Four years later, in late 2009, fully online courses were still preferred by between 4% and 12% of students. **However, in person classes were no longer the teaching mode a majority of students prefer.** Unlike the 2005 survey, the 2009 survey offered a choice of "offer both" – in other words, offer a section that is 3 hours per week live and a section that is 3 hours per week fully online, and let students choose which to attend. Offering both alternatives was preferred by between 28% and 33% of students. Offering both was less popular among instructors, preferred by between 2% and 9% of instructors.

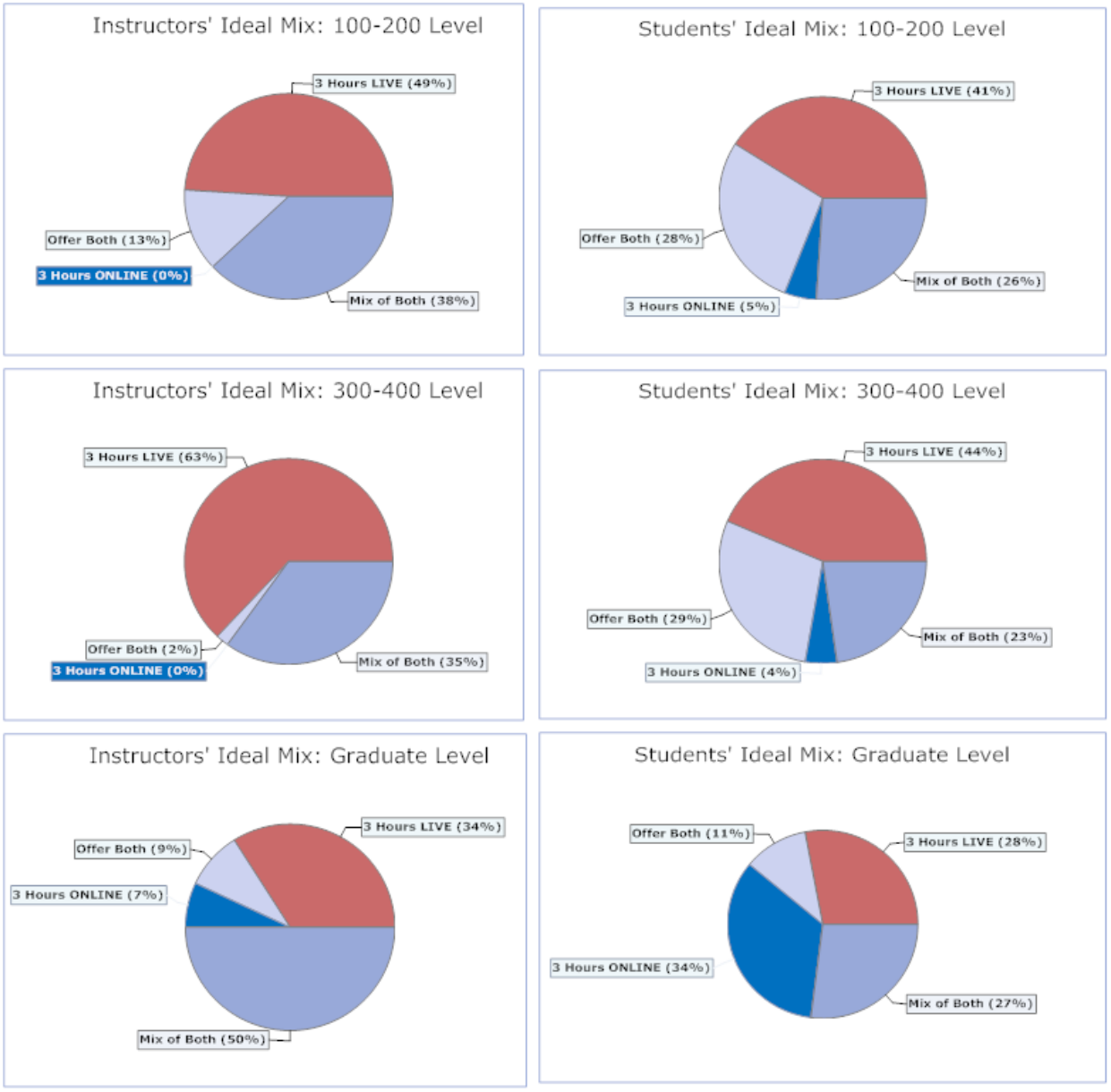
Respondents were asked about the ideal mix of classroom versus online time for a high quality graduate or undergraduate course. The four options were 3 hours per week live, 3 hours per week online, a mix of live and online, and offer both online and in person and let students choose.

The least popular alternative for both instructors and students was fully online courses. However, the traditional 3 hours of live instruction option was selected by less than half of instructors and students.

Graduate students were least likely to want 3 hour live classes (only 29% preferred this option), and graduate instructors were similar (only 34% thought three hour live classes was optimal). About one third (34%) of graduate instructors and 29% of graduate students choose 3 hours per week live as the ideal mix. Half of graduate instructors would opt for blended graduate instruction. Blended learning was also preferred by 35% of 300-400 level instructors and 38% of 100-200 level instructors. Approximately one fifth of undergraduate students would choose a

blended course. Twenty-eight percent to 33% of students felt the idea solution was to offer both modes (in person and fully online) and let the students choose which to enroll in. Only 2% to 10% of instructors preferred this option.

2009 Instructor and Student Preference for Live, Online, or Mixed Instruction by Course Level

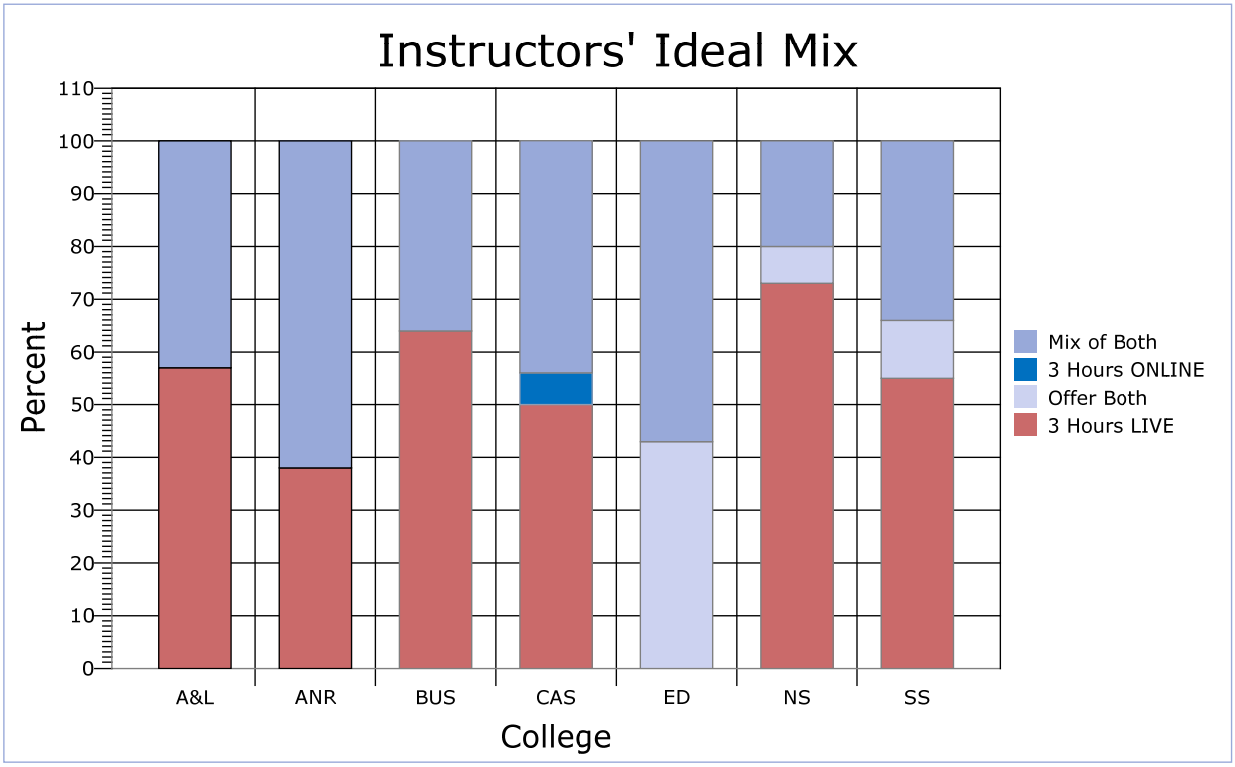


Instructors Ideal Mix: χ^2=18.06, df=6, p=.006
Students Ideal Mix: χ^2=21.71, df=6, p=.000
Instructors and Students Ideal Mix: χ^2=47.80, df=6, p=.000
Course Level Ideal Mix: χ^2=32.95, df=6, p=.000

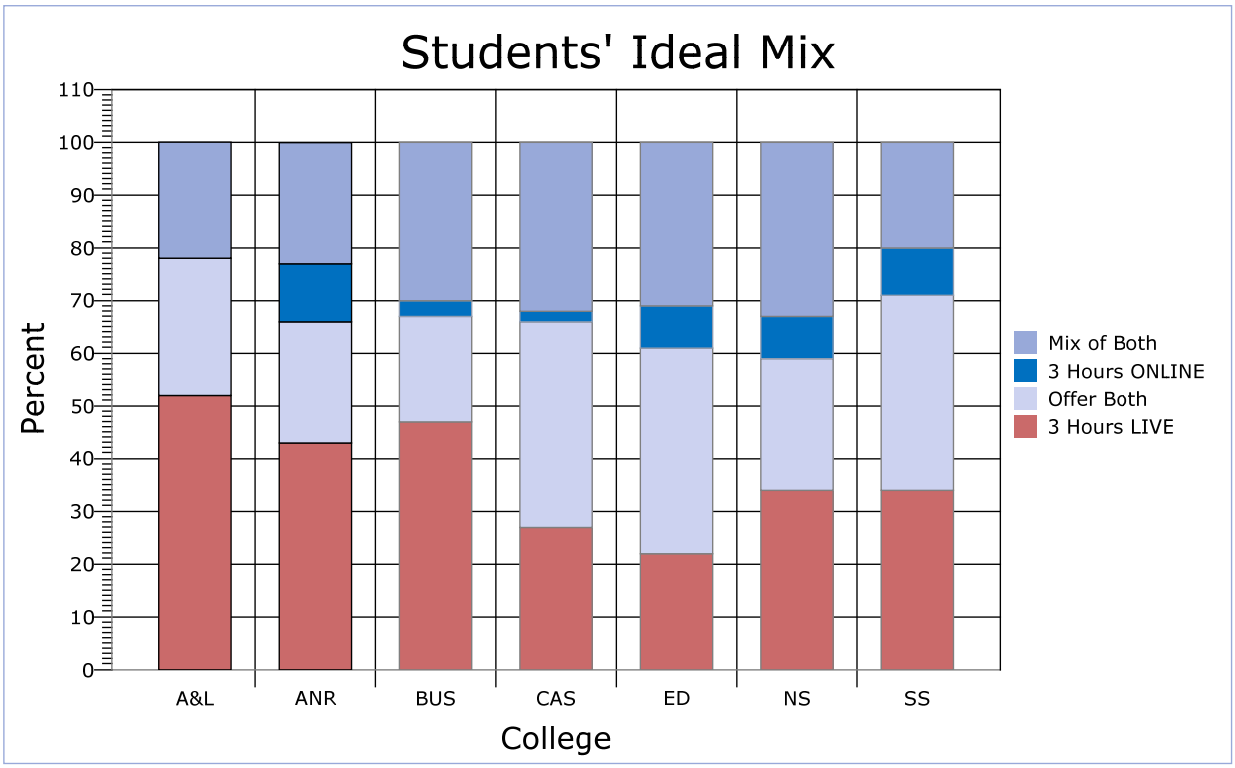
Ideal Mix Comparisons by College

Looking across the colleges with the most respondents, the perceived ideal mix varies by discipline. Instructors in the college of Education opted for either blended classes or offering both fully online and live courses. Instructors in the college of Natural Science are most strongly enthusiastic about live classes; 73% would choose that mode over blended (20%) or fully online (7%).

2009 Instructor Preference for Live, Online, or Mixed Instruction by College



2009 Student Preference for Live, Online, or Mixed Instruction by College



Students also are quite different in their ideal mix preference depending upon their college. Students in the college of Communication Arts and Sciences and the college of Education were least interested in traditional live class formats (27 and 22%, respectively). Those two colleges and Social Science were most likely to opt for offering both online and live (ranging from 37% to 39%). Instructors tended to be more interested in blended instruction than students were, with the exceptions of Business where interest in blended was almost equal and Natural Science where student interest in blended instruction (33%) exceeded faculty interest (20%).

Classroom and Online Tools Associated with Live Lectures

Overall Instructor Values

Only about half of instructors (53%) considered live lectures an essential pedagogical approach in a high quality, in person course. Only 10% considered guest lecturers essential. The two tables below show breakdowns of related "must-have" classroom and online technologies. A projector capable of projecting computer or video signals was the closest to a universal need, rated essential by 66% of instructors. A technical support help line and classroom-provided instructor computer with USB port come next, essential for about 55% of instructors. About half would need wireless internet for the instructor in the classroom to teach well. Whiteboards or blackboards were also essential to many (44%), as is a VCR-DVD player (40%). One third felt they would need a clock in the classroom. Oddly, although 40% considered a DVD-VCR to be an essential classroom technology, only 20% rated watching videos or DVDs as an essential pedagogical approach.

One fourth rated overhead projectors as essential. This number seems high, given current usage patterns. It may be that some respondents were thinking of a video/data projector when they answered this question. Fifteen percent of instructors rated both overhead projectors and video/data projectors as essential, while 10% would require an overhead projector but not a video/data projector.

The remaining classroom technologies were considered essential but much smaller numbers of instructors. Sixteen percent would use a microphone. Ten percent felt they needed to be able to record audio or video of the live class. Nearly 10% would use a document camera. Five percent would use clickers or other voting technologies, and five percent believed photocopied handouts were essential. One percent considered flip charts essential.

About one fourth of instructors felt it was essential to post Power Point or video of live lectures online.

The fact that only a small percentage of instructors consider particular technologies essential does not mean that those technologies are unimportant. Individual instructors and academic programs each develop their own pedagogical approaches. Some have more specialized needs than do others.

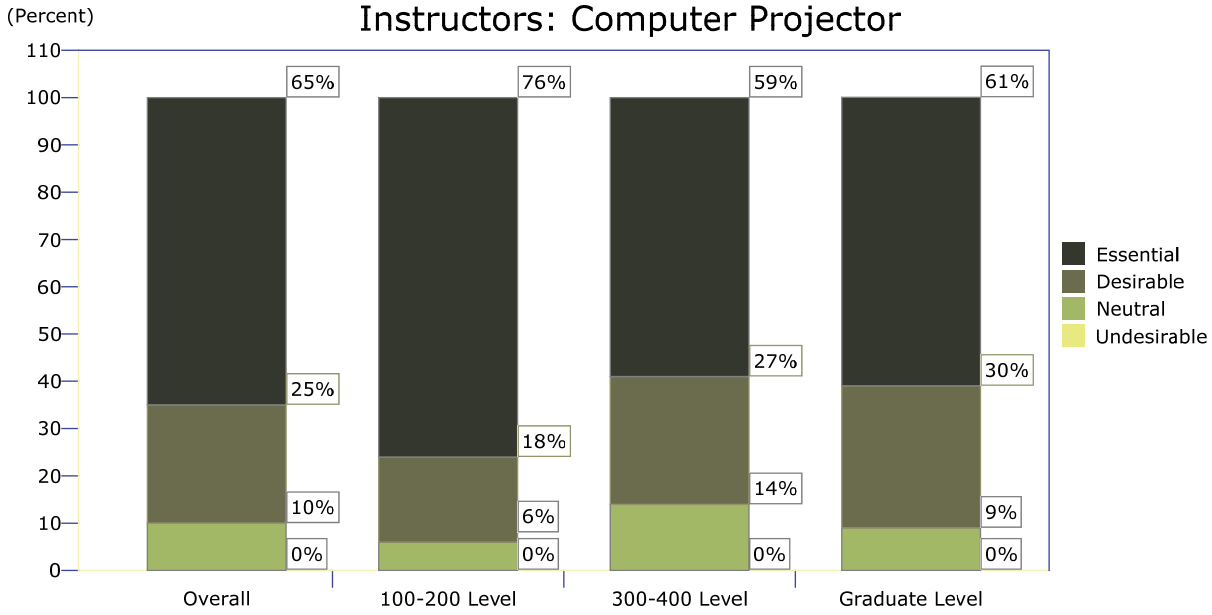
Lectures: Essential Classroom Technologies
66% VIDEO/DATA PROJECTOR
56% TECH SUPPORT HELP LINE
54% CLASSROOM PROVIDED INSTRUCTOR COMPUTER with USB PORT
49% WIRELESS INTERNET (for the instructor)
44% WHITE OR BLACKBOARD
40% VCR-DVD
32% CLOCK
26% OVERHEAD PROJECTOR
20% VIDEOS
16% MICROPHONE
10% CAPACITY TO RECORD AUDIO OR VIDEO OF LIVE CLASS
09% DOCUMENT CAMERA
05% CLICKERS OR OTHER VOTING TECHNOLOGY
05% PHOTOCOPIED HANDOUTS
01% FLIPCHART

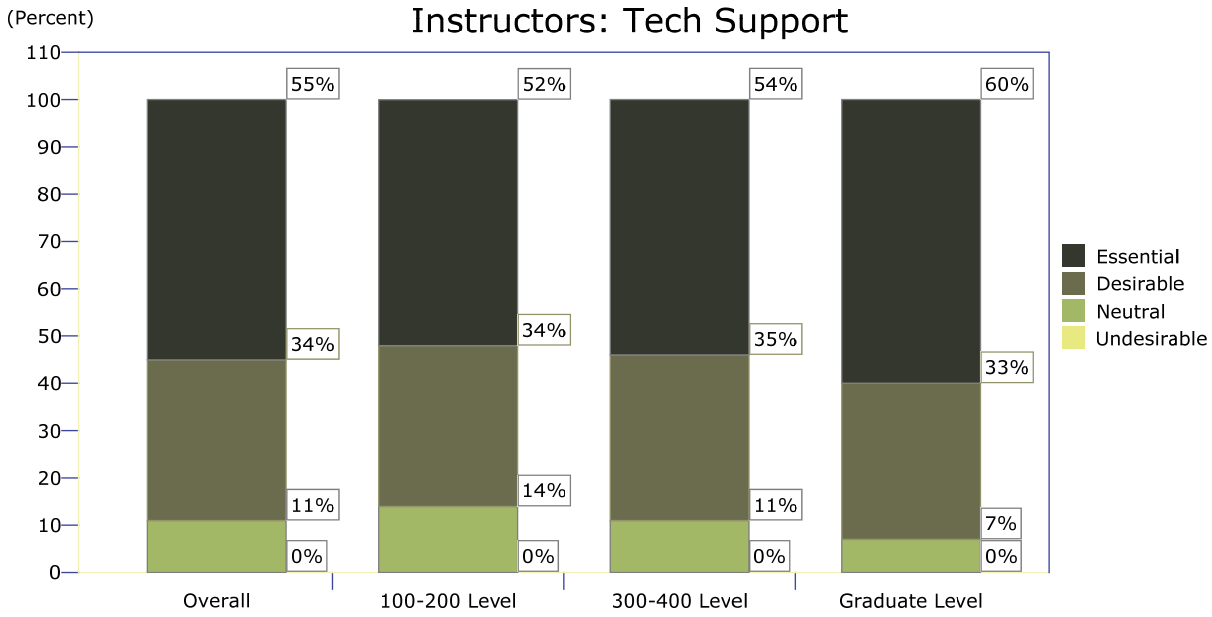
Lectures: Essential Online Technologies
24% POWERPOINTS or LECTURE VIDEO ONLINE

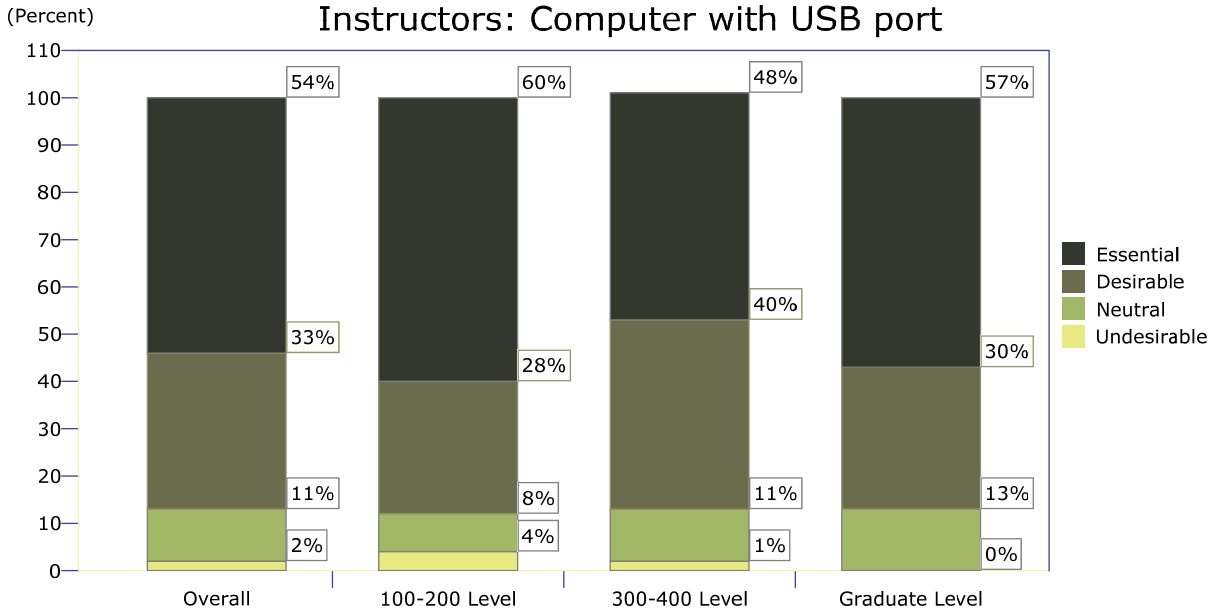
Instructor Classroom Lecture Technologies by Course Level

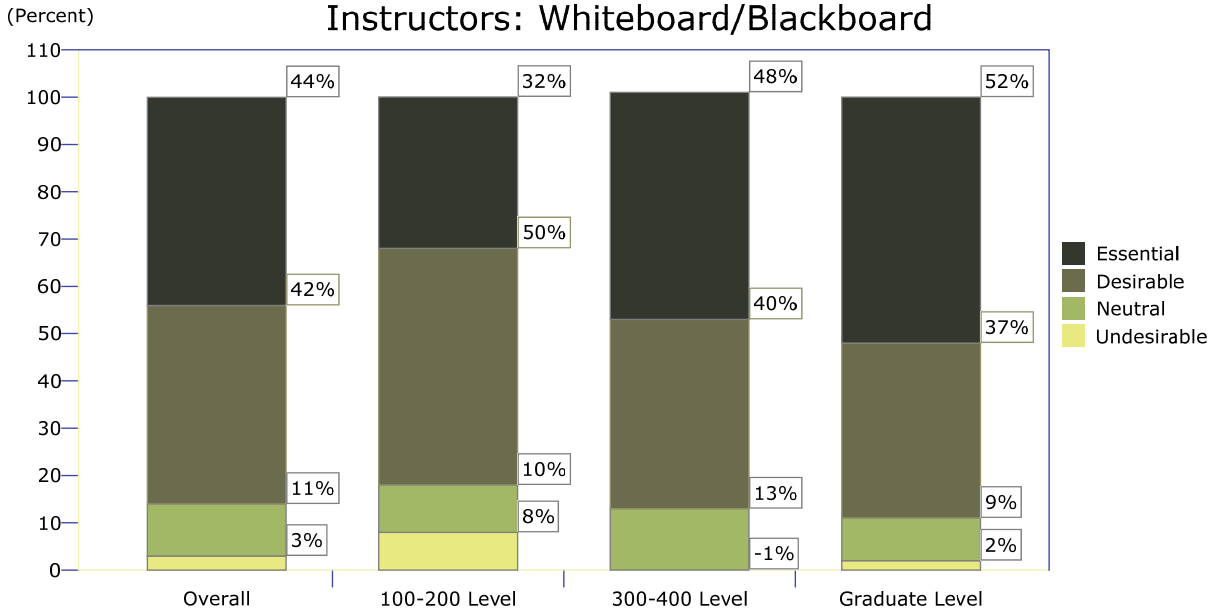
There are slight but not significant differences in instructor ratings of the importance of classroom technologies by course level. The 12 charts below provide added detail about those instructor ratings, including the percent rating each technology as undesirable, neutral, desirable, and essential for 100-200 level courses, 300-400 level courses, graduate level courses, and overall. When essential and desirable ratings are combined, far more instructors would like to be able to use these different tools.

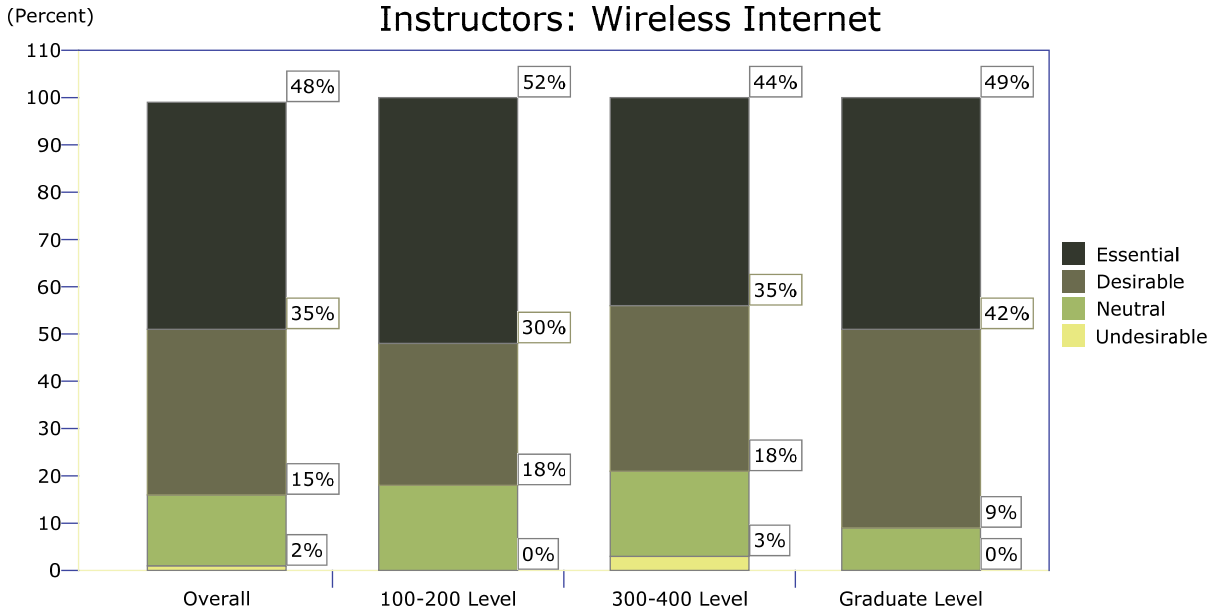
The tables that follow show breakdowns for instructor classroom lecture technologies, overall and by course level.

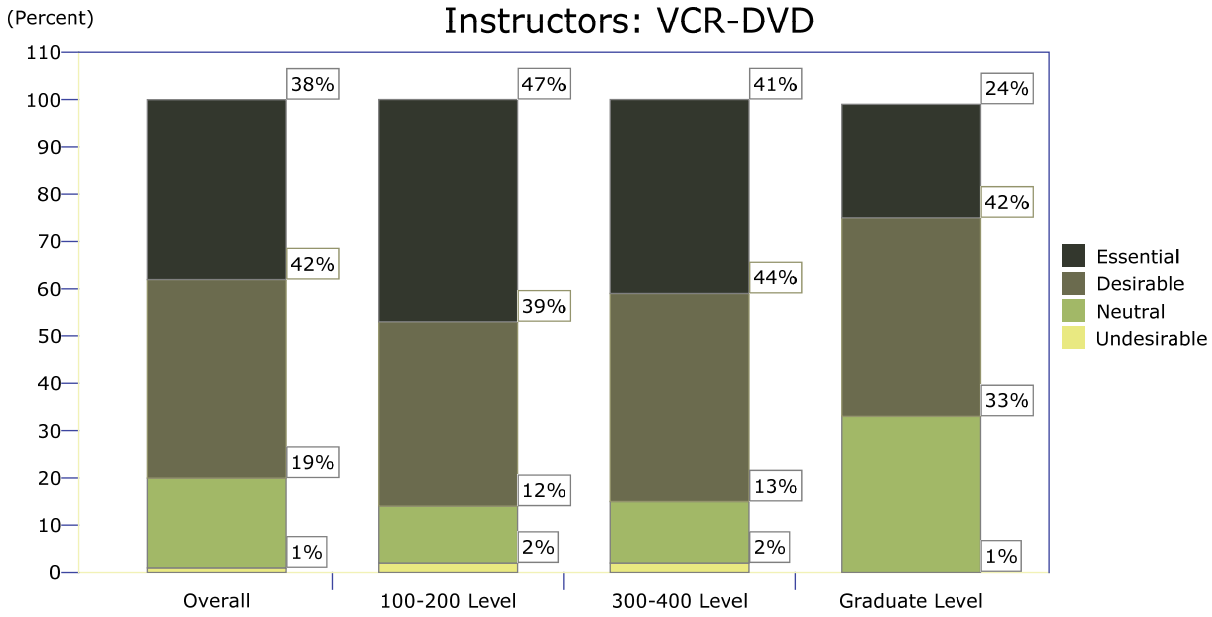

Instructors: Computer Projector
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
65%
25%
10%
0%
76%
18%
6%
0%
59%
27%
14%
0%
61%
30%
9%
0%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


Instructors: Tech Support
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
55%
34%
11%
0%
52%
34%
14%
0%
54%
35%
11%
0%
60%
33%
7%
0%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable

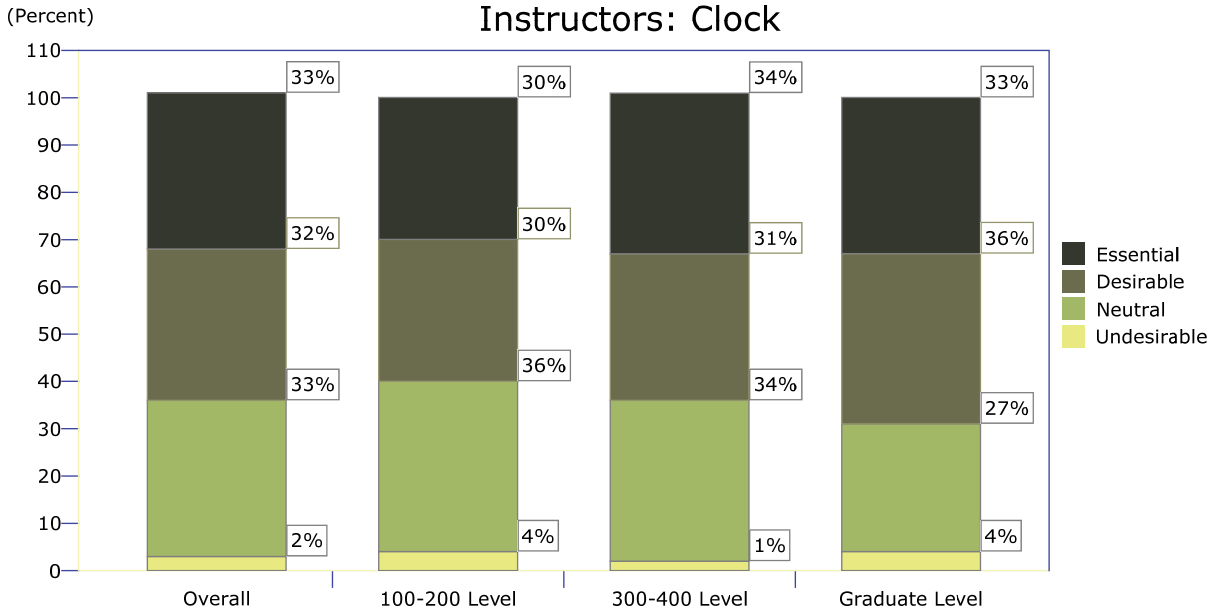

Instructors: Computer with USB port
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
54%
33%
11%
2%
60%
28%
8%
4%
48%
40%
11%
1%
57%
30%
13%
0%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable

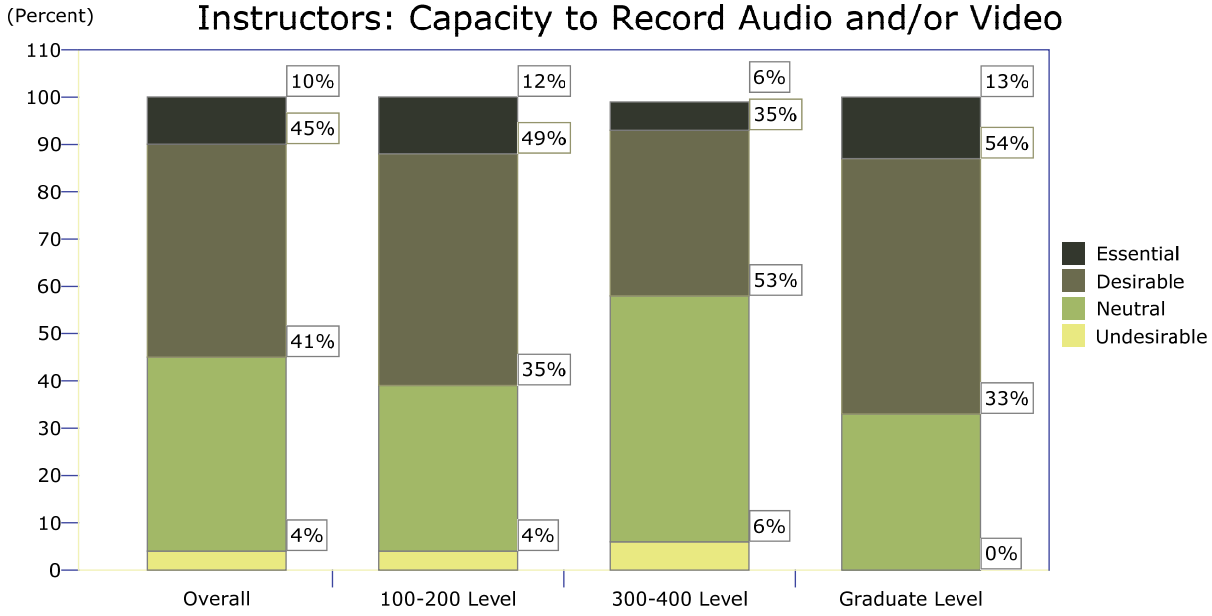

Instructors: Whiteboard/Blackboard
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
44%
42%
11%
3%
32%
50%
10%
8%
48%
40%
13%
-1%
52%
37%
9%
2%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable

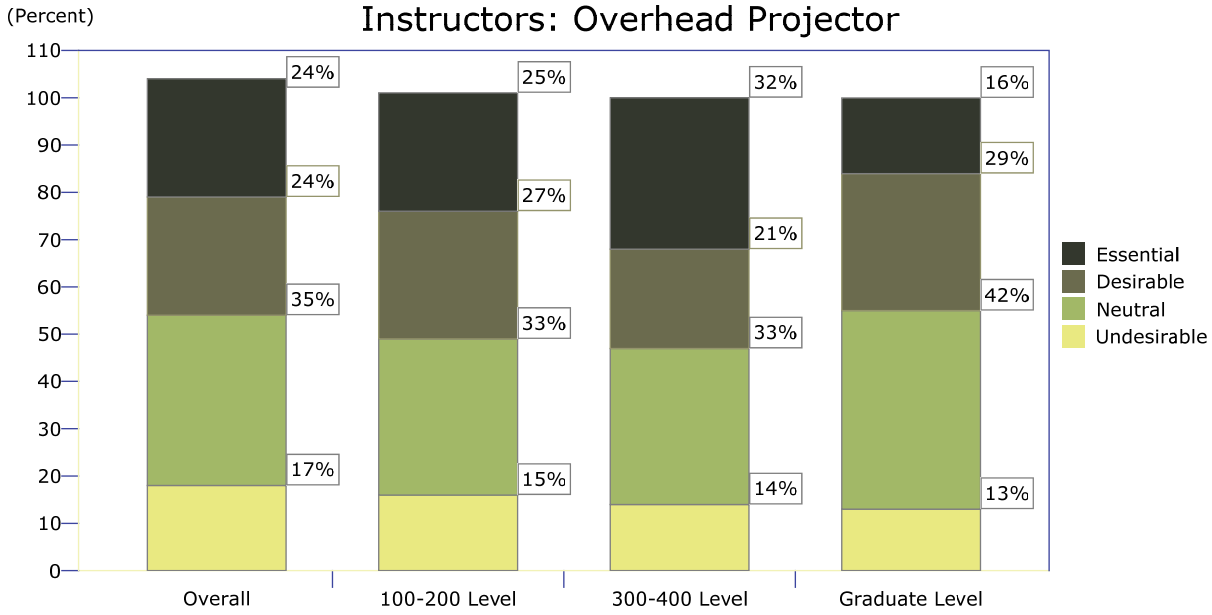


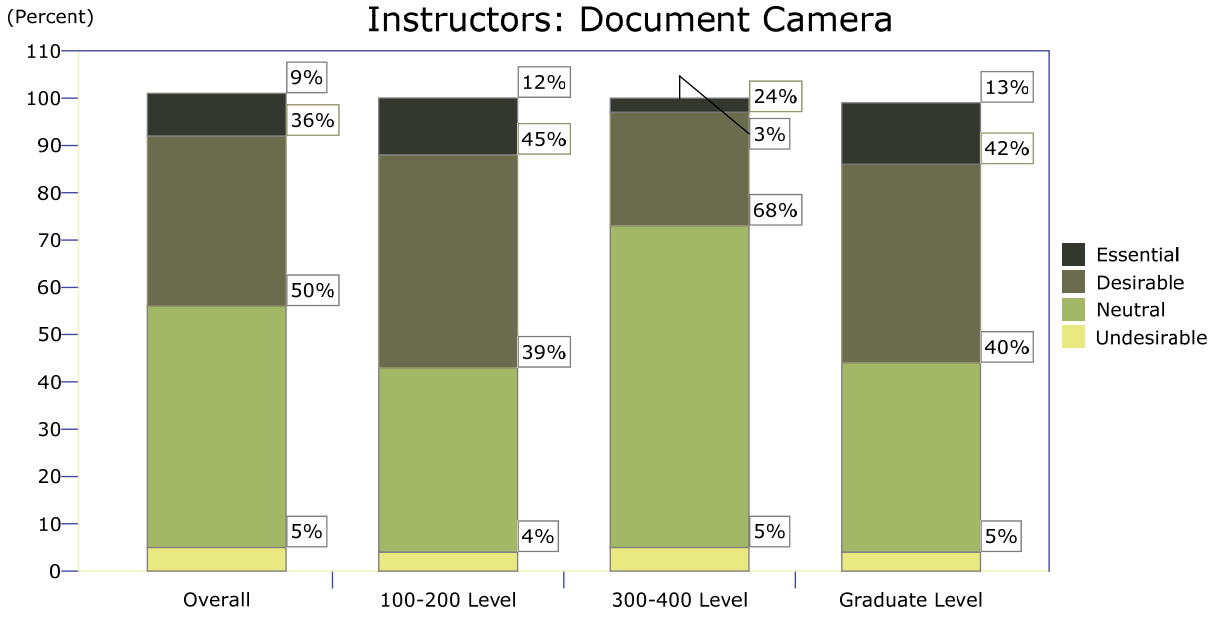


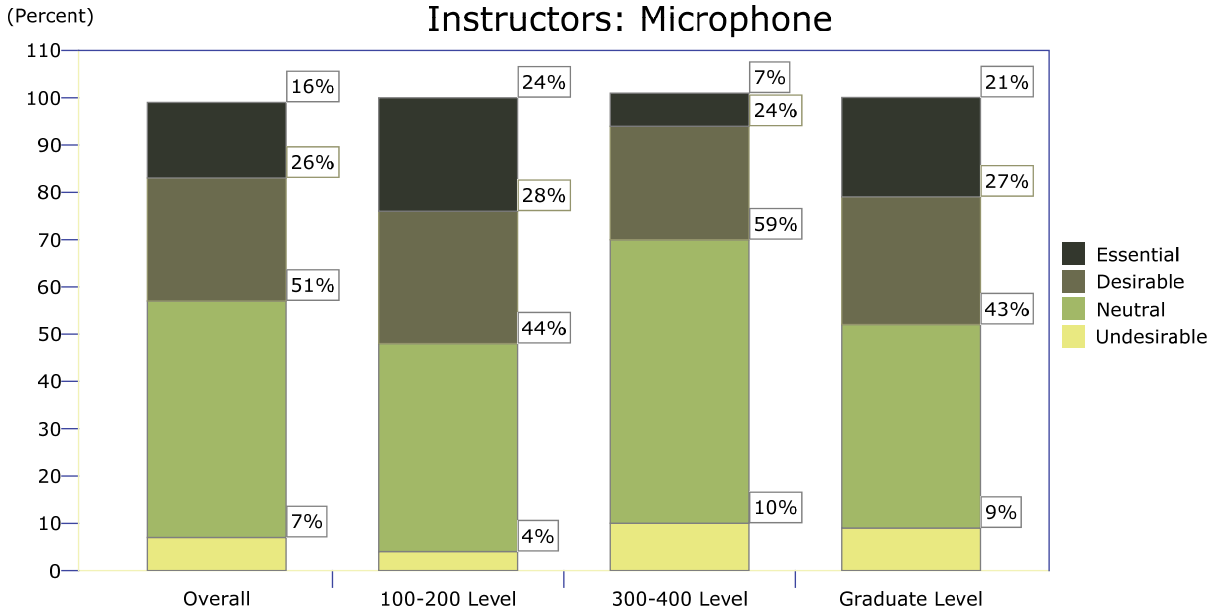
One third of graduate level instructors were neutral about the need for DVD-VCR players in the classroom, compared to the percent of lower level instructors (χ^2=11.97, df=6, p=.063). This difference approached but did not achieve statistical significance.

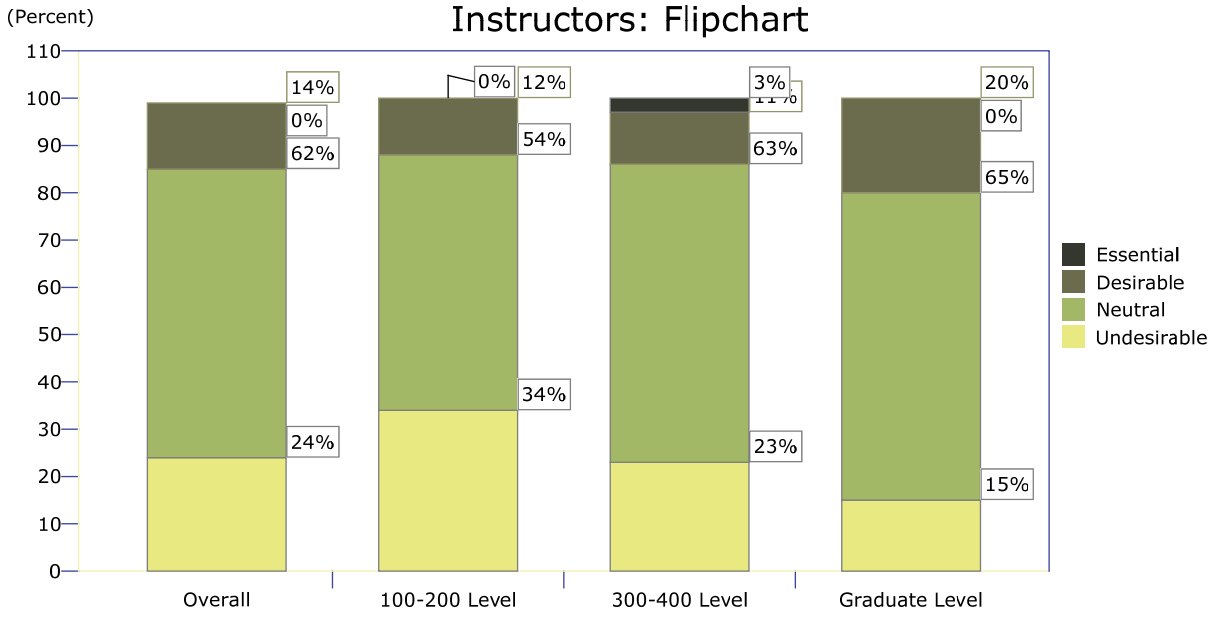

Instructors: Clock
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
33%
32%
33%
2%
30%
30%
36%
4%
34%
31%
34%
1%
33%
36%
27%
4%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


Instructors: Capacity to Record Audio and/or Video
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
10%
45%
41%
4%
12%
49%
35%
4%
6%
35%
53%
6%
13%
54%
33%
0%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


Instructors: Overhead Projector
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
24%
24%
35%
17%
25%
27%
33%
15%
32%
21%
33%
14%
16%
29%
42%
13%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


Instructors: Document Camera
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
9%
36%
50%
5%
12%
45%
39%
4%
24%
3%
68%
5%
13%
42%
40%
5%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


Instructors: Microphone
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
16%
26%
51%
7%
24%
28%
44%
4%
7%
24%
59%
10%
21%
27%
43%
9%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


Instructors: Flipchart
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
14%
0%
62%
24%
0%
12%
54%
34%
3%
63%
23%
20%
0%
65%
15%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable

Overall Instructor – Student Lecture Comparisons

Six of the items reported in the previous section were asked of both instructors and students. The items used a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable. T-tests were used to compare averages. Instructors and students had significantly different expectations about high quality in person classes along 5 of those six variables. Students were much more likely than instructors were to say that posting copies of Power Point slide shows or videos of class lectures was essential to high quality courses. Students rated live lectures and watching videos or DVDs less highly than instructors did. Students were more likely than instructors were to want photocopied handouts, although the overall importance was quite low. Students were less enthusiastic about clickers/voting technologies than instructors were, though only a small percent of either group considered clickers essential. There was no instructor-student difference in the relatively low importance of guest lectures.

Instructor and Student Lecture Pedagogy and Technology Comparisons

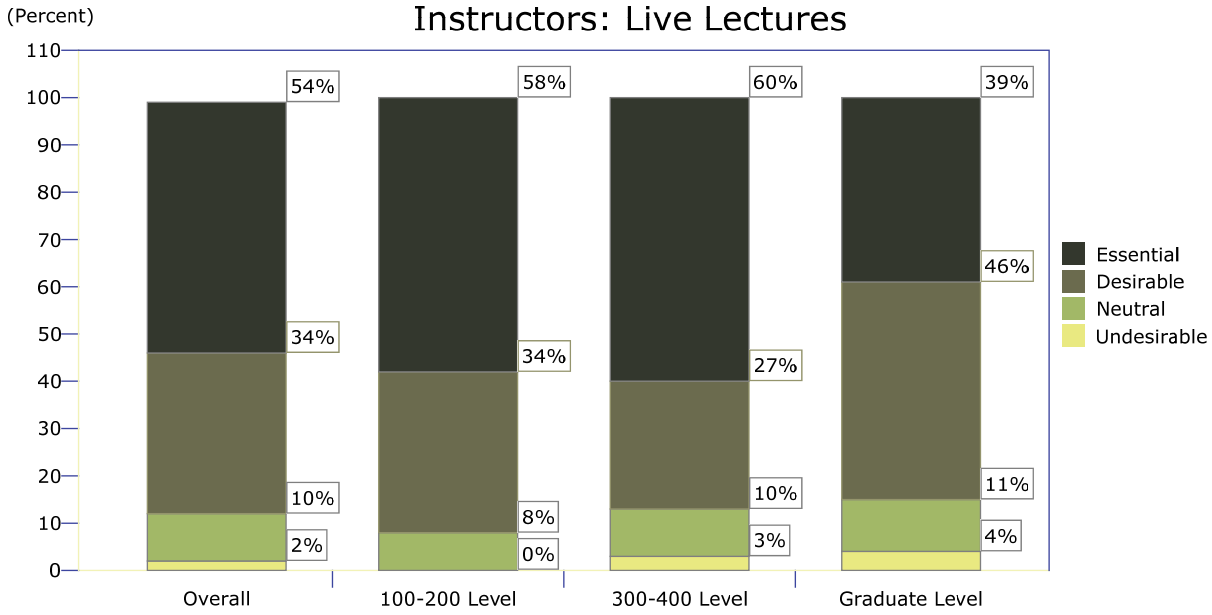
	Instructors	Students	F	p
Live Lectures (pedagogy)	1.4	1.2	1.01	.031
Online copies of slideshows or videos from live class	1.0	1.5	2.09	.000
Watch Videos/DVDs (pedagogy)	0.9	0.5	19.62	.000
Guests/Visitors (pedagogy)	0.8	0.7	n.s.	
Clickers (pedagogy)	0.2	0.1	0.44	.047
Photocopied Handouts	0.1	0.5	13.96	.000
N	164	657		

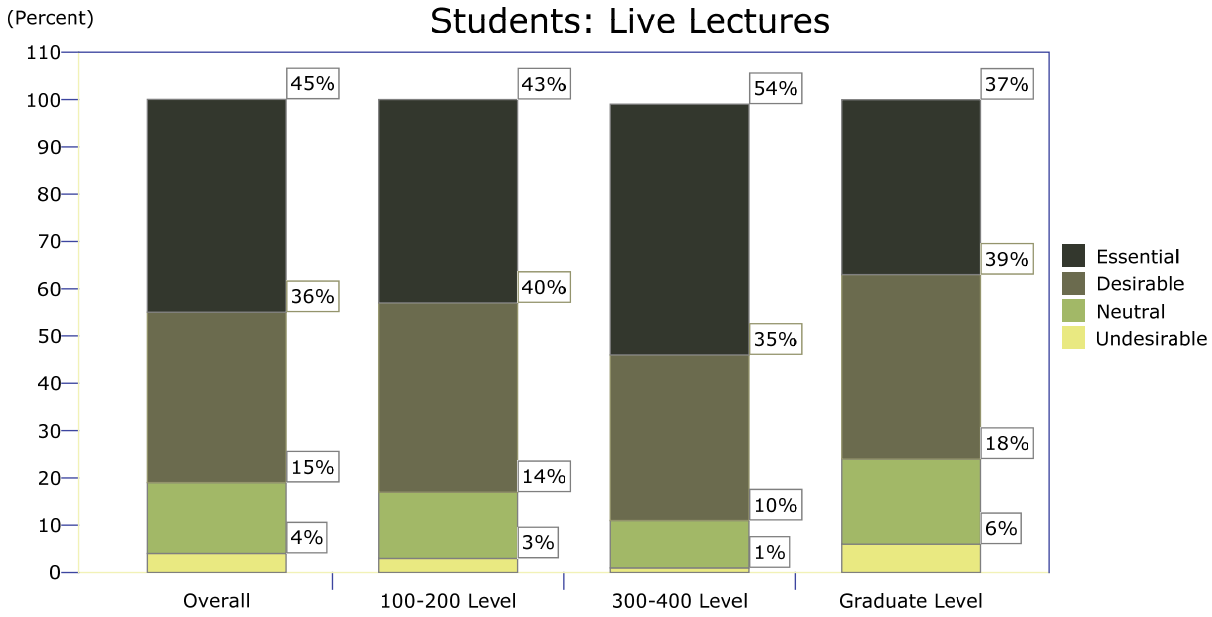
(average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

Instructor and Student Lecture Ratings by Course Level

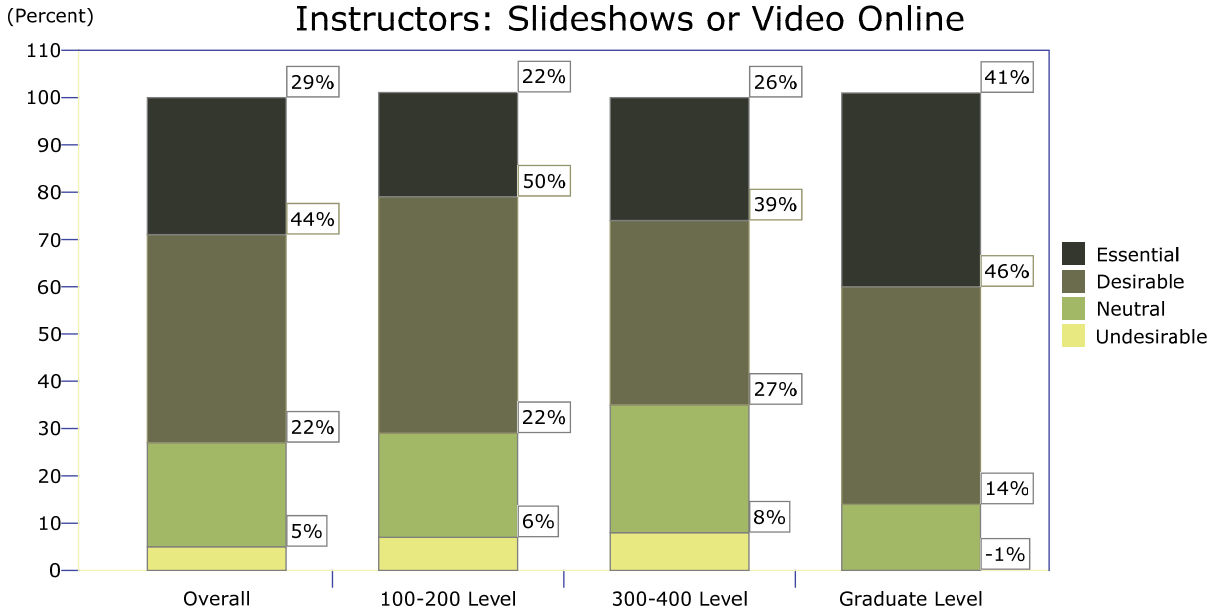
This section of the report presents detailed breakdowns for instructors and for students of classroom and online technologies and pedagogies associated with live lectures, by course level. For students, ratings of four of the six technologies or pedagogies were significantly different by course level. For instructors, only clickers were significantly different by course level.

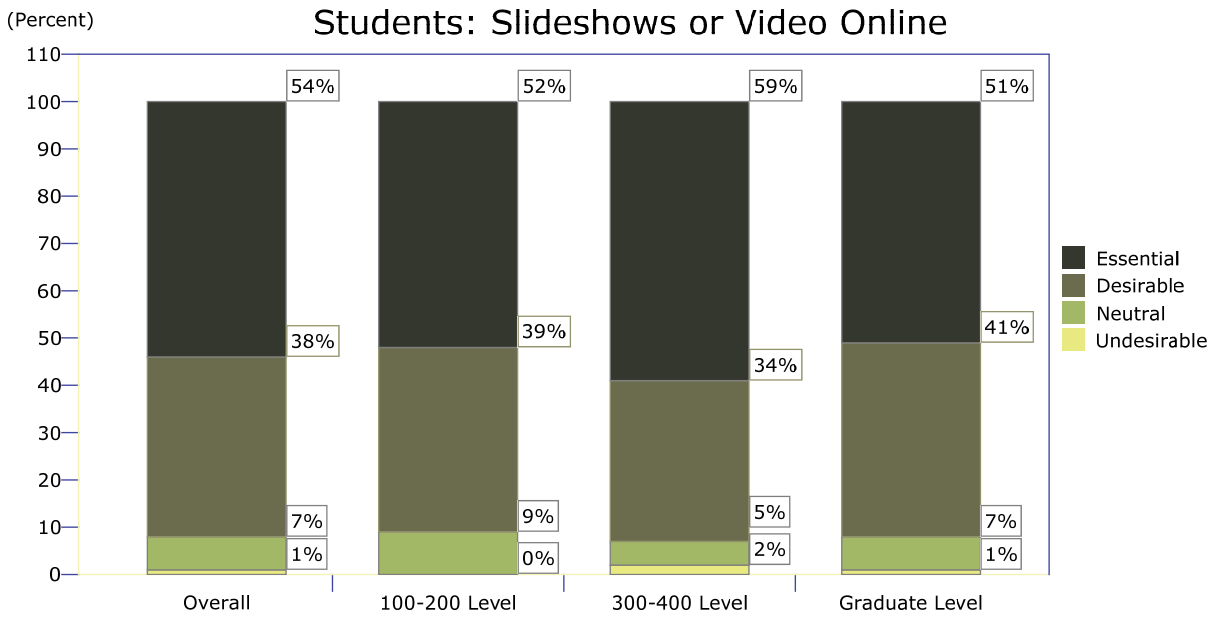
The tables that follow show lecture pedagogy and technology breakdowns for instructors and for students, overall and by course level.

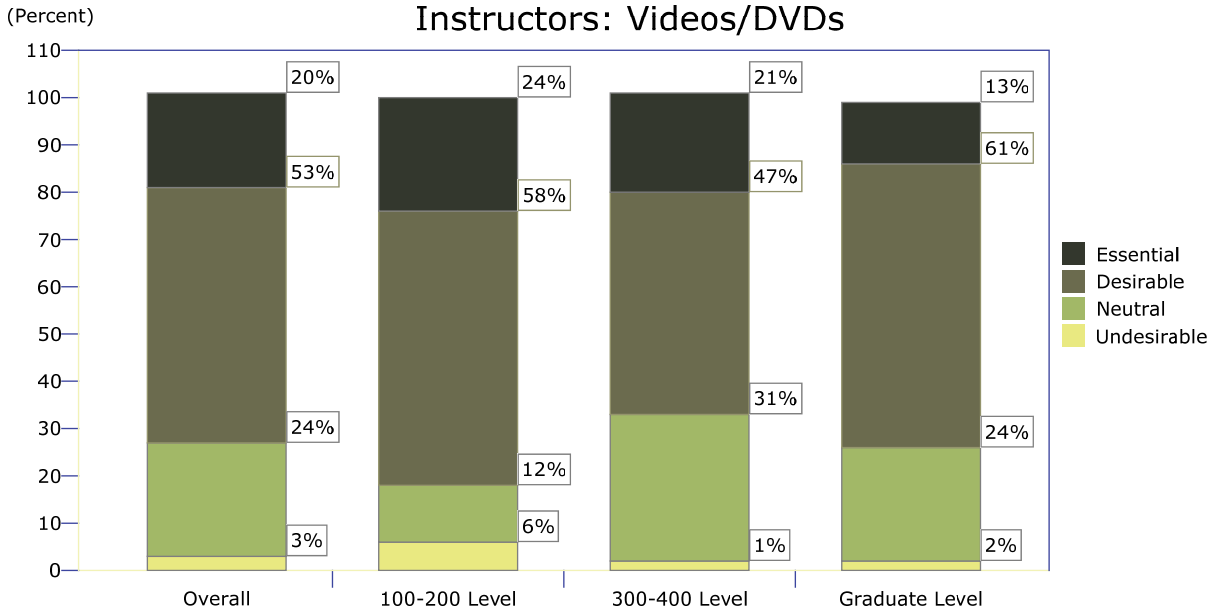


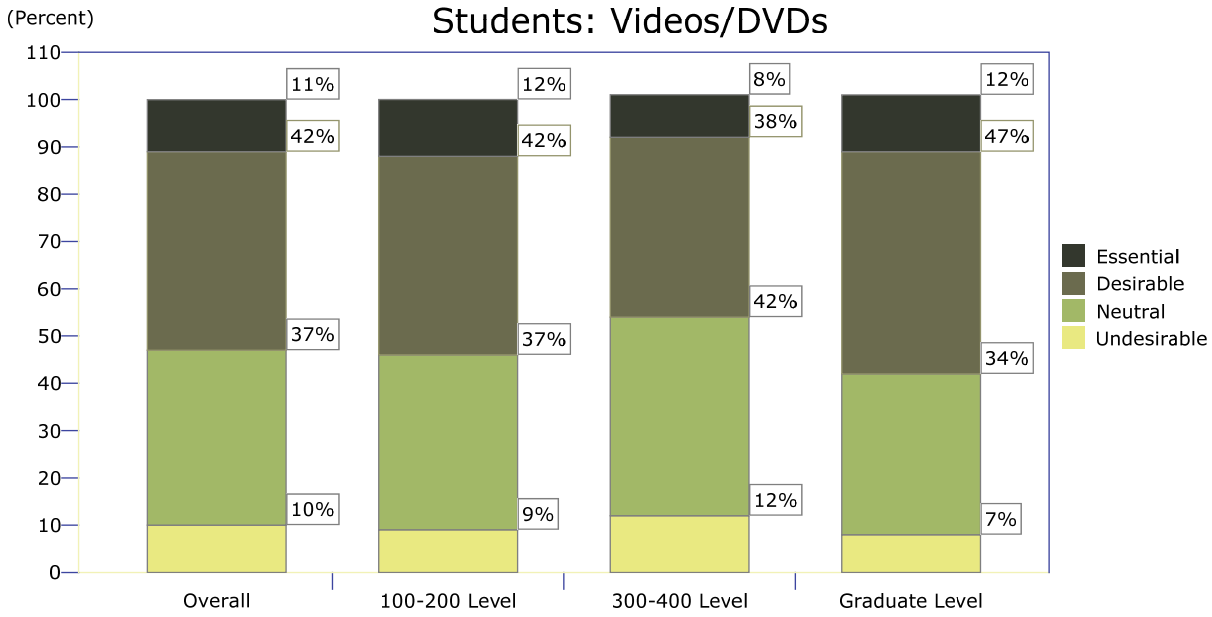


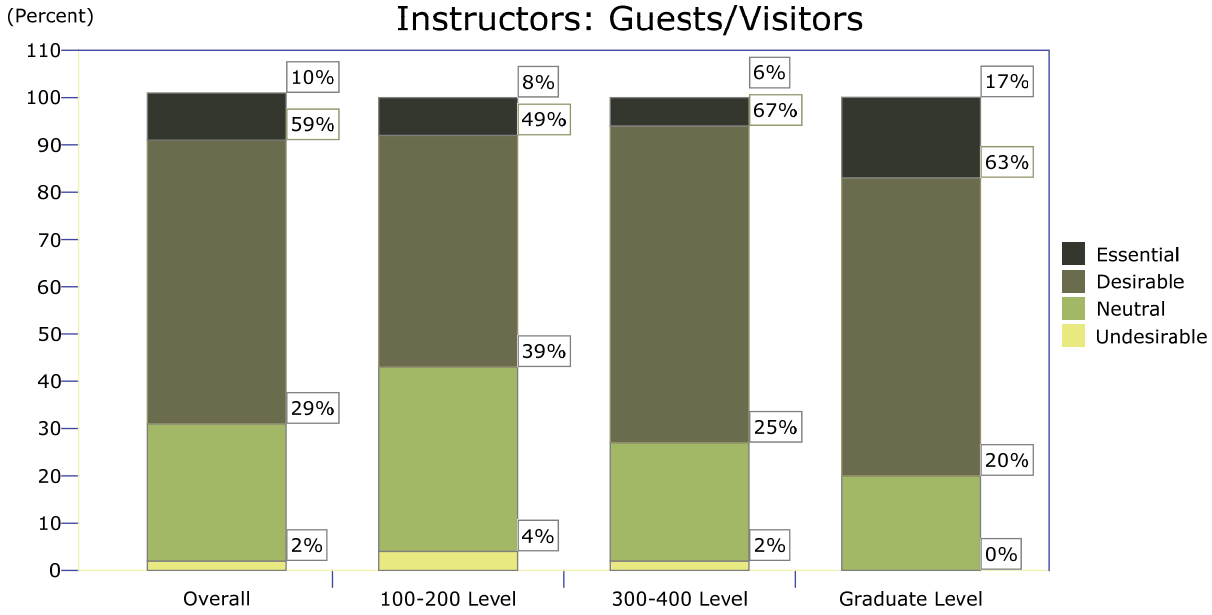
Students considered live lectures significantly more important in 300-400 level courses than in 100-200 level or graduate level courses, $\chi^2=20.14$, df=6, p=.003.

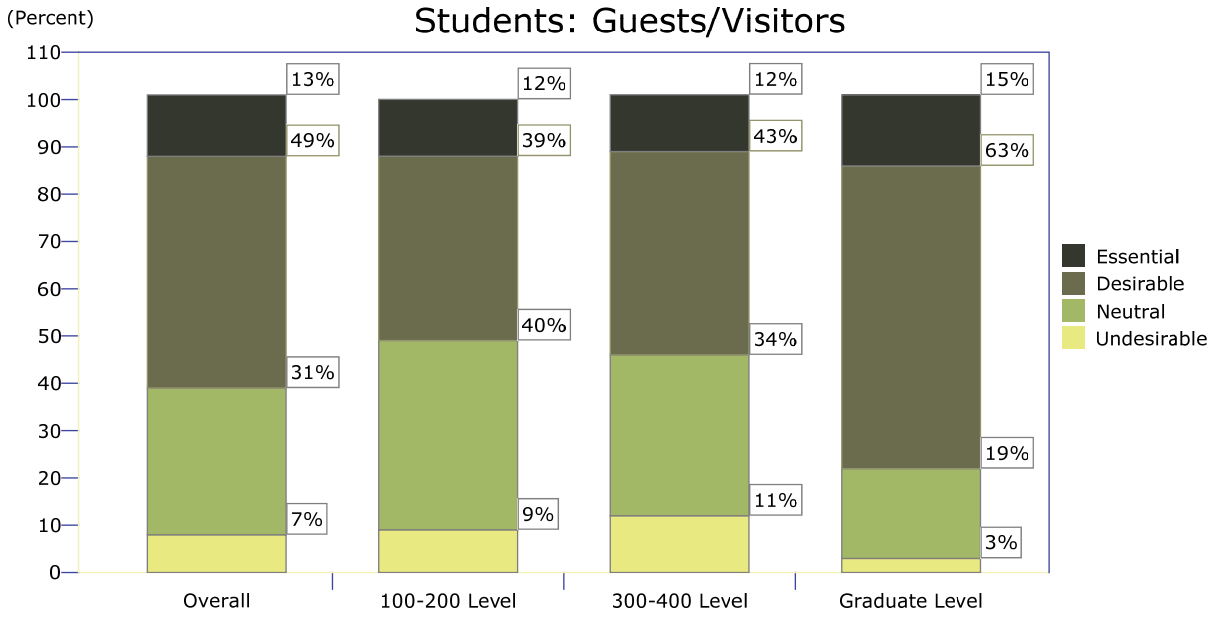

(Percent)
Instructors: Slideshows or Video Online
110
100
90
80
70
60
50
40
30
20
10
0
29%
44%
22%
5%
22%
50%
22%
6%
26%
39%
27%
8%
41%
46%
14%
-1%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


(Percent)
Students: Slideshows or Video Online
110
100
90
80
70
60
50
40
30
20
10
0
54%
38%
7%
1%
52%
39%
9%
0%
59%
34%
5%
2%
51%
41%
7%
1%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable

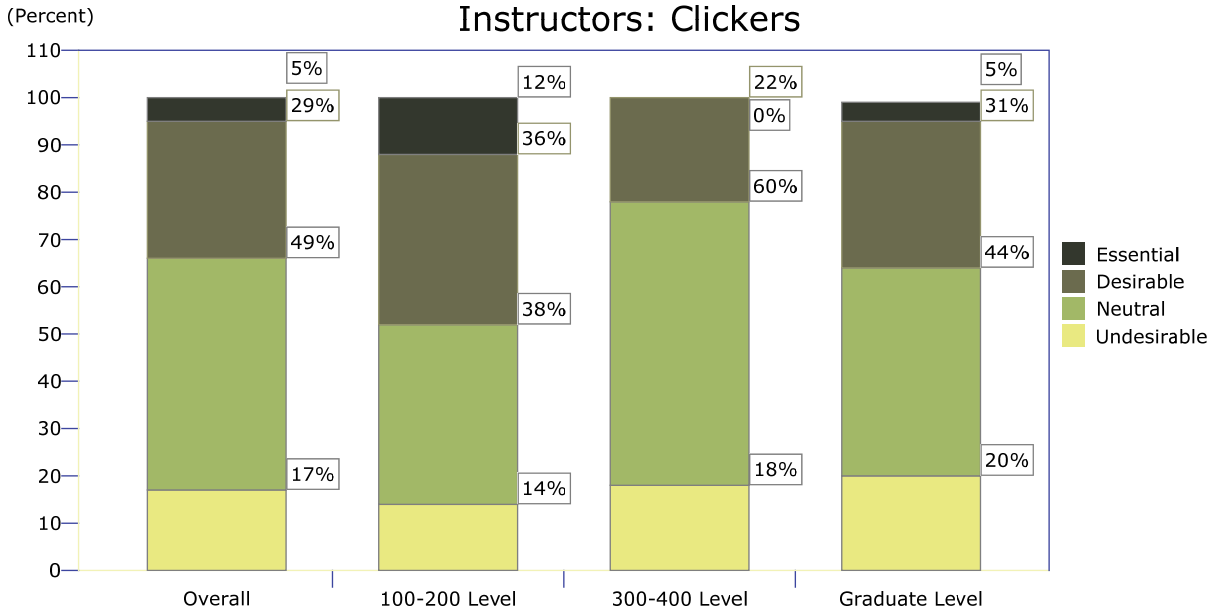

Instructors: Videos/DVDs
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
20%
53%
24%
3%
24%
58%
12%
6%
21%
47%
31%
1%
13%
61%
24%
2%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable


Students: Videos/DVDs
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
11%
42%
37%
10%
12%
42%
37%
9%
8%
38%
42%
12%
12%
47%
34%
7%
Overall
100-200 Level
300-400 Level
Graduate Level
Essential
Desirable
Neutral
Undesirable

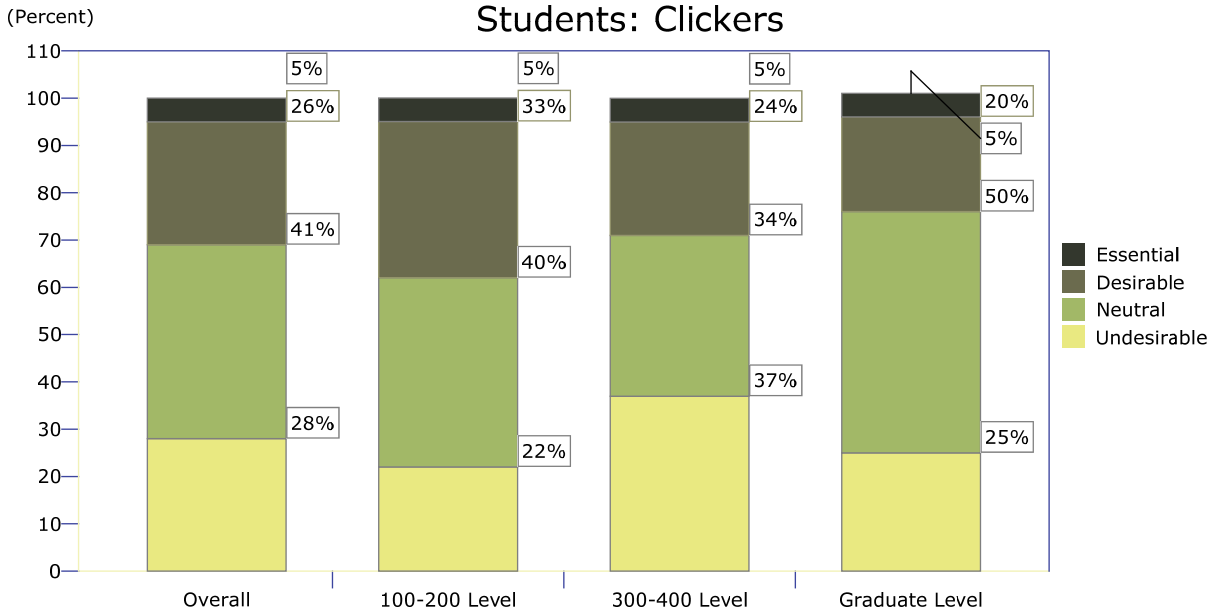




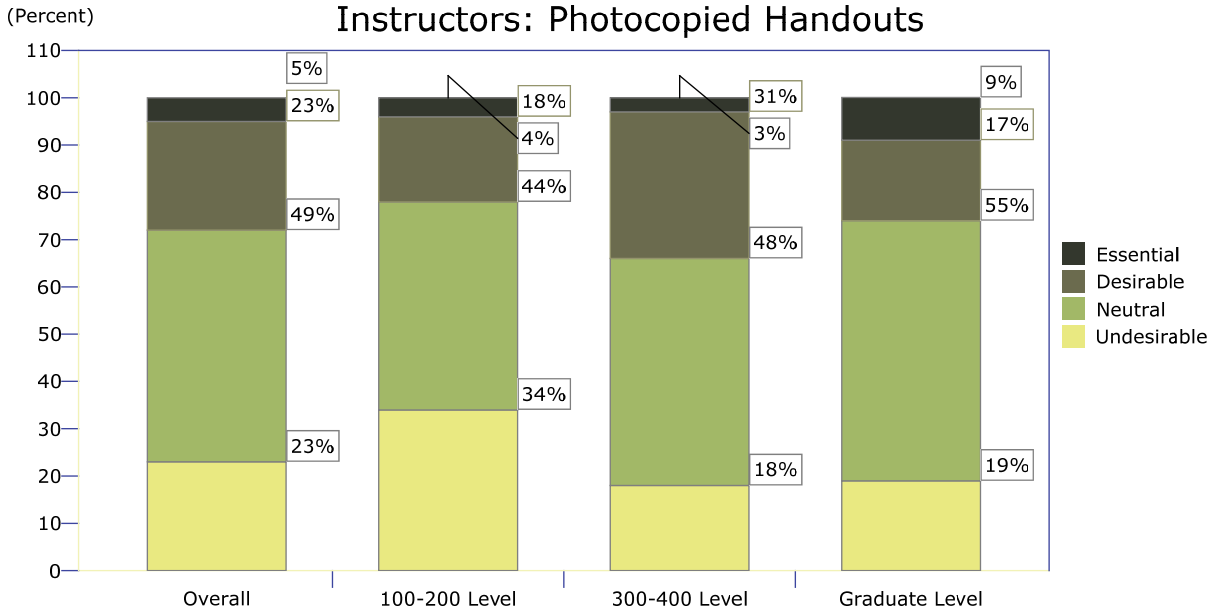
Students in graduate level courses were more likely to rate Guests/Visitors as desirable than were students in lower level courses, χ^2=46.92, df=6, p=.000

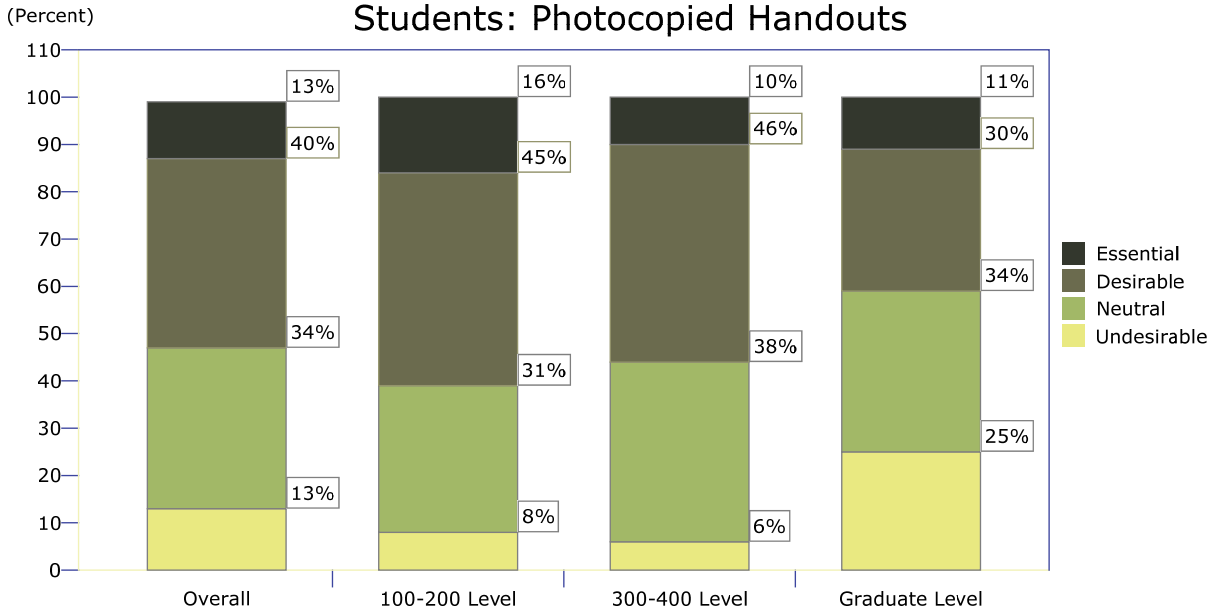


Instructors were most likely to value clickers as essential or desirable in 100-200 level courses, and least likely to do so in 300-400 level courses, $\chi^2=13.47$, df=6, p=.032.



Students were most more to value clickers as essential or desirable in 100-200 level courses, and least likely to do so in 300-400 level courses $\chi^2=26.23$, df=6, p=.000





Students in graduate level courses were least likely to consider photocopied handouts essential or desirable and 25% even rated handouts undesirable, χ^2=50.25, df=6, p=.000

Instructor Lecture Pedagogy and Technology Ratings by College

Statistical comparisons by college were run for the live lecture technologies among A&L (13% of instructor respondents), CAS (10%), NS (9%) and SS (23%). Five of the 17 variables were significantly different by college. A classroom-supplied computer with USB port was least likely to be needed by Natural Science instructors. Natural Science instructors were also most likely

to use clickers and most likely to need a microphone. A whiteboard or blackboard was least likely to be needed by Communication Arts and Sciences instructors. Comm Arts instructors were also most likely to embrace watching videos as an essential pedagogy.

Instructor Lecture Pedagogy and Technology Comparisons by College

	A&L	CAS	NS	SS	F	p
Video/Data Projector	1.7	1.4	1.5	1.6	n.s.	
Live Lectures (pedagogy)	1.5	1.9	1.3	1.5	n.s.	
Technical Support	1.5	1.4	1.4	1.5	n.s.	
Computer with USB Port	1.4	1.4	0.8	1.5	3.54	.018
Wireless Internet	1.3	1.6	1.2	1.3	n.s.	
Whiteboard/Blackboard	1.5	0.4	1.4	1.2	7.28	.000
VCR/DVD	1.2	1.3	1.1	1.5	n.s.	
Clock	0.9	0.7	1.1	1.0	n.s.	
Overhead Projector	0.2	0.2	0.8	0.7	n.s.	
Watch Videos (pedagogy)	0.8	1.1	0.5	0.8	5.36 (df=3,86)	.002
Microphone	0	0.3	0.9	0.5	3.93	.011
Guest Lectures (pedagogy)	0.7	1.1	0.5	0.8	n.s.	
Document Camera	0.6	0.5	0.9	0.4	n.s.	
Clickers/Voting (pedagogy)	0	0.3	0.7	0.1	5.46 (df=3,86)	.002
Photocopied handouts	0.2	0	0.3	0.1	n.s.	
Flipchart	0	0	0	0	n.s.	
Online copies of slideshows or videos from live class	1.1	0.7	0.7	0.8	n.s.	

(average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

Pedagogies and Technologies Associated with Class Discussion

Overall Instructor Values

Classroom discussion was the most universally valued pedagogical approach among instructors, considered as essential by 64% and desirable by 33%. Moveable desks in the classroom were rated essential by 41% of instructors. Thirty-eight percent also felt that working in groups was essential.

Four online tools related to class discussion and group work were considered necessary components of a high quality in person course by a large majority of instructors. Eight-four percent of instructors indicated it was essential to provide students with an online class list and

email addresses of fellow students. Nearly two thirds of instructors felt an online blog, wiki, or discussion form was essential. Sixty percent felt a high quality in person course needed to include use of online chat or Skype, and 37% expected use of Twitter, Face Book, or other social networking tools.

Discussion: Classroom
64% CLASS DISCUSSION PEDAGOGY
41% MOVABLE DESKS
38% TEAMWORK PEDAGOGY

Discussion: Online
84% ONLINE CLASS LIST
64% BLOG OR WIKI
63% GROUP BLOG OR WIKI
60% ONLINE CHAT OR SKYPE
37% SOCIAL NETWORKING

Overall Instructor – Student Class Discussion Comparisons

Instructors and students differed significantly in how much they valued class discussions and group work as pedagogical approaches for in person classes. Instructors rated these approaches much higher than did students. However, instructors and students were nearly identical in their valuing of online class lists, blogs or wikis, and social networking. Students were slightly more enthusiastic about online chat or Skype than were instructors (77% versus 63%) but a majority of both groups felt these tools should be part of teaching or taking an in person course.

Instructor and Student Class Discussion Comparisons

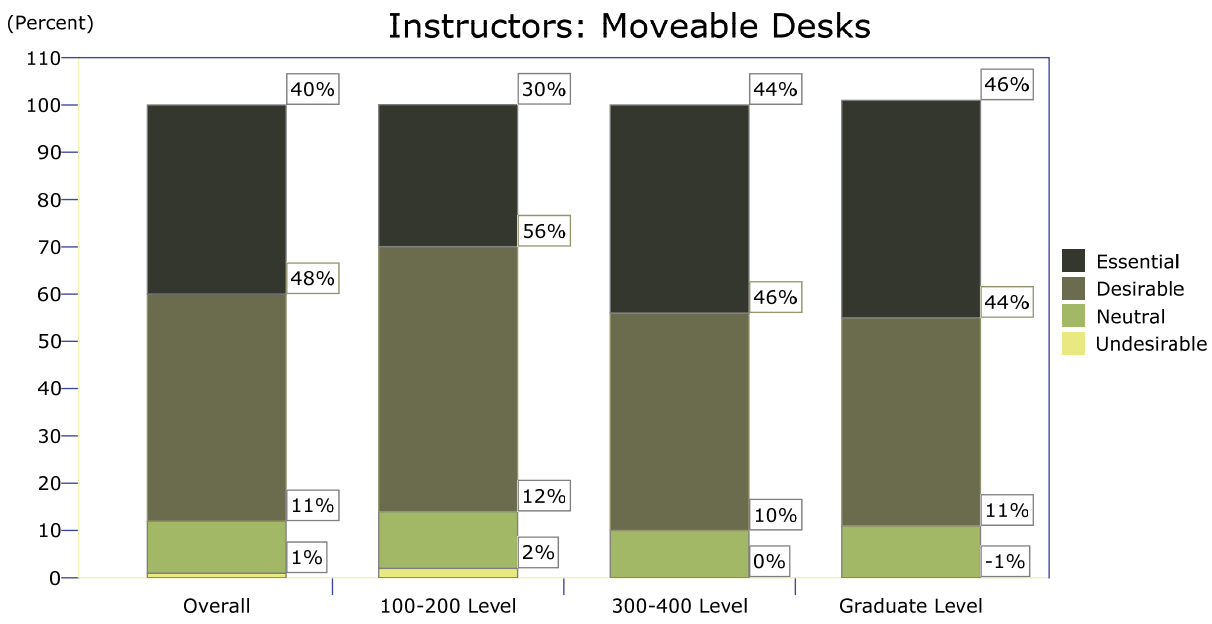
	Instructors	Students	F	p
Class Discussions (pedagogy)[1]	1.6	1.0	4.32	.000
Group Work (pedagogy)[1]	1.2	0.4	26.68	.000
Class List with Emails[2]	87%	90%		
Blog or Wiki or Forum[2]	70%	69%		
Online Chat or Skype[2]	63%	77%		
Twitter, Facebook or Social Networking[2]	40%	40%		
N	164	657		

(1 - average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable
2 - % who answered that each learning technology would be used in a top-notch in person course, either during or outside of class)

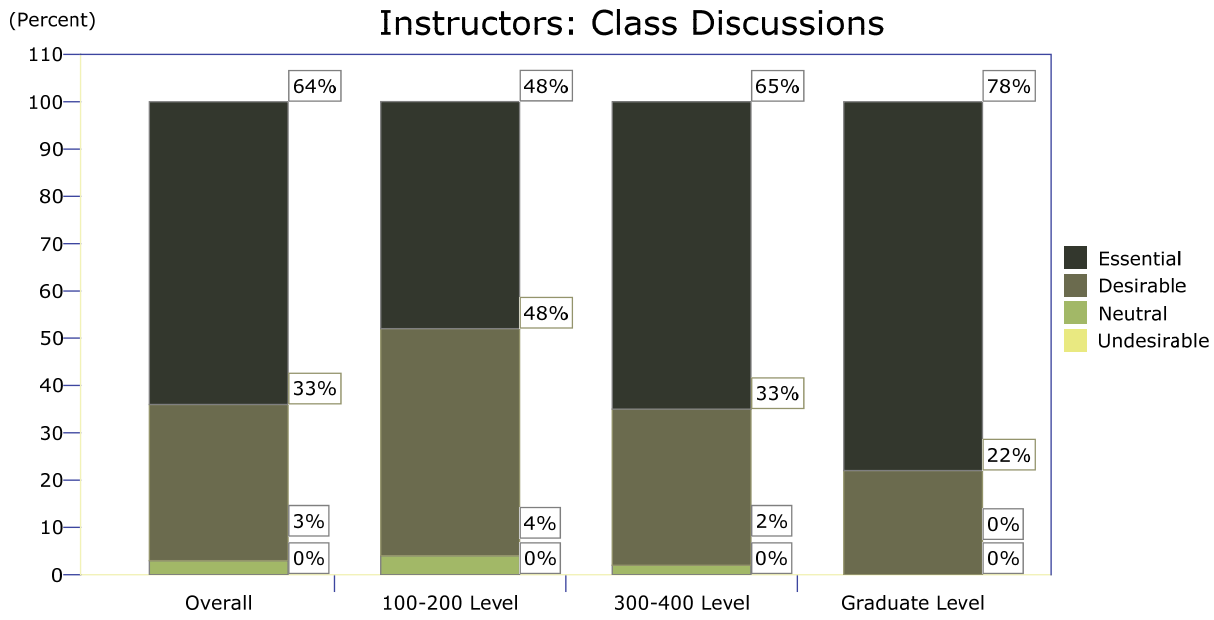
Instructor and Student Class Discussion Ratings by Course Level

Movable desks were rated either essential or desirable by 88% of instructors overall. This configuration was less essential for 100-200 level courses, though the difference was not significant. Almost no instructor felt that moveable desks were undesirable.

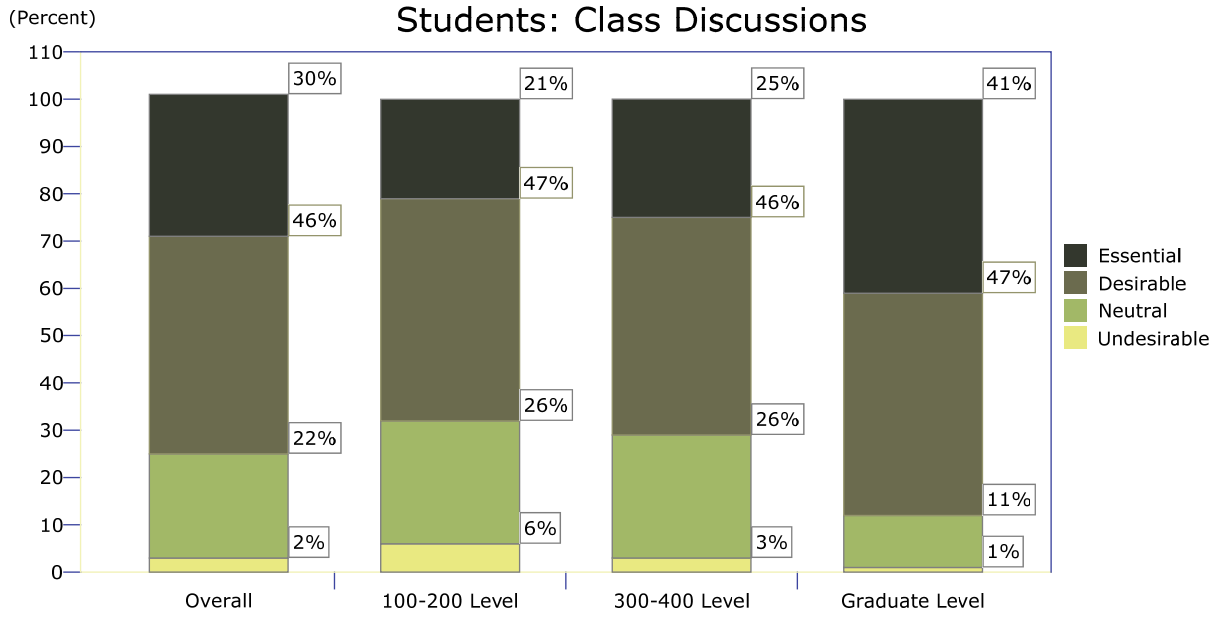
The tables that follow show class discussion pedagogy and technology breakdowns for instructors, and when available, for students, overall and by course level.



The value of class discussion as a pedagogy differed significantly by course level, with 78% of instructors who rated graduate level courses saying that class discussion was essential, compared to only 48% of those considering 100 – 200 level courses. Student responses showed parallel significant variation, but with considerably few students at all three levels favoring class discussion.

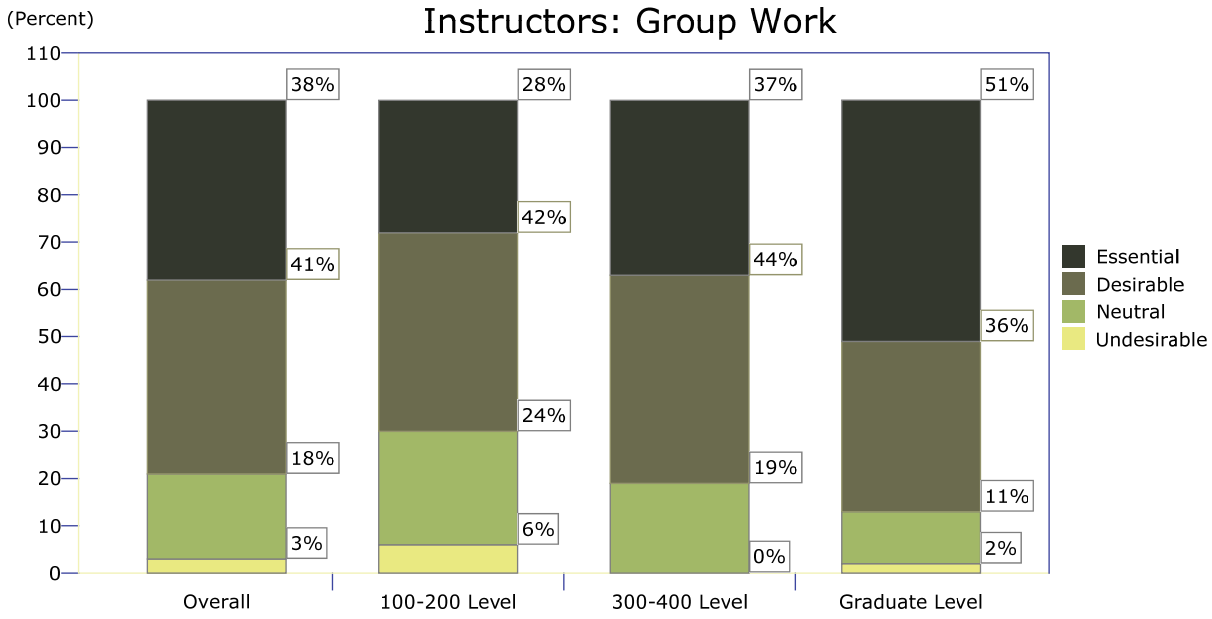


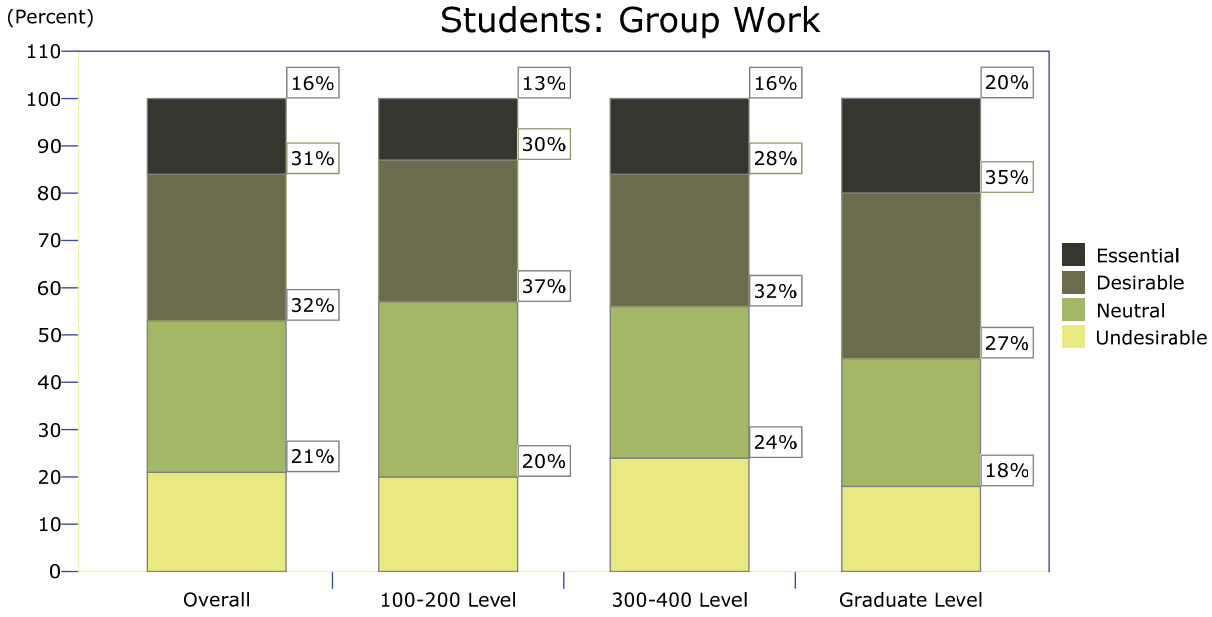
Instructors: Class Discussion χ^2=8.95, df=6, p=.062



Students: Class Discussion χ^2=38.04, df=6, p=.000

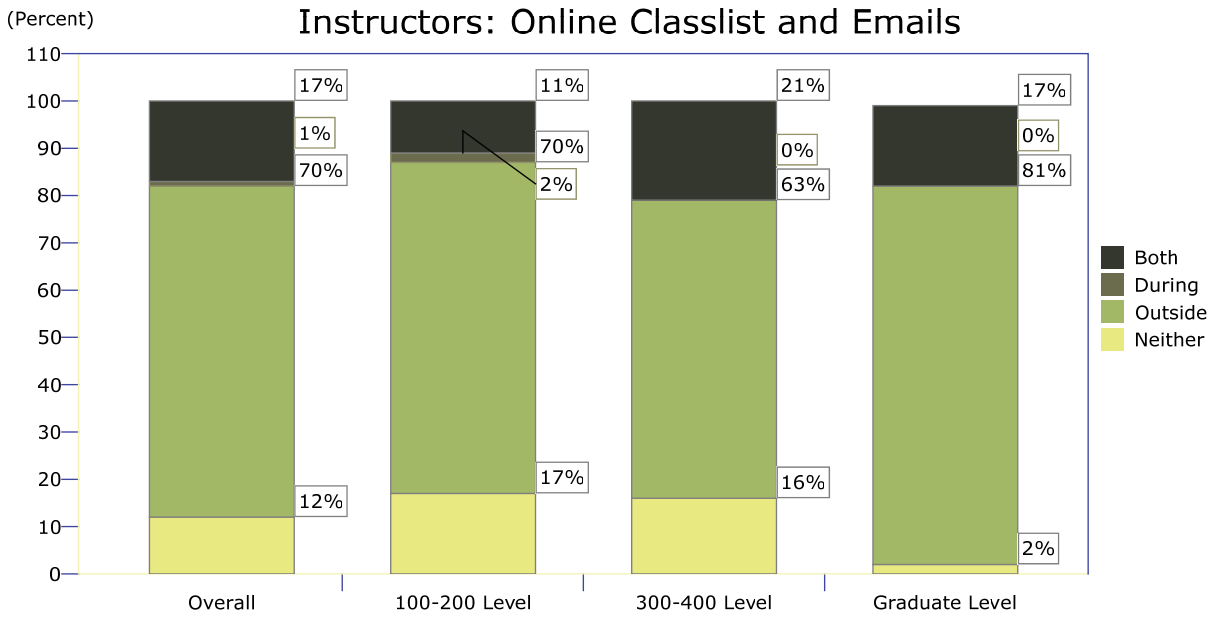
Instructors rarely rated group work "undesirable," regardless of course level. Eighty-seven percent of graduate level instructors and 70% of 100-200 level instructors considered group work to be either essential or desirable. About one fifth of students considered group work undesirable, and nearly one third were neutral. Students in graduate level courses were least hostile towards group work.

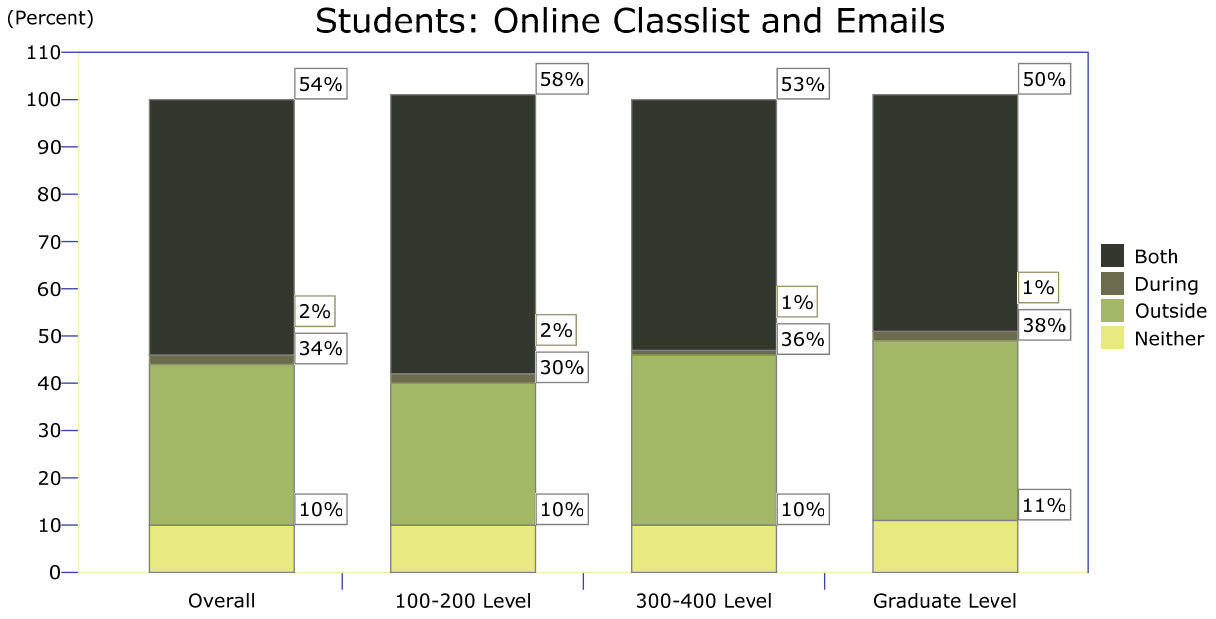




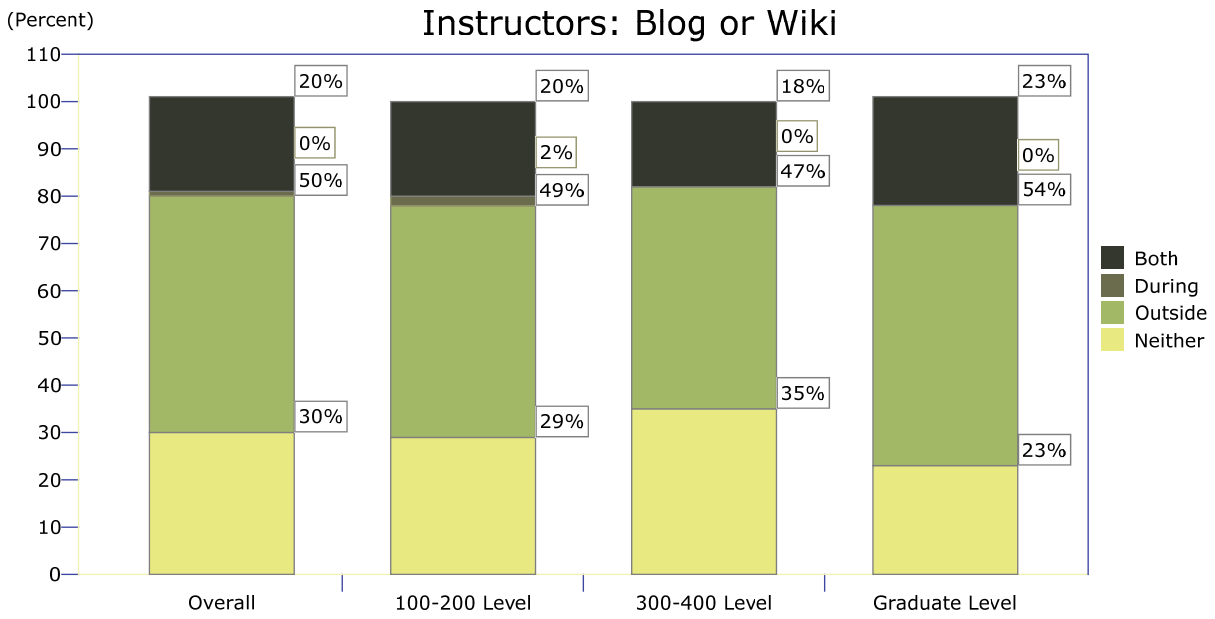
Students: Group Work, $\chi^2=14.82$, df=6, p=.022

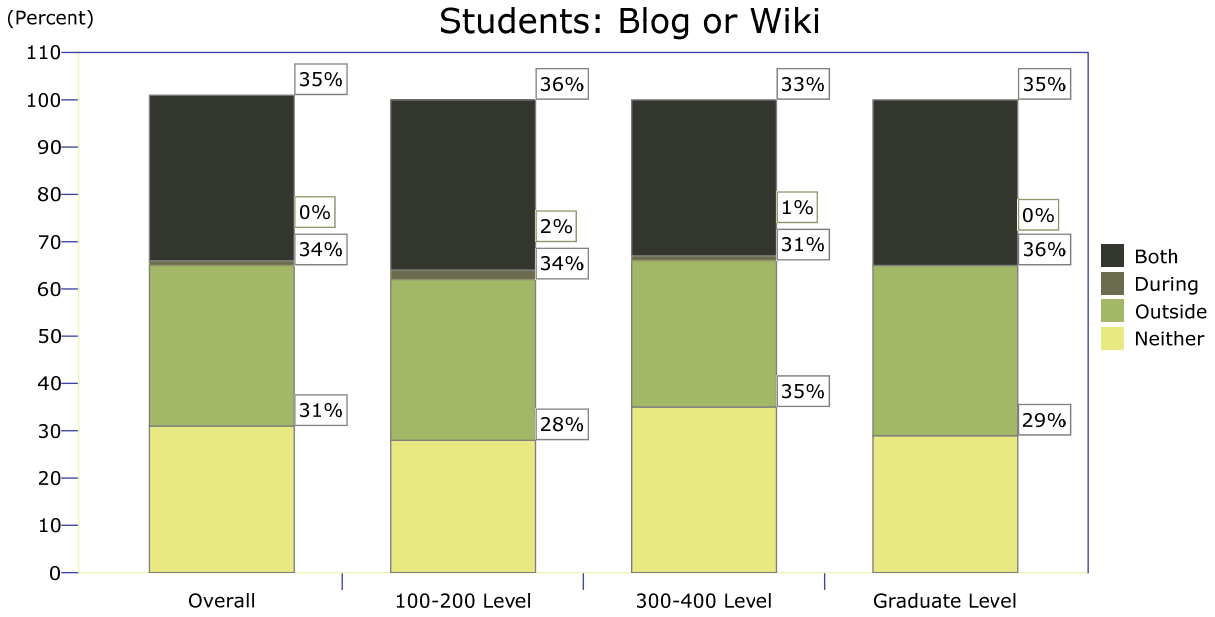
Note that the categories for the tables which follow are different – they represent answers of both during and outside of class, during class, outside of class, and neither. Hence, the most important data is yellow, indicating the respondent felt the technology should not be part of a top notch in person course. About 10% of students felt that class lists were not important, as did between 2% and 17% of instructors. Graduate level instructors almost universally answered that posting class lists with emails online should be part of in person courses.



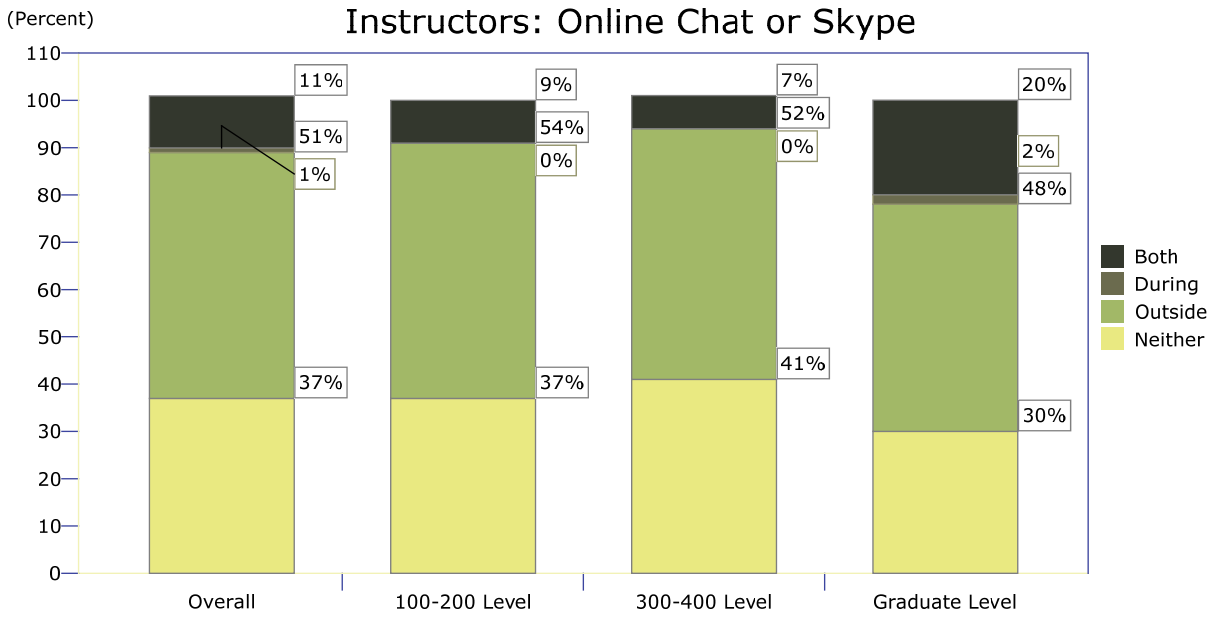


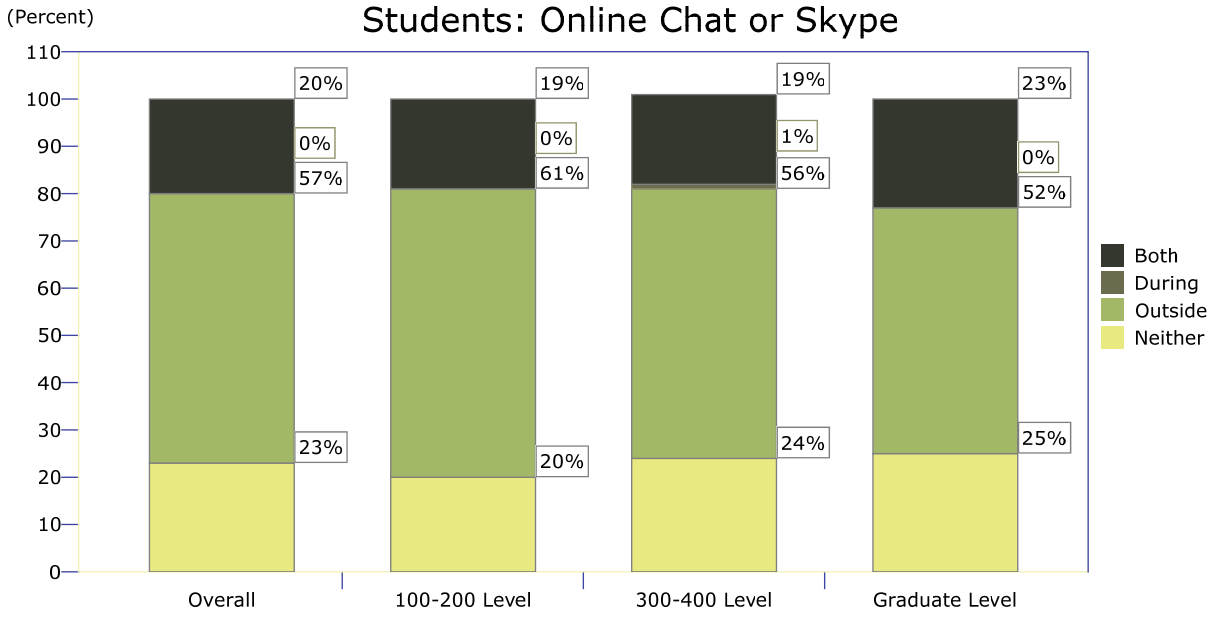
Slightly less than one third of instructors and students felt that blogs or wikis should NOT be part of an in person course. Graduate level instructors were especially likely to expect to use this tool.



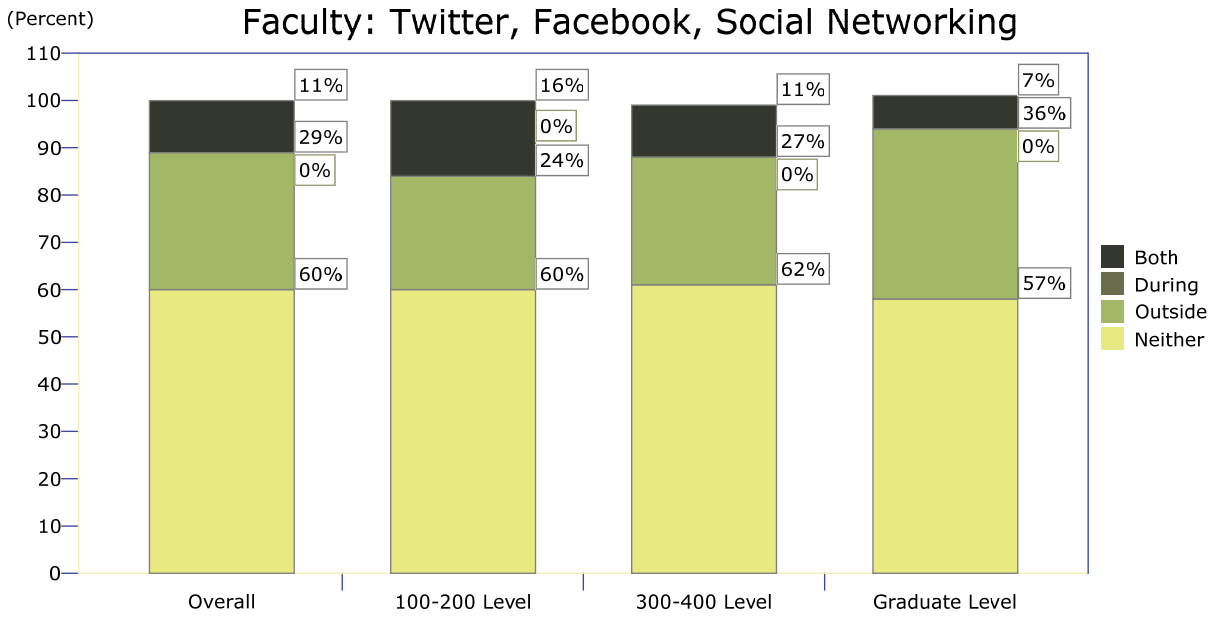


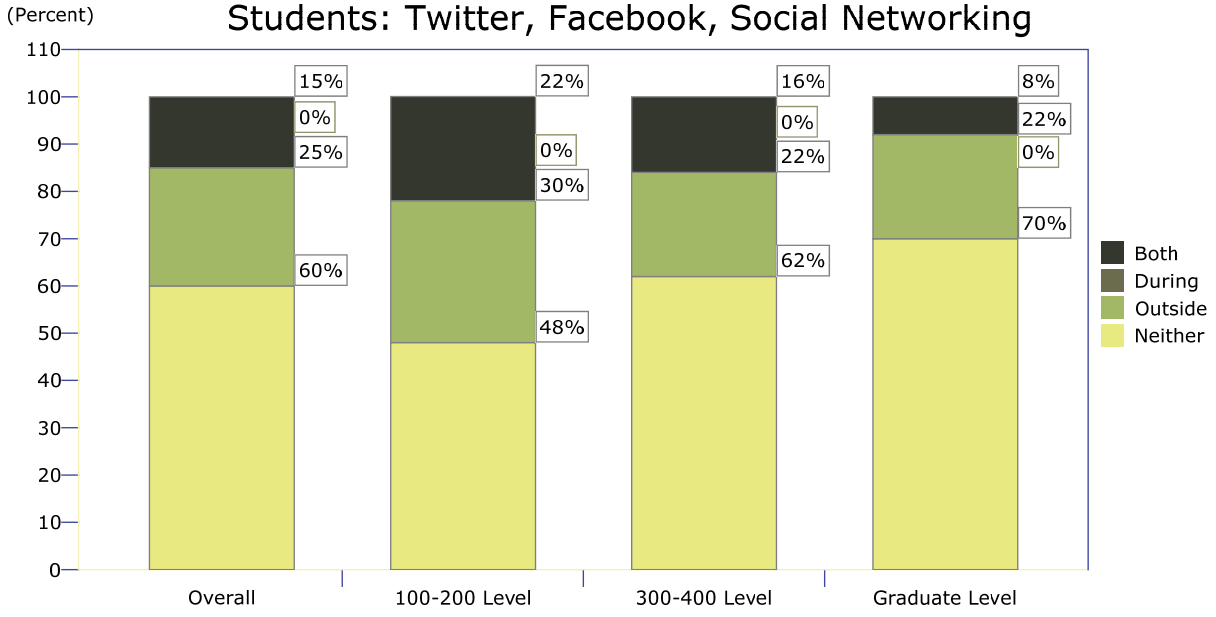
Between 30% of 37% of instructors felt that online chat or Skype had no place in a high quality, in person course, as did 20% to 25% of students.





Sixty percent of instructors and students overall did not believe social networking tools have a place in a high quality in person course. For instructors, this view did not vary by course level. However, students rating ideal 100-200 level in person courses were the most positive about these tools (52% would expect them to be used), where as graduate level students were the least positive (30% expected them to be used either during class, outside of class, or both).





Students Social Networking: $\chi^2=28.27$, df=4, p=.000

Instructor Class Discussion Ratings by College

Neither class discussion nor group work pedagogical approaches were significantly different by college. However, the sample size was very small for these comparisons, so differences would need to be large to be significant. Natural Science was less oriented towards group work than Arts and Letters, Comm Arts, or Social Science, but they were more likely to make use of online chat or Skype. Comm Arts was the most enthusiastic about social networking technologies, with 63% of instructors expecting to use them in a high quality in person course.

Instructor Class Discussion Pedagogy and Technology Comparisons by College

	A&L	CAS	NS	SS	F	p
Class Discussion[1]	1.8	1.6	1.5	1.6	n.s.	
Group Work[1]	1.3	1.2	0.7	0.9	n.s.	
Online Class List[2]	95%	81%	73%	89%		
Blog or Wiki or Forum[2]	79%	69%	57%	68%		
Online Chat or Skype[2]	55%	63%	73%	61%		
Twitter, Facebook, or Social Network[2]	38%	63%	36%	42%		

(1 - average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable
2 - % who answered that each learning technology would be used in a top-notch in person course, either during or outside of class)

Computer Access for an In Person Class

Overall Instructor Values

Very few instructors considered student access to computers related to a live, in person class to be essential. Only 14% of instructors felt that student internet access during class was essential and only 10% felt it was essential for students to bring laptops to class. Only 4% said it was essential for the university to provide a computer for each student during class.
On the other hand, 39% of instructors thought it was essential for students to have access to a computer lab outside of class. Sixteen percent needed server space for each student to store their work.

Student Computer Use: Classroom
14% STUDENT INTERNET
10% BRING LAPTOPS
04% PROVIDE COMPUTERS

Student Computer Use: Outside of Class
39% COMPUTER LAB ACCESS
16% STUDENT SERVER SPACE

Instructor- Student Computer Access Comparisons

Instructors and students were not different in their relatively low expectation of needing server space for each student. Students were significantly more enthusiastic about students having internet access during live class than were instructors.

Instructor and Student Computer Access Comparisons

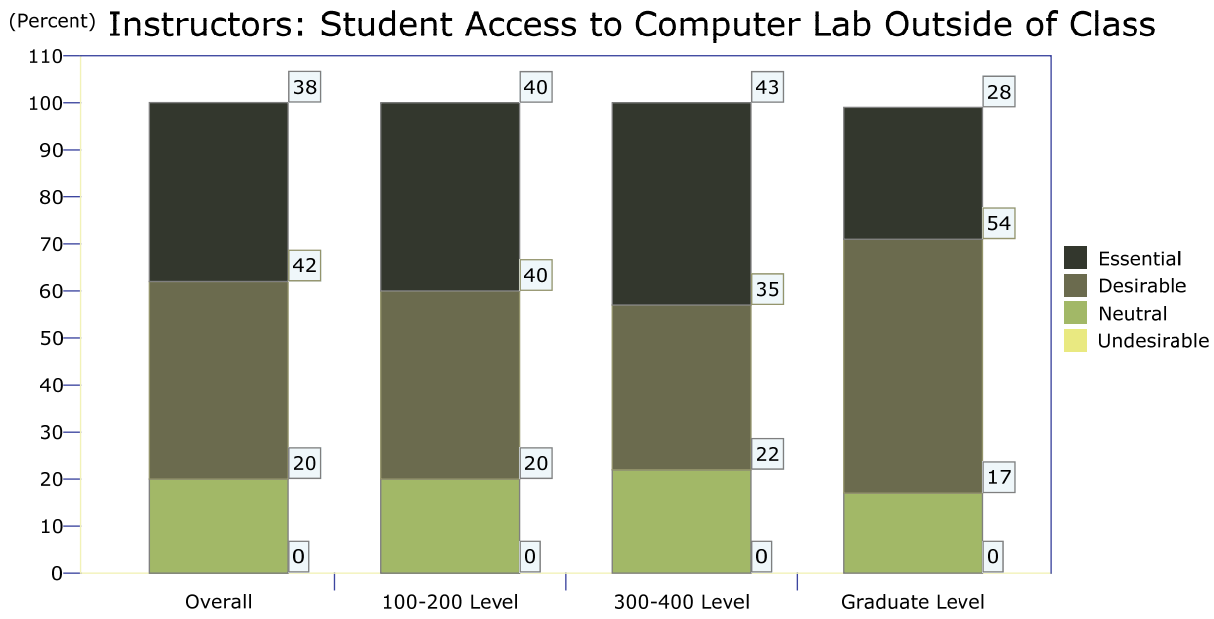
	Instructors	Students	F	p
Server space for each student	0.7	0.8	n.s.	
Student internet access during live class	0.3	0.8	1.99	.000

(average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

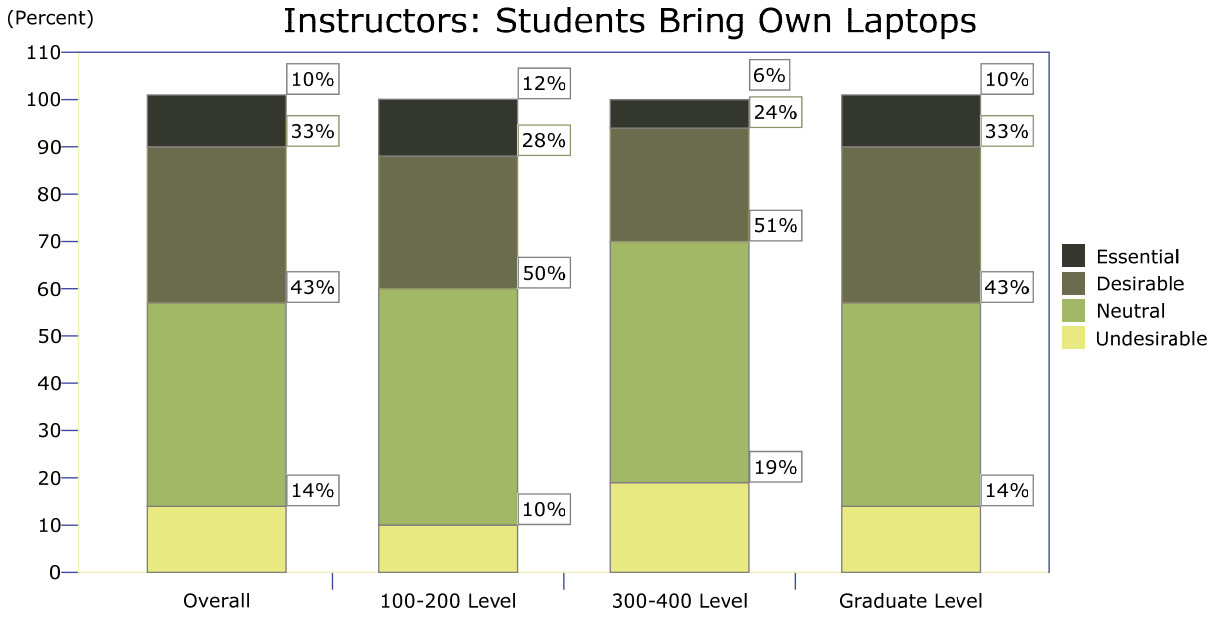
Instructor – Student Computer Access Ratings by Course Level

Three of the questions related to student computer use were asked only of instructors: whether students need access to a computer lab outside of class, whether students should be provided with computers during class, and whether students need to bring laptops to class. 80% of instructors considered it either essential or desirable for students to have access to a computer lab for course-related activities outside of class.

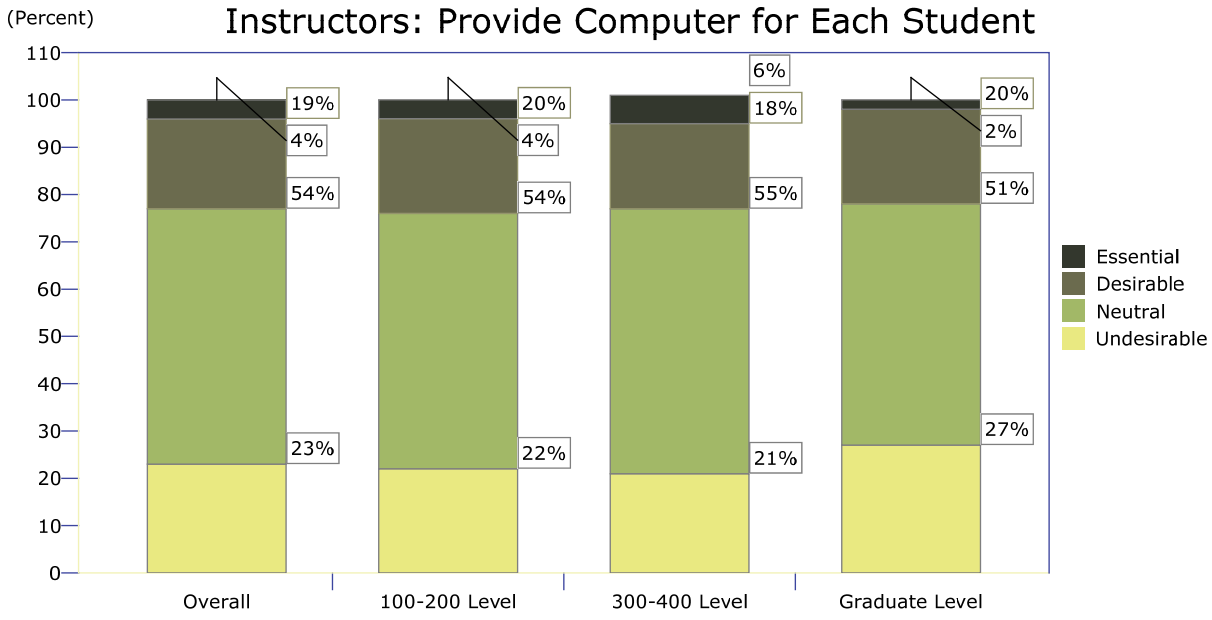
The tables that follow show computer access breakdowns for instructors, and when available, for students overall and by course level.



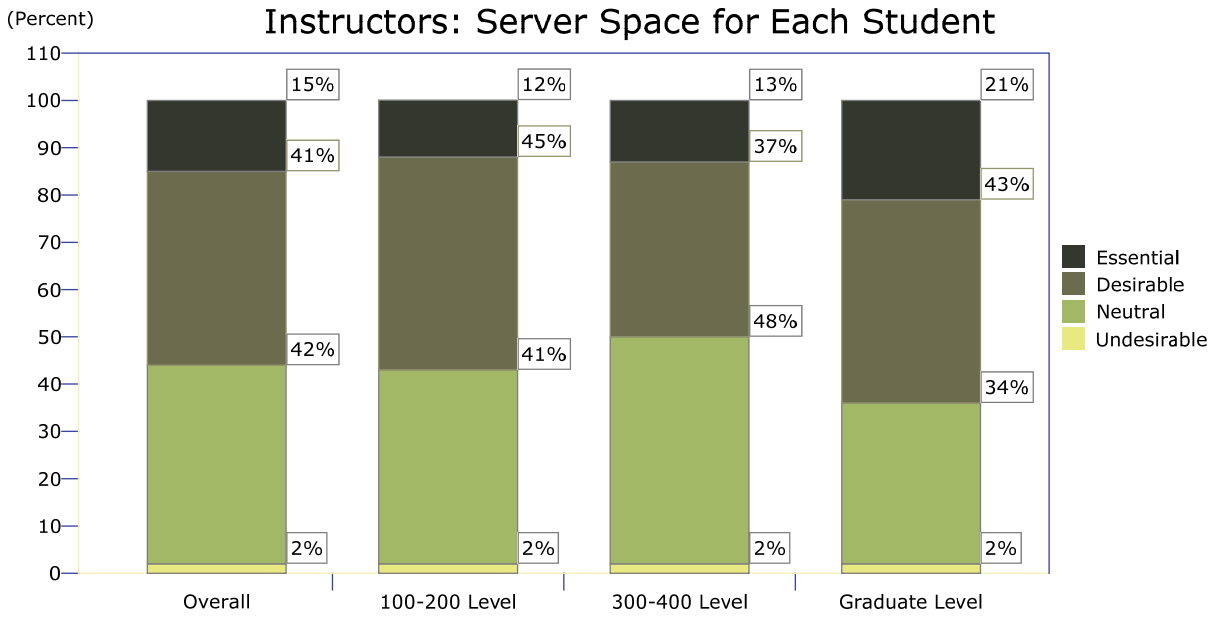
Less than half of instructors wanted students to bring their own laptops to class; only 10% felt this was essential, and 14% even thought it would be undesirable for students to use laptops during live class.

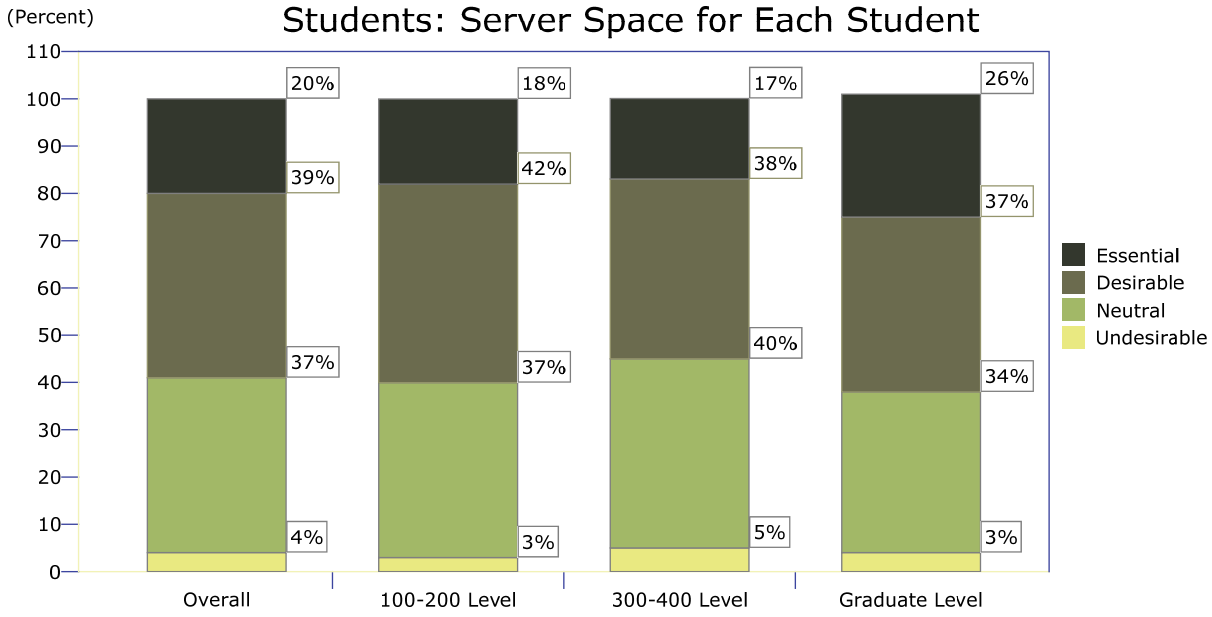


There was even less enthusiasm for having computers provided for each student – only 4% felt this was essential, and a total of 23% considered it either essential or desirable.

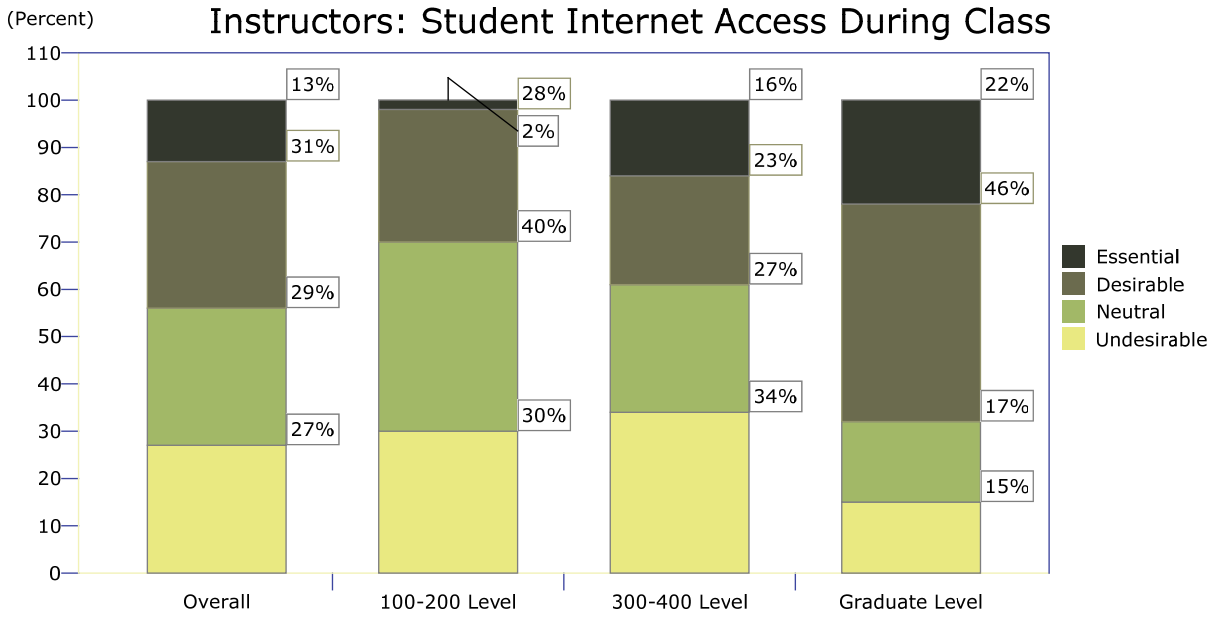


Both instructors and students were asked about server space and internet access. Instructors and students had very similar expectations regarding server space for each student: only 15% of instructors considered this essential, as did 20% of students. Respondents were nearly evenly divided between whether server space for each student was desirable or neutral.

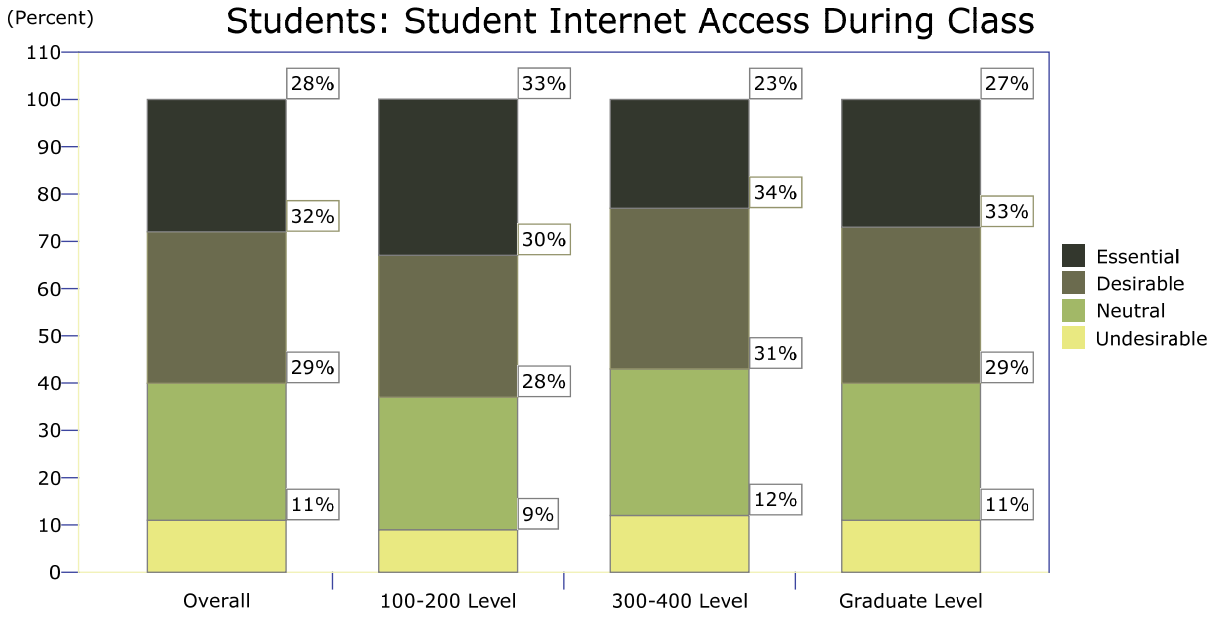




Sixty percent of students rated internet access either desirable or essential, compared to 44% of instructors. There were significant differences by course level among instructors. Graduate level courses were most likely to want or expect students to access the internet during live class, and 100-200 level instructors were least likely to want this. In fact, between 30% of non-graduate instructors considered student internet access during class to be undesirable.



Instructors: Student Internet Access during Class, χ^2=20.21, df=6, p=.002



Instructor Computer Access Ratings by College

Instructors' expectations about student internet access during live class and the need for server space for each student were not significantly different by college. However, Communication Arts and Sciences instructors seemed considerably more enthusiastic about student internet use during class than did Arts and Letters, Natural Science, or Social Science instructors.

Instructor Computer Access Comparisons by College

	A&L	CAS	NS	SS	F	p
Server space for each student	0.8	0.8	0.4	0.6	n.s.	
Student internet access during live class	0.3	0.8	0	0.1	n.s.	

(average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

Interactive Software for In Person Courses

Overall Instructor Values

Between half and three quarters of instructors considered each of five interactive software applications essential components of a top-notch, in person course. Since these same instructors mostly did not expect students to be using computers during class, presumably these software tools would be used outside of class. Nearly four fifths of instructors rated online quizzes or exams essential, and that same number considered student use of Google Docs essential. It is not clear whether these responses referred specifically to the set of applications known as "Google Docs" (a suite of tools that currently includes word processing, presentations, spreadsheets, forms, and drawings) or if they were considering any Google application or tool when they answered.

More than half (63%) of instructors expected games or simulations to be used during live class, outside of class, or both, and about half considered portfolio software and/or LON CAPA or other interactive online problem sets essential.

Interactive Software
79% ONLINE QUIZ OR EXAM
79% GOOGLE DOCS
63% GAMES OR SIMULATIONS
56% PORTFOLIO SOFTWARE
54% LON-CAPA OR INTERACTIVE PROBLEMS

Overall Instructor – Student Interactive Software Comparisons

Students were not asked about online quizzes or exams. Instructors were more enthusiastic about Google Docs (79%) than were students (67%), although a substantial majority of each felt that Google Docs should be used in conjunction with in person courses. Students were

more enthusiastic about LON CAPA/online problem sets (65%) than were instructors (54%), although a majority of each felt online problem sets should be part of in person courses. Students and instructors valued games or simulations and portfolio software about equally.

Instructor –Student Interactive Software Rating Comparisons

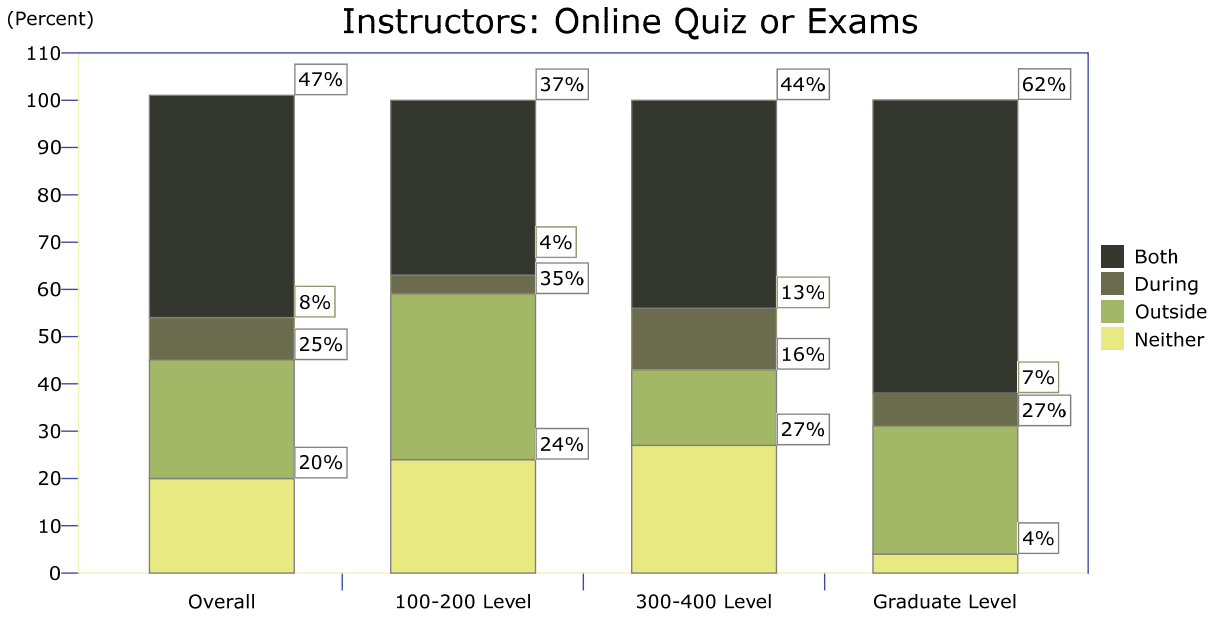
	Instructors	Students
Online Quiz/Exams	79%	n.a.
Google Docs	79%	67%
Games or Simulations	63%	64%
Portfolio Software	56%	58%
LON CAPA / Online Problem Sets	54%	65%

(% who answered that each learning technology would be used in a top-notch in person course, either during or outside of class)

Instructor and Student Interactive Software Ratings by Course Level

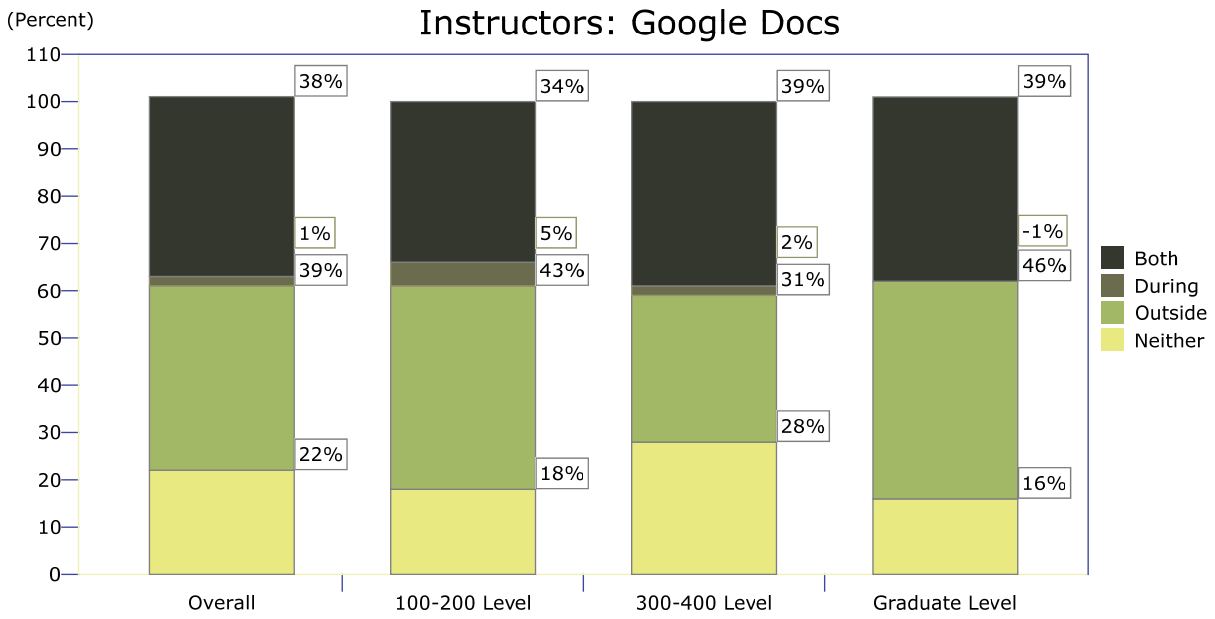
Instructors of graduate level courses were significantly more likely to expect to use online quizzes or exams as part of a top-notch in person class (96%) than were instructors of lower level courses (73% to 76%).

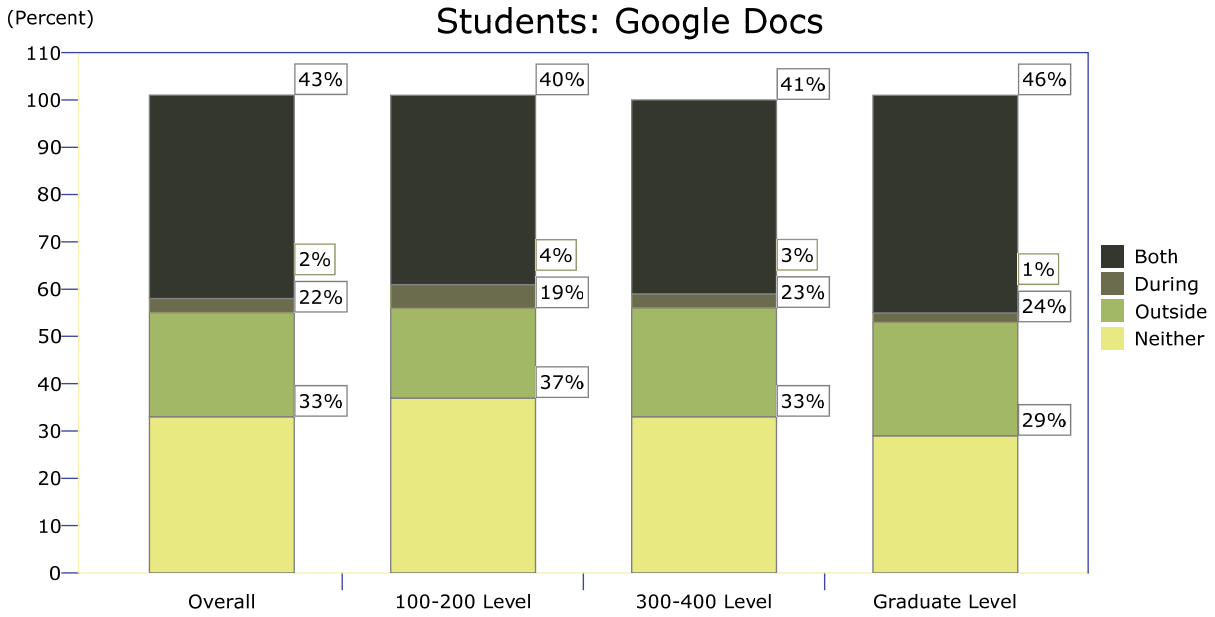
The tables that follow show interactive software response breakdowns (neither, outside of class, during class, or both) for instructors, and when available, for students, overall and by course level.

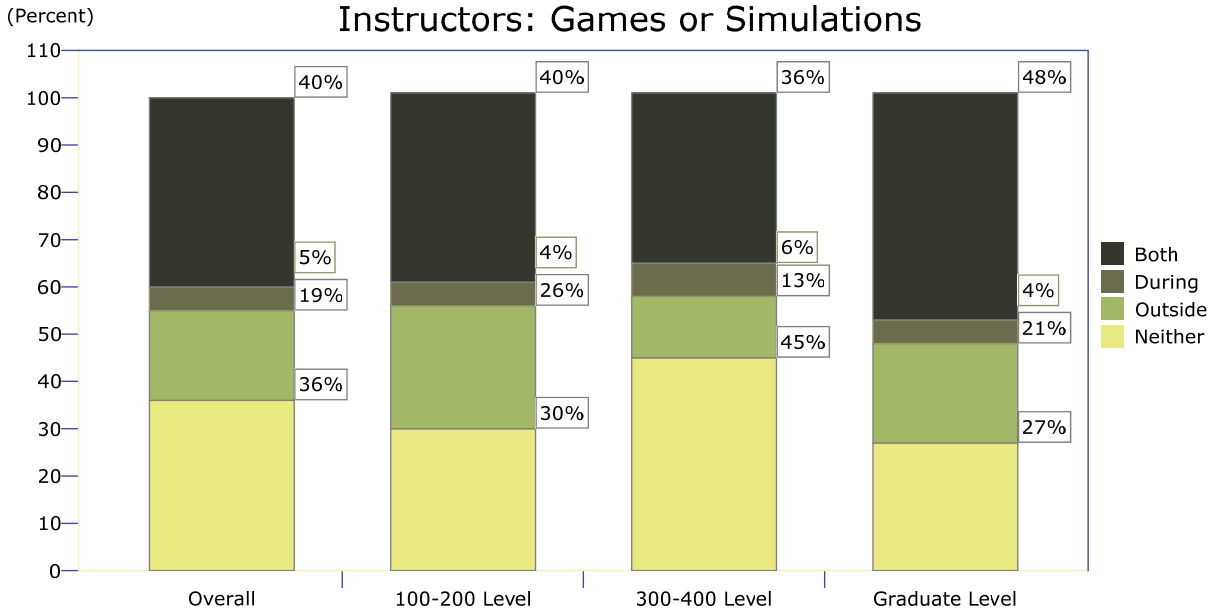


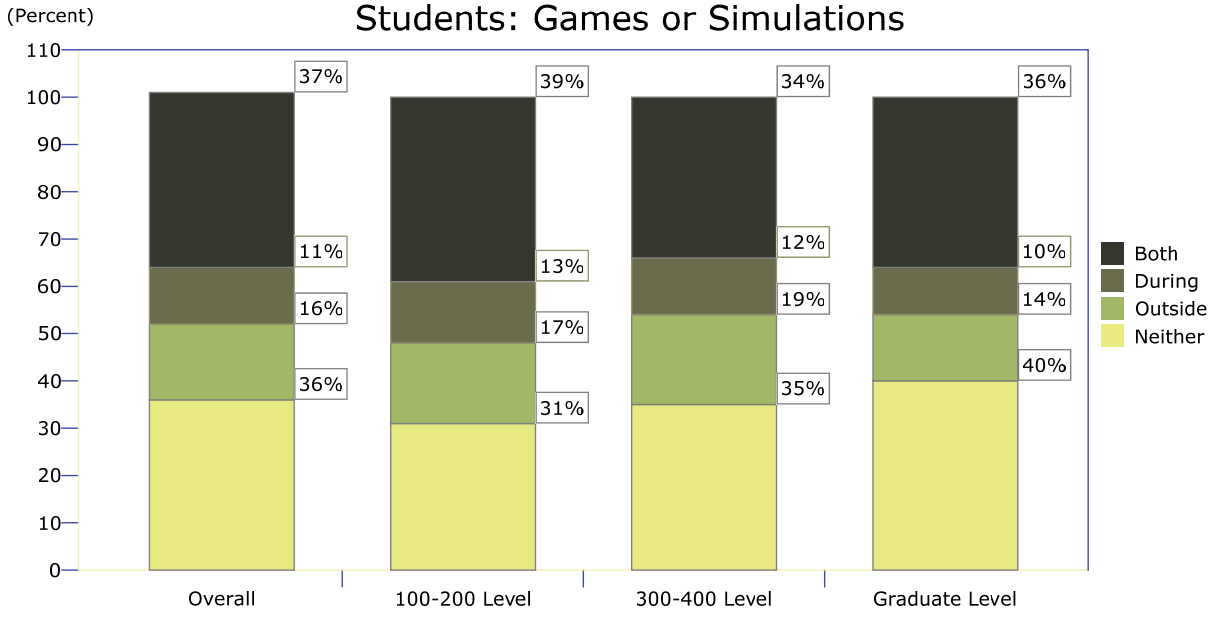
Instructors Online Quiz or Exams: χ^2=17.31, df=6, p=.008

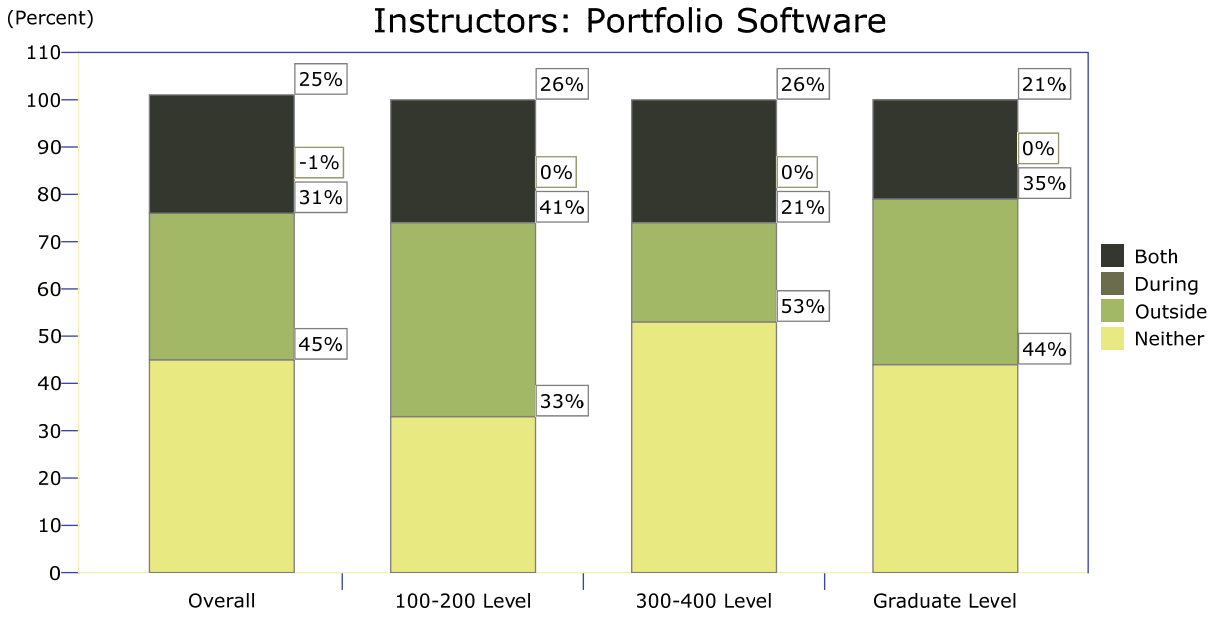
None of the other comparisons by course level of interactive software was significantly different for instructors or students.

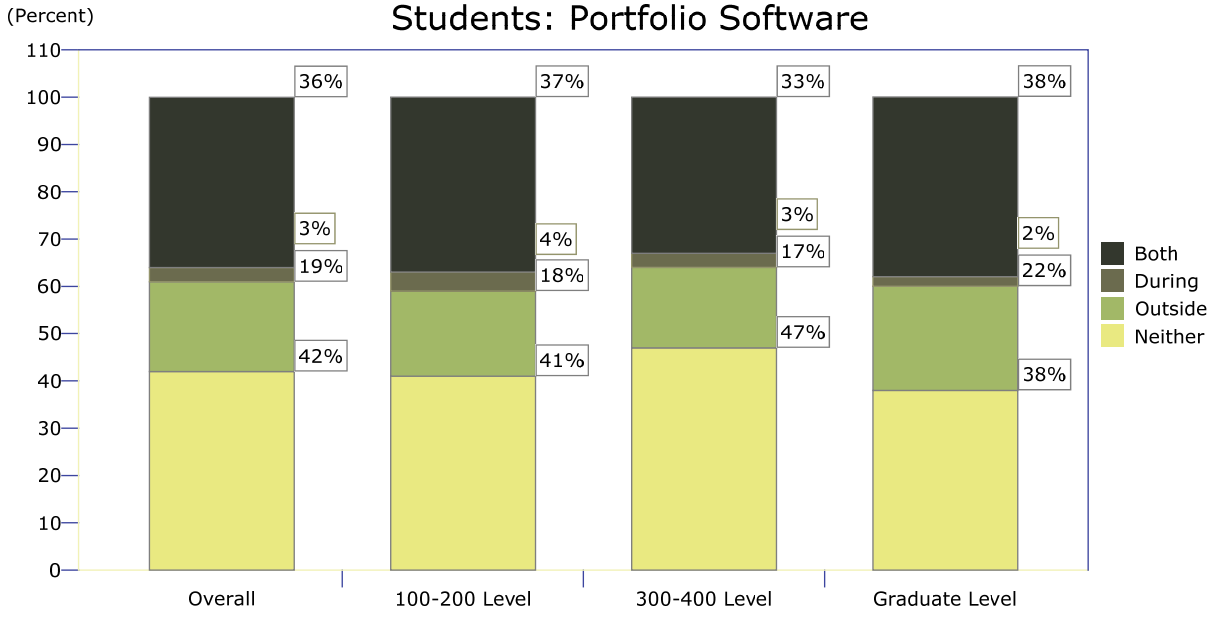


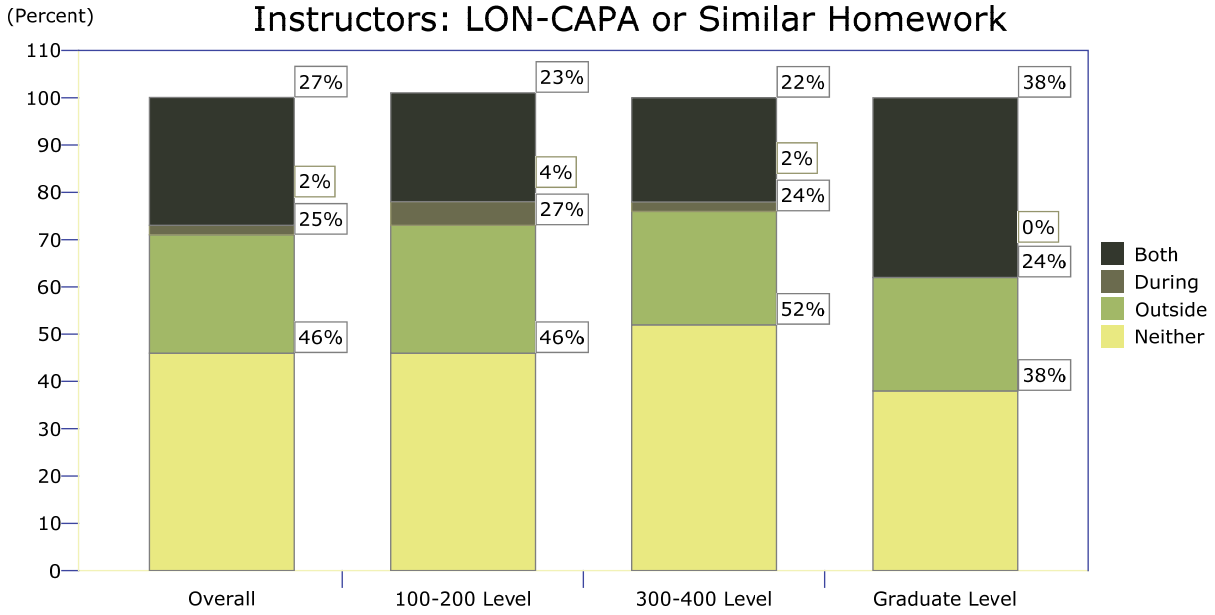


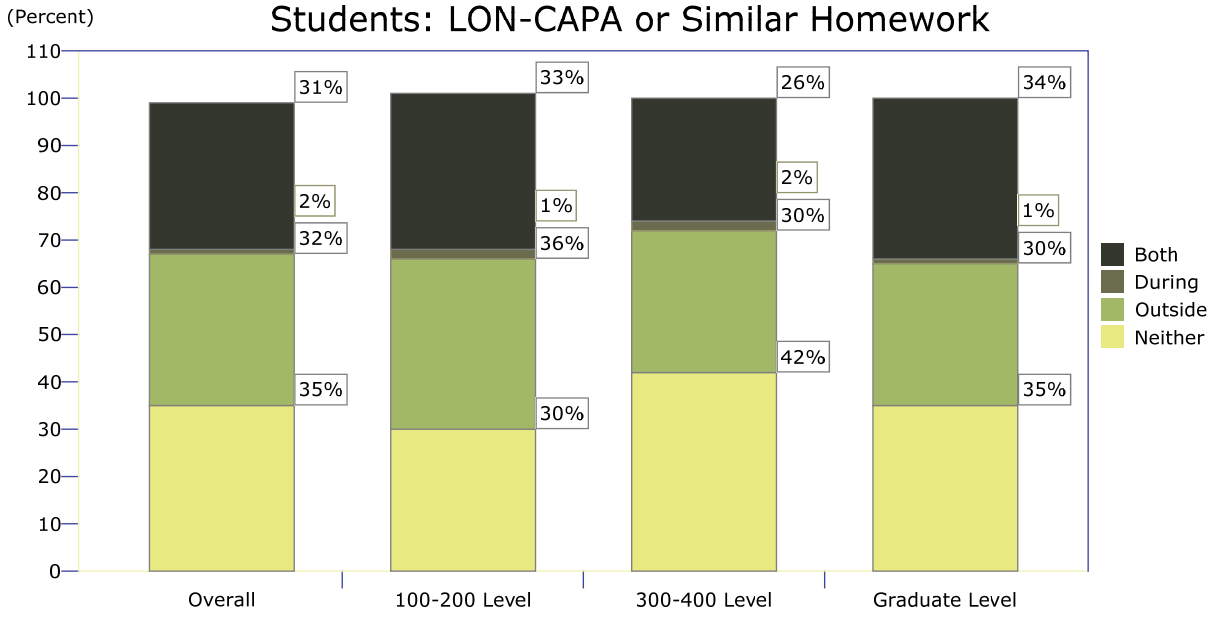

Instructors: Games or Simulations
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
40%
5%
19%
36%
40%
4%
26%
30%
36%
6%
13%
45%
48%
4%
21%
27%
Overall
100-200 Level
300-400 Level
Graduate Level
Both
During
Outside
Neither


Students: Games or Simulations
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
37%
11%
16%
36%
39%
13%
17%
31%
34%
12%
19%
35%
36%
10%
14%
40%
Overall
100-200 Level
300-400 Level
Graduate Level
Both
During
Outside
Neither


Instructors: Portfolio Software
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
25%
-1%
31%
45%
26%
0%
41%
33%
26%
0%
21%
53%
21%
0%
35%
44%
Overall
100-200 Level
300-400 Level
Graduate Level
Both
During
Outside
Neither


Students: Portfolio Software
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
36%
3%
19%
42%
37%
4%
18%
41%
33%
3%
17%
47%
38%
2%
22%
38%
Overall
100-200 Level
300-400 Level
Graduate Level
Both
During
Outside
Neither


Instructors: LON-CAPA or Similar Homework
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
27%
2%
25%
46%
23%
4%
27%
46%
22%
2%
24%
52%
38%
0%
24%
38%
Overall
100-200 Level
300-400 Level
Graduate Level
Both
During
Outside
Neither


Students: LON-CAPA or Similar Homework
(Percent)
110
100
90
80
70
60
50
40
30
20
10
0
31%
2%
32%
35%
33%
1%
36%
30%
26%
2%
30%
42%
34%
1%
30%
35%
Overall
100-200 Level
300-400 Level
Graduate Level
Both
During
Outside
Neither

Instructor Interactive Software Ratings by College

Communication Arts and Sciences instructors and Arts and Letters instructors were somewhat more likely than were instructors in Natural Science or Social Science to expect to use Google Docs as a component of a high quality in person course. Communication Arts and Sciences instructors were much more likely than were instructors in the other three colleges to use online quizzes or exams, and they were somewhat less likely to expect to use portfolio software. Instructors across the four colleges were fairly similar in their valuing of games or simulations. Natural Science instructors were vastly more likely to expect to use LON CAPA or other online interactive problem sets (93%); about half of Arts and Letters instructors would do so, as would about one third of Communication Arts and Sciences and Social Science instructors.

Instructor Interactive Software Comparisons by College

	A&L	CAS	NS	SS
Google Docs	81%	87%	71%	68%
Online Quizzes/Exams	70%	94%	71%	68%
Portfolio Software	67%	50%	64%	62%
Games or Simulations	55%	60%	64%	62%
LON CAPA or Other Online Problem Sets	47%	33%	93%	34%

(% who answered that each learning technology would be used in a top-notch in person course, either during or outside of class)

Online Learning Links and Course Management Tools

Overall Instructor Values

Instructors universally expect that high quality in person courses will make use of electronic library resources and external web links. Almost all instructors (94%) also expected to find online assigned readings, and 90% considered an electronic course pack or electronic textbook essential. The numbers of electronic textbooks or course packs are surprisingly high. It may be that if respondents were asked specifically whether they prefer online or printed textbooks and course packs, the answers would have been different.

<u>Online Learning Links</u>
99% STUDENT eLIBRARY ACCESS
98% EXTERNALWEB LINKS
94% ONLINE ASSIGNED READINGS
90% eCOURSE PACK or eTEXTBOOK

Nearly every instructor who responded to the survey also expected that instructors of high quality in person courses would regularly send emails to students in the class. The survey asked about five other common course management system (CMS) tools. Slightly more than half of instructors rated password protected course space and posting the course syllabus online as essential. Roughly 40% of instructors considered an online drop box, online course announcements, and an online gradebook essential.

Course Management System (CMS) Tools
100% CLASS EMAILS FROM INSTRUCTOR
57% PASSWORD-PROTECTED SPACE
55% ONLINE SYLLABUS
41% DROPBOX
38% ONLINE ANNOUNCEMENTS
37% GRADEBOOK

Overall Instructor – Student Links and CMS Rating Comparisons

Instructors and students were similar in their ratings of the importance of student use of electronic library resources and incorporation of external web links as part of class. Students were less strongly desirous of online assigned readings or electronic textbooks. Even so, 78% of students wanted online assigned readings, and 82% wanted electronic textbooks or course packs.

Instructor –Student Online Learning Links Ratings Comparisons

	Instructors	Students
eLibrary Resources	99%	93%
External Web Links	98%	94%
Online Assigned Readings	94%	78%
eTextbook/Course Pack	90%	82%

(% who answered that each learning technology would be used in a top-notch in person course, either during or outside of class)

Class emails from the instructor were universally considered essential for high quality in person courses. Student and instructor ratings of the next set of less course management tools were significantly different for four of the five items. Having an online syllabus, online gradebook, and online weekly announcements were significantly more important to students than to instructors. Password protected space was significantly less important to students than to instructors. Online drop boxes were equally important to both groups.

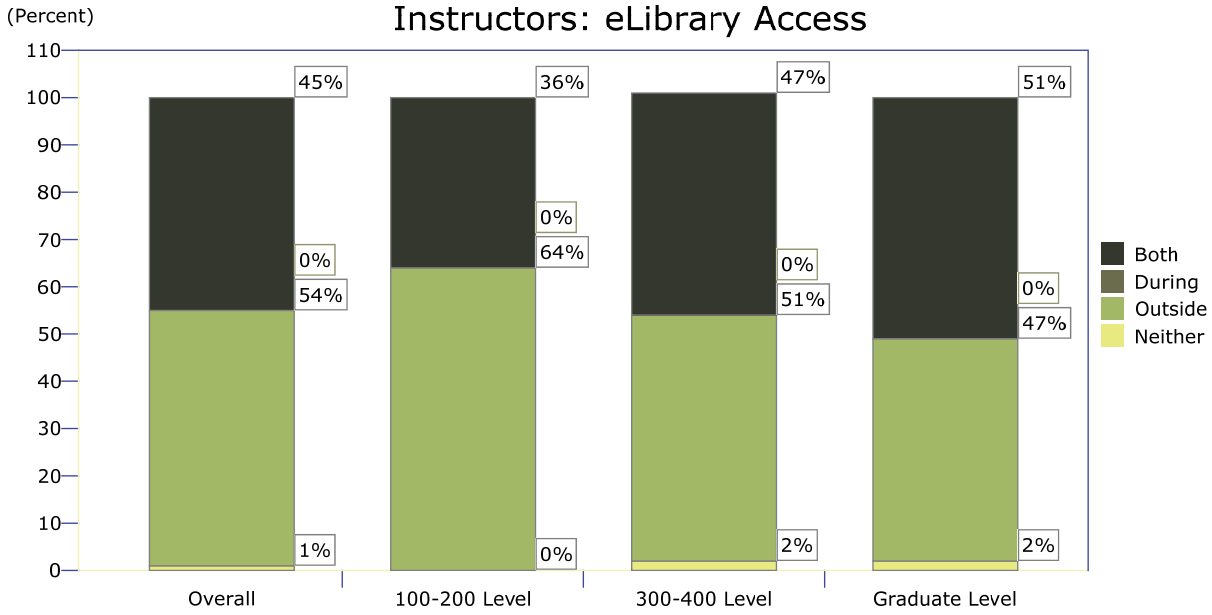
Instructor –Student CMS Tool Ratings Comparisons

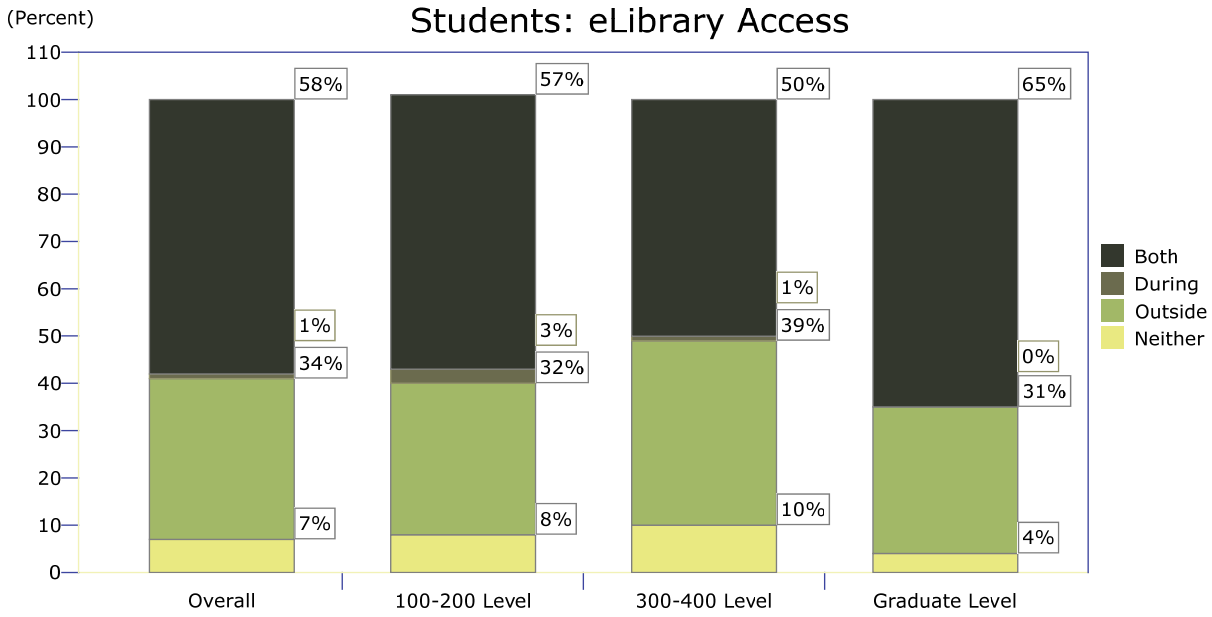
	Instructors	Students	F	p
Instructor Emails[1]	100%	99%		
Password protected course space[2]	1.5	1.1	.65	.000
Online syllabus[2]	1.4	1.7	26.07	.000
Online drop box[2]	1.2	1.2	n.s.	
Weekly online announcements[2]	1.2	1.4	.30	.000
Online gradebook[2]	1.1	1.6	32.74	.000

(1 - % who answered that each learning technology would be used in a top-notch in person course, either during or outside of class
2 - average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

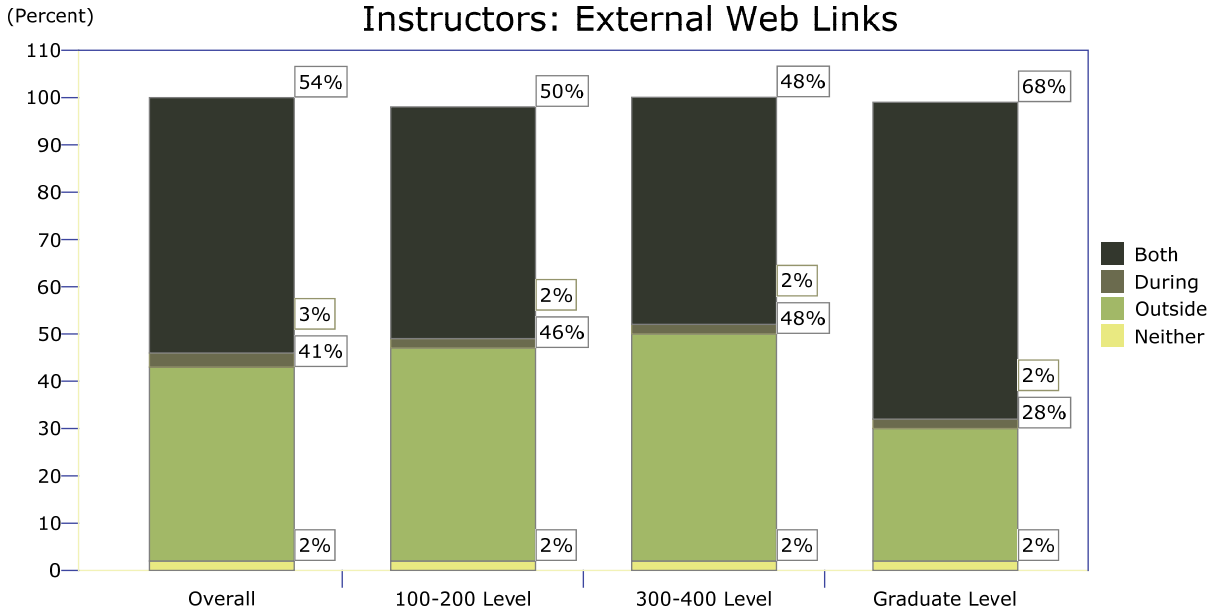
Instructor – Student Online Learning Links and CMS Tools by Course Level

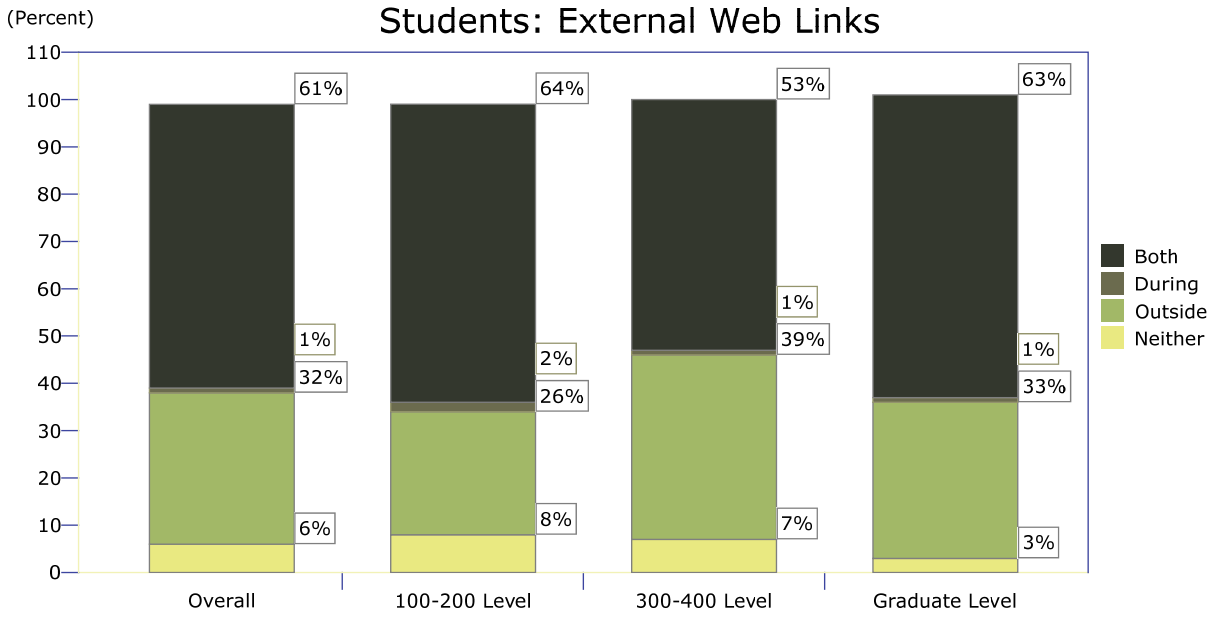
A majority of instructors and students envisioned using external web links during and outside of class rather than merely outside of class. For students, a majority also envisioned using external online library resources both during and outside of class (59%) whilst only 45% of instructors anticipated access to happen both during and outside of class. Graduate level students were significantly more likely to expect to use eLibrary resources both during and outside of class.





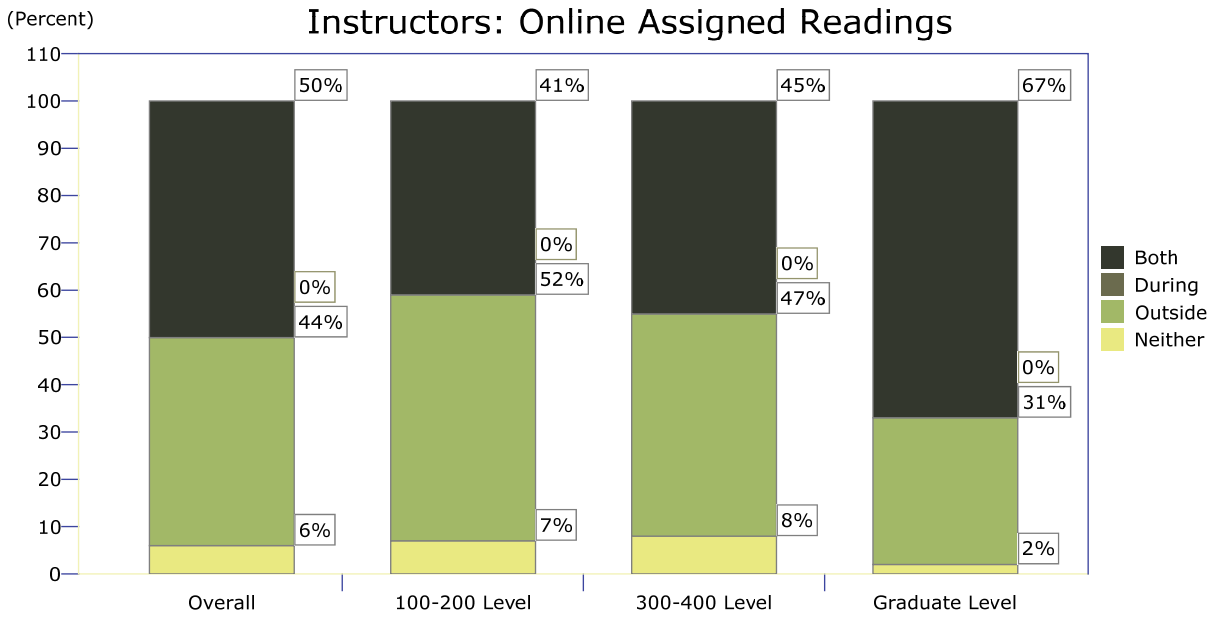
Students eLibrary Access: $\chi^2=17.86$, df=6, p=.007

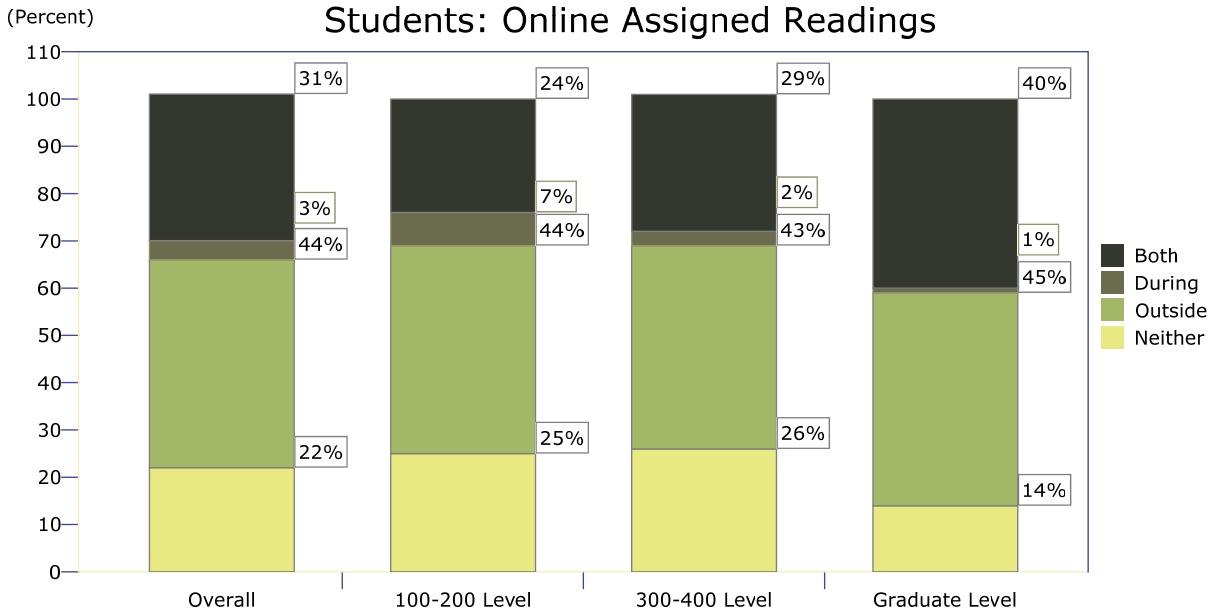




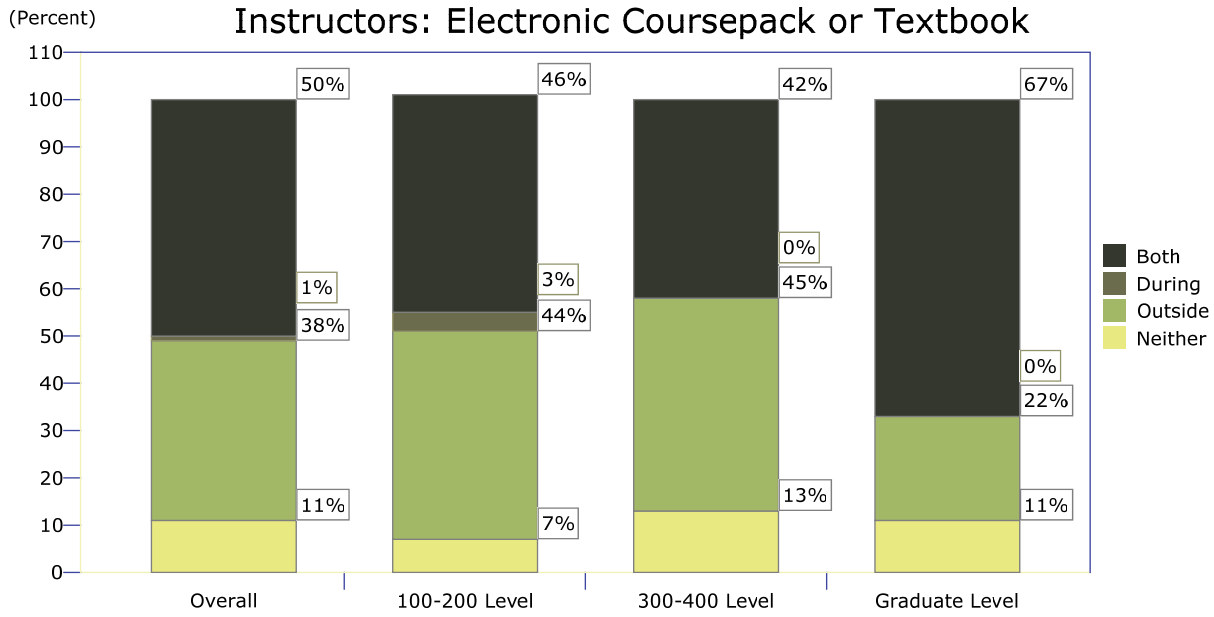
Students External Web Links: χ^2=17.08, df=6, p=.009

Students were slightly more likely to anticipate using an eTextbook both during and outside of class (63%) compared to instructors (52%). Graduate level students were significantly more likely to consider online assigned readings essential, and graduate level instructors showed a similar though non-significant trend.

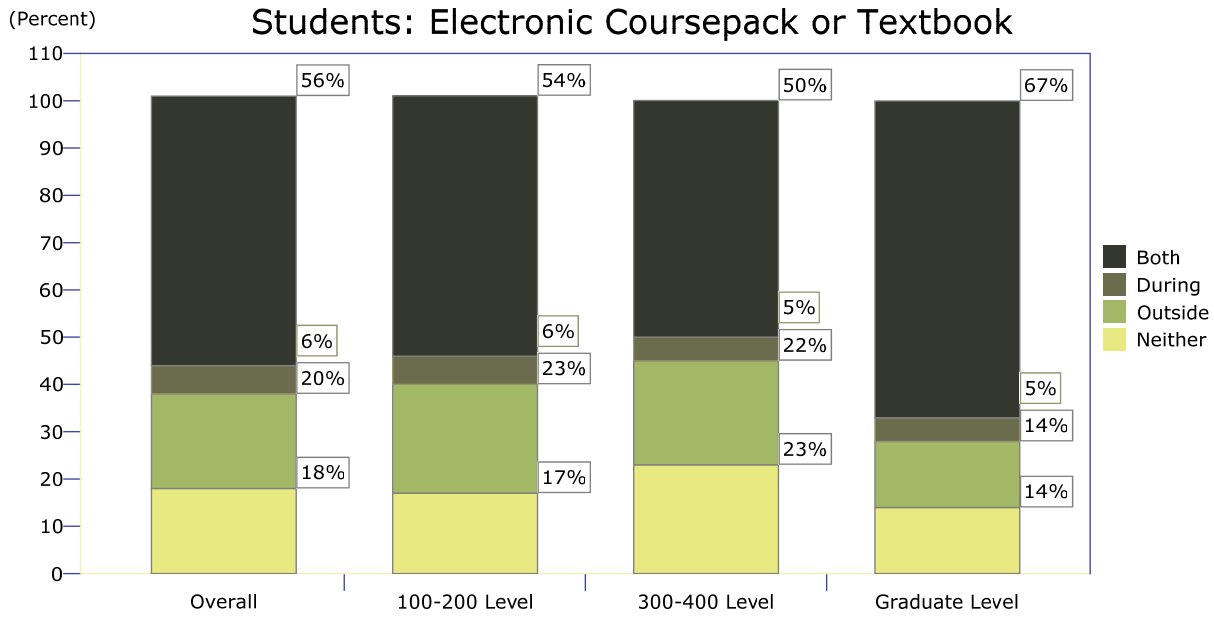




Students Online Assigned Readings: χ^2=29.59, df=6, p=.000

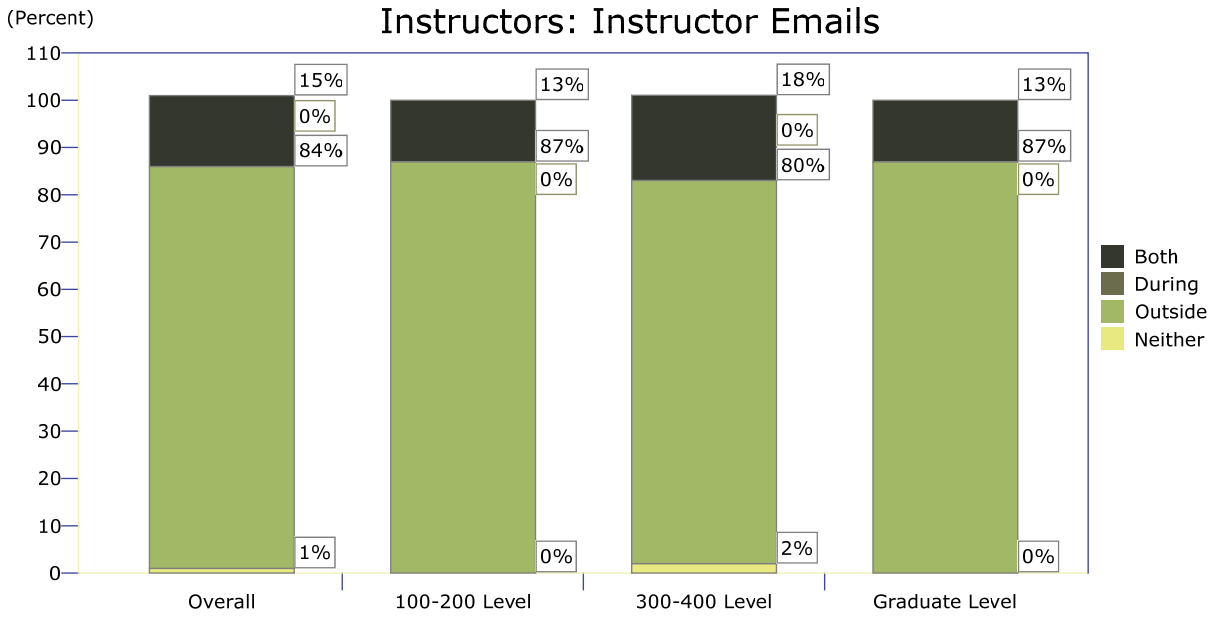


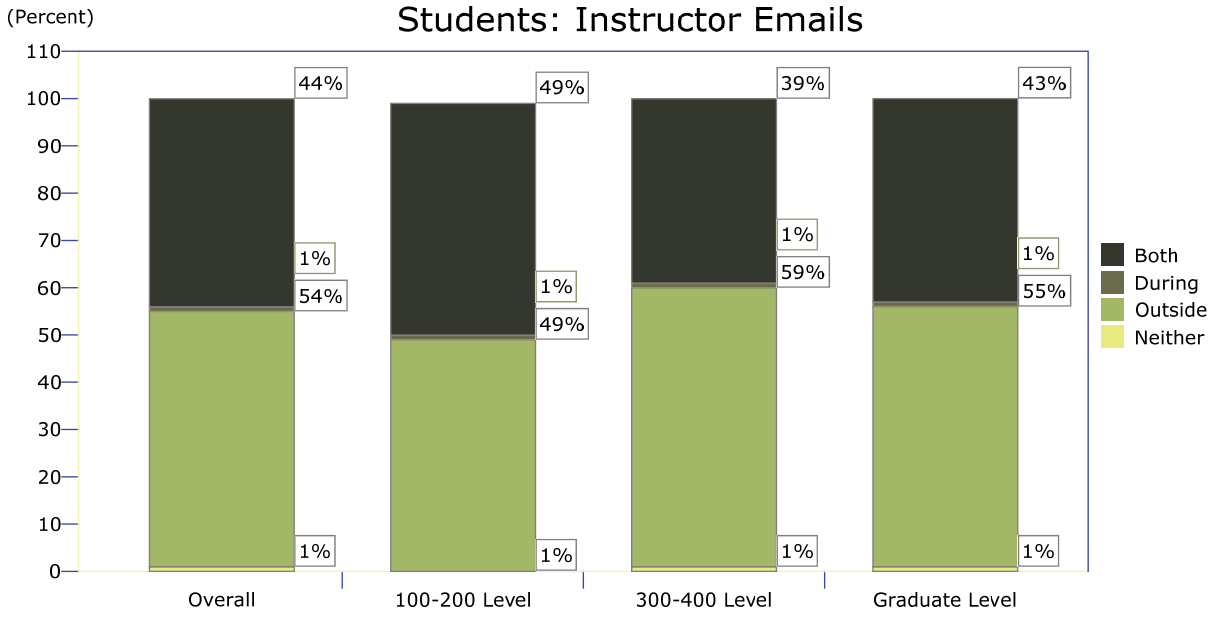
Instructors eTextbook: χ^2=13.32, df=6, p=.038



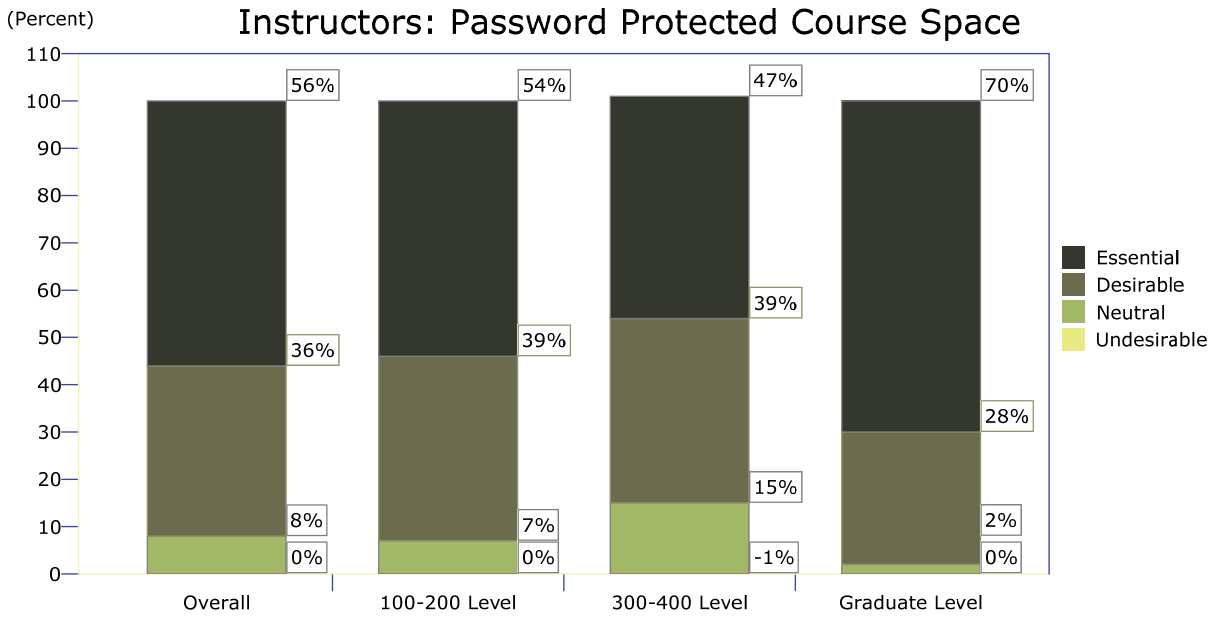
Students eTextbook: χ^2=16.43, df=6, p=.012

Nearly 100% of instructors and students at all three course levels believed instructor emails should be part of a high quality in person course.

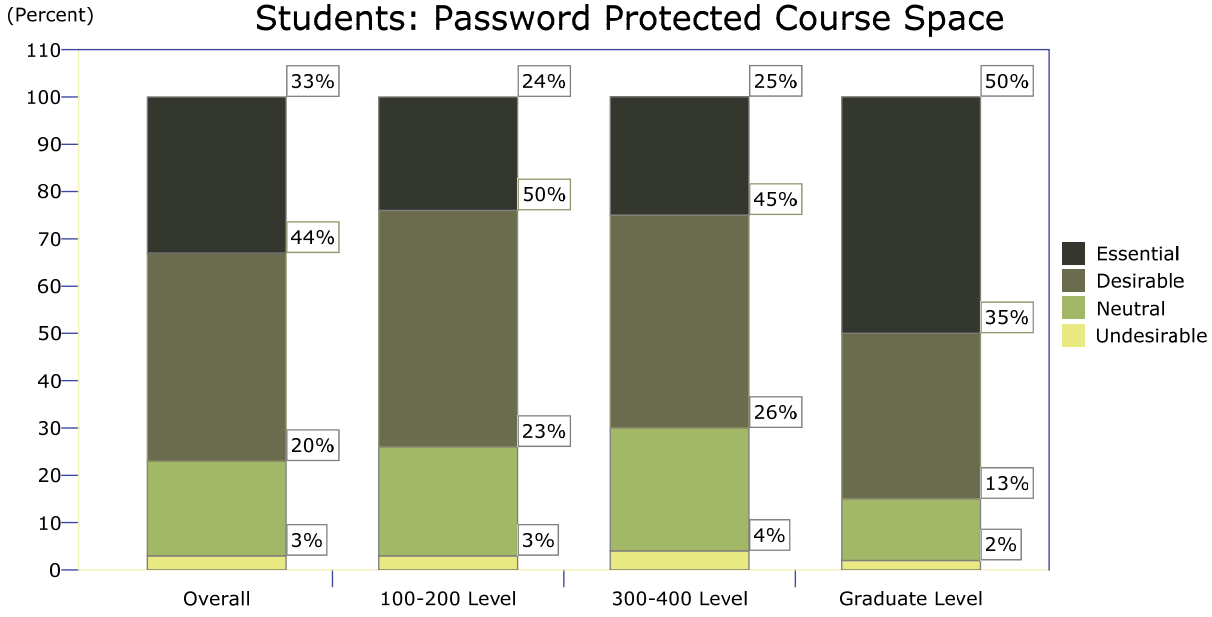




The importance of password protected course space varied significantly by course level for both instructors and students. Specifically, graduate level instructors and students were more likely to consider password protected course space essential. At all three levels, instructors valued password protection more than students did.

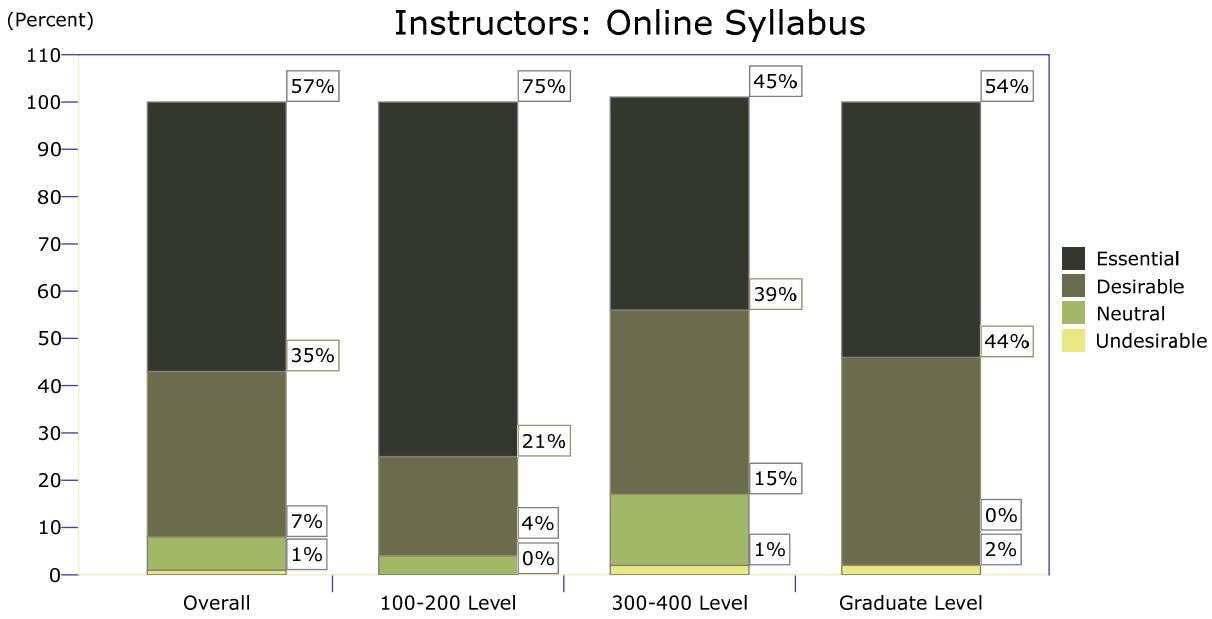


Instructors: Password Protected Course Space, χ^2=8.56, df=4, p=.073

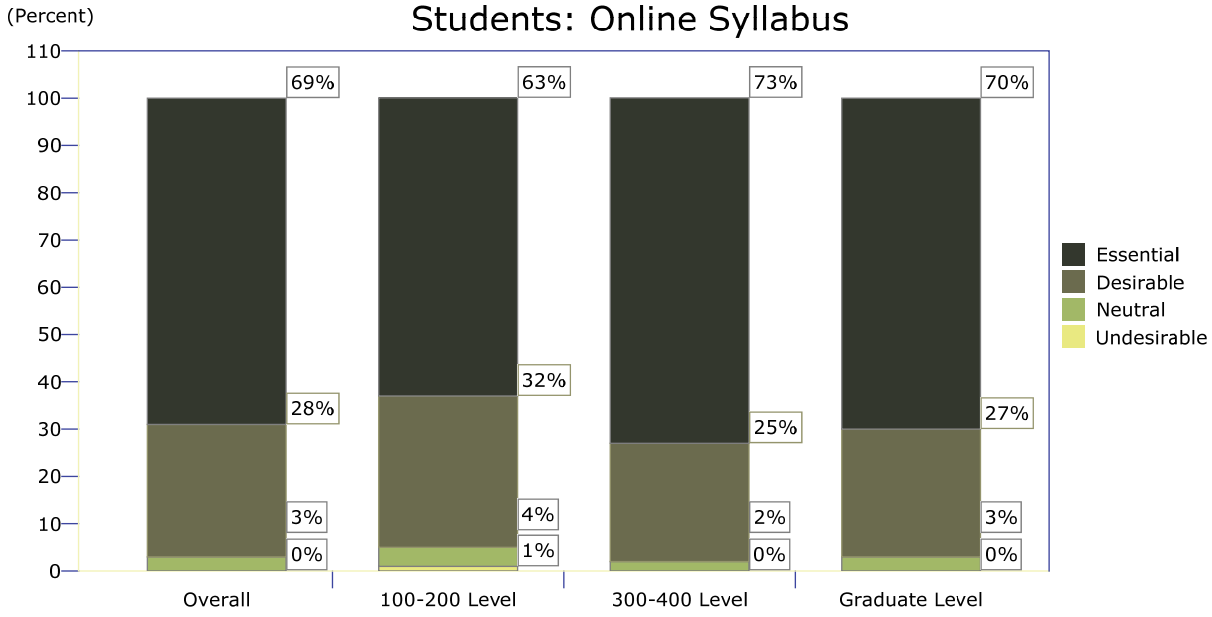


Students: Password Protected Course Space, χ^2=46.24, df=6, p=.000

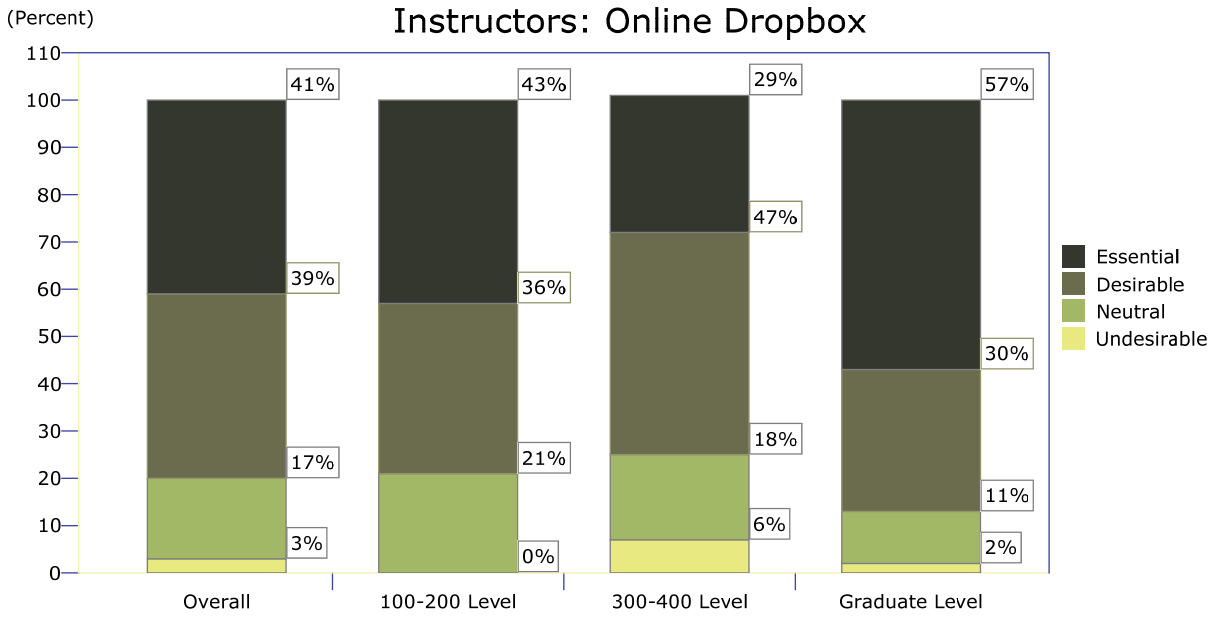
Instructors of 100-200 level courses were significantly more likely than instructors of higher level courses to say that posting a syllabus online was essential. Graduate level and 300-400 level students were much more likely to consider an online syllabus essential than were their instructors.



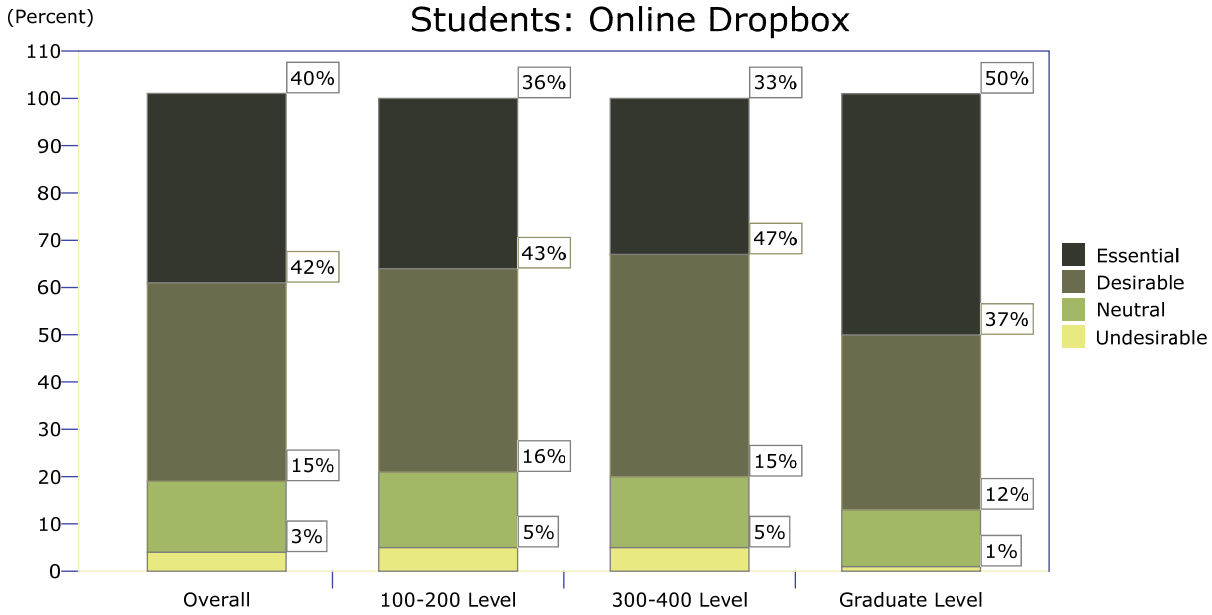
Instructors: Online Syllabus, χ^2=17.39, df=6, p=.000



Graduate level instructors and students each were significantly more likely to say that online drop boxes were essential than were instructors and students of lower level courses.

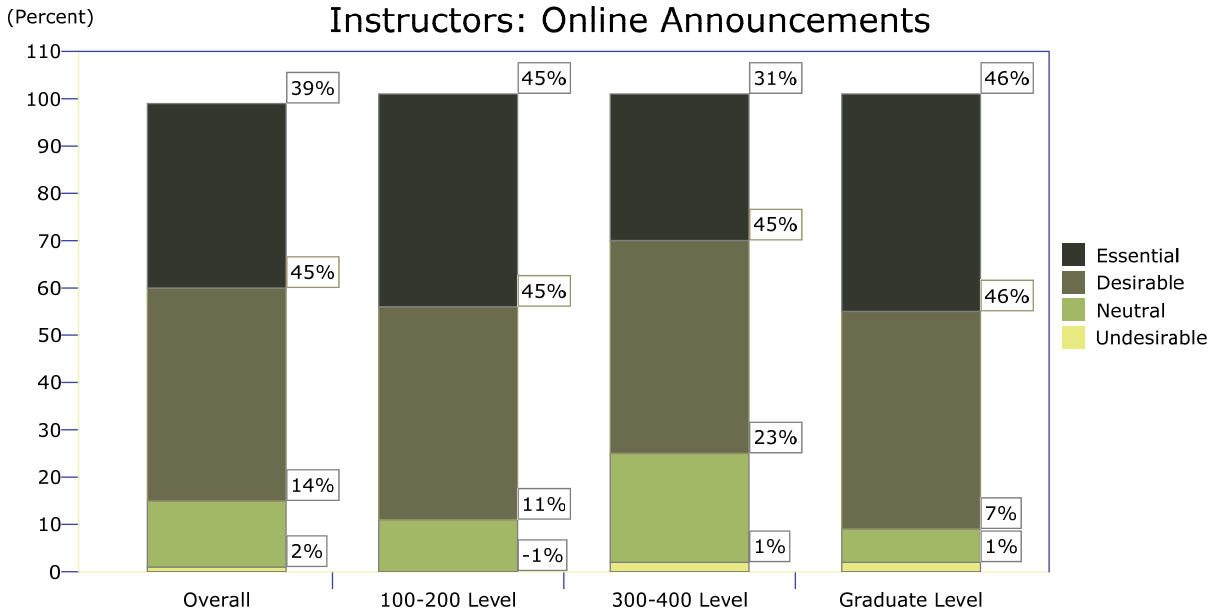


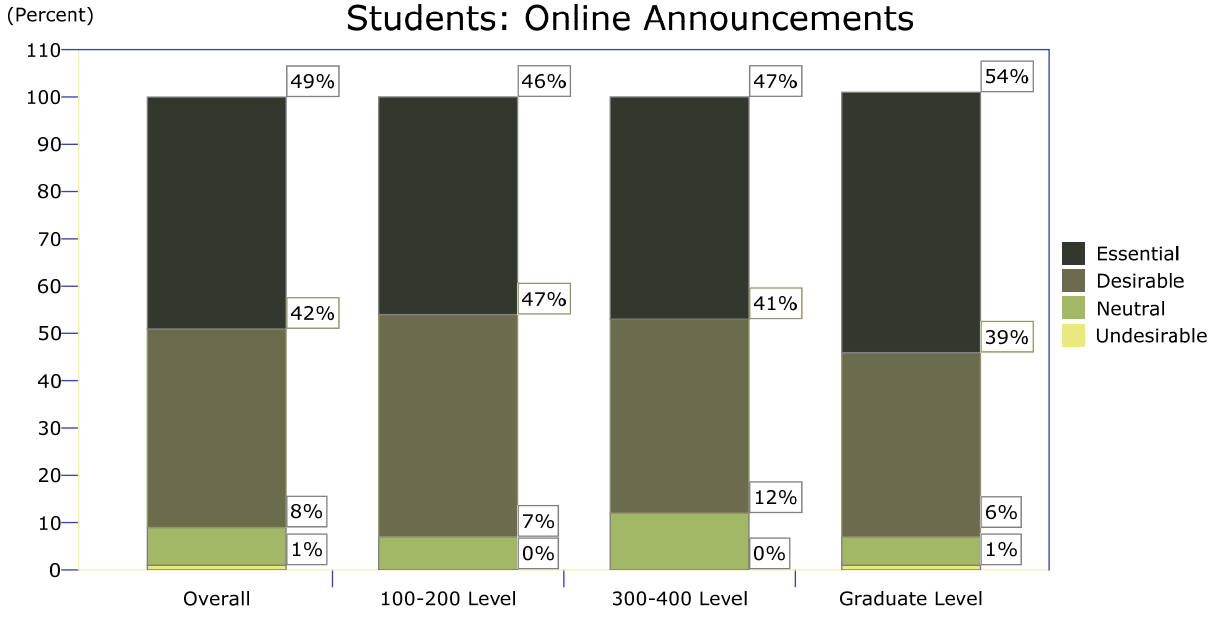
Instructors: Online Drop Box, χ^2=12.03, df=6, p=.061



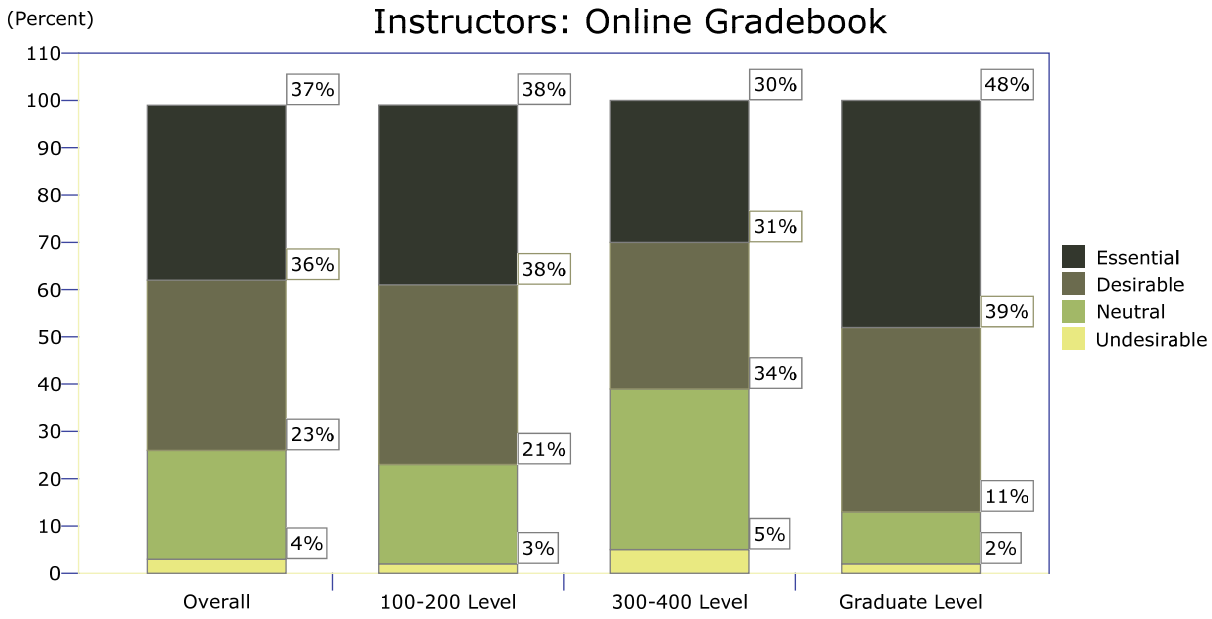
Students: Online Drop Box, χ^2=28.83, df=6, p=.001

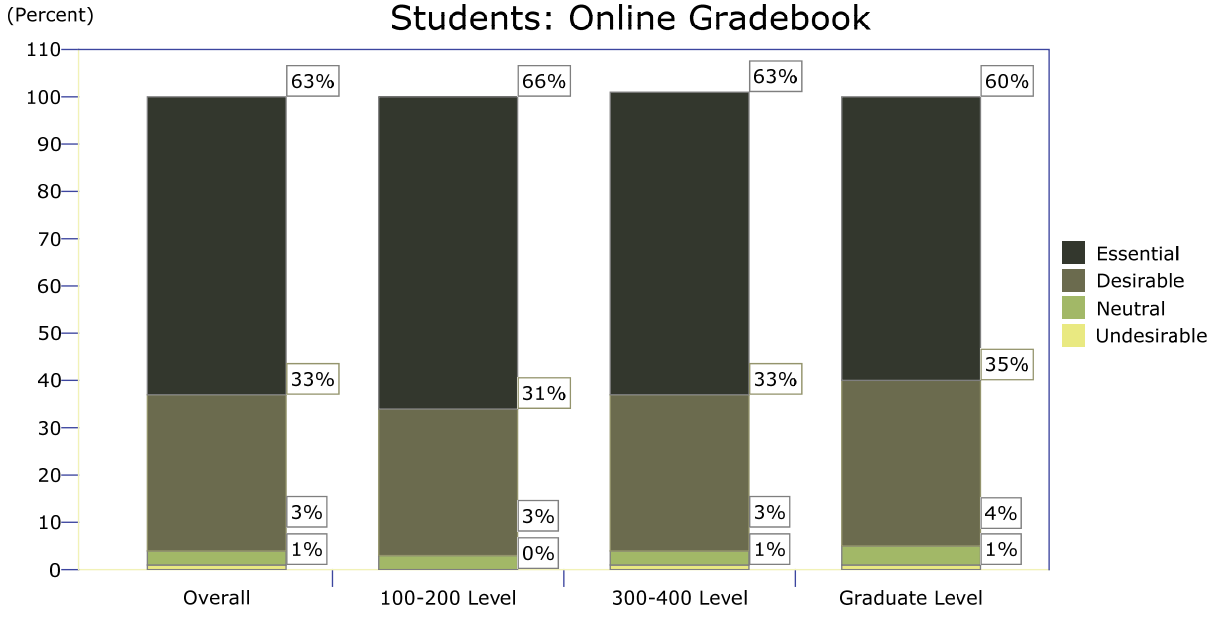
Graduate and 300-400 level students were slightly more likely than instructors to say that weekly online announcements were essential, but generally both instructors and students at all levels saw value in weekly online announcements.





A majority of students at all three course levels felt that online gradebooks were essential. Five percent or fewer students were neutral about online gradebooks or said they were undesirable. Instructors were slightly more than have as likely as students to say that online gradebooks were essential. Overall, 27% of instructors considered online gradebooks neutral or undesirable.





Instructor Links and CMS Tool Ratings by College

There was little variation by college for instructor ratings of the importance of the 5 most ubiquitously important online technologies to support in person instruction.

Instructor Online Learning Links Comparisons by College

	A&L	CAS	NS	SS
eLibrary Access	100%	100%	100%	100%
External Web Links	100%	94%	100%	100%
Assigned Readings Posted Online	90%	94%	100%	97%
eTextbook or eCourse Pack	81%	81%	93%	89%

(% who answered that each learning technology would be used in a top-notch in person course, either during or outside of class)

Arts and Letters instructors were most likely to consider posting external readings online essential, and Communication Arts and Sciences instructors were least likely to do so.

Instructor CMS Tools Comparisons by College

	A&L	CAS	NS	SS	F	p
Instructor Emails[1]	100%	100%	100%	100%		
Password protected course space[2]	1.2	1.6	1.5	1.5	n.s.	
Online syllabus[2]	1.1	1.5	1.4	1.5	n.s.	
Weekly online announcements[2]	1.0	1.3	1.4	1.2	n.s.	
Online dropbox[2]	1.1	1.3	1.1	1.0	n.s.	
Online gradebook[2]	0.9	1.0	1.0	1.1	n.s.	

(1 - % who answered that each learning technology would be used in a top-notch in person course, either during or outside of class
2 - average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

Online Custom Design Expectations

Overall Instructor Values

This final group of components relate to the design of online content for an in person course. Fewer than half of the instructors who responded to the survey considered any of these six design components essential to a high quality in person course. Highest rated in the list was assistance acquiring permission to include copyrighted materials online (43%), followed by the actual inclusion of external copyrighted materials (31%). About one fourth of instructors rated having accessible online content essential, and about the same percent wanted their students

to have a single login for the course. Only one fifth of instructors felt that having a unique, custom design was essential

Online Custom Design
43% COPYRIGHT PERMISSION ASSISTANCE
31% ONLINE EXTERNAL COPYRIGHTED MATERIALS
26% ACCESSIBLE ONLINE CONTENT
24% SINGLE LOGIN
20% CUSTOM DESIGN
06% CELLPHONE COMPATIBLE MATERIALS

Overall Instructor – Student Online Custom Design Comparisons

Instructors were significantly more concerned than were students about copyright permission assistance when teaching a top-notch in person course and about being sure to post copyrighted materials online in support of the course. Students were slightly more interested in having a single login for the course and for having a coherent, unique online course design than were instructors for top notch in person courses. There were no significant instructor-student differences as far as the desirability of course materials that were accessible to people with disabilities nor for inclusion of cell-phone compatible course material.

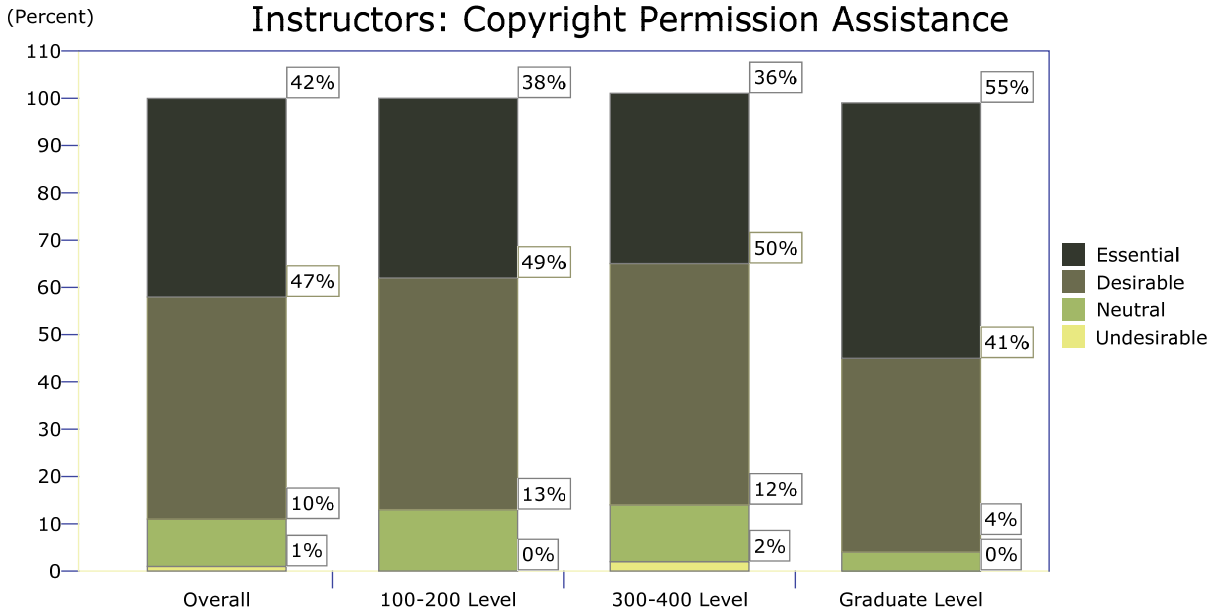
Instructor – Student Online Custom Design Comparisons by College

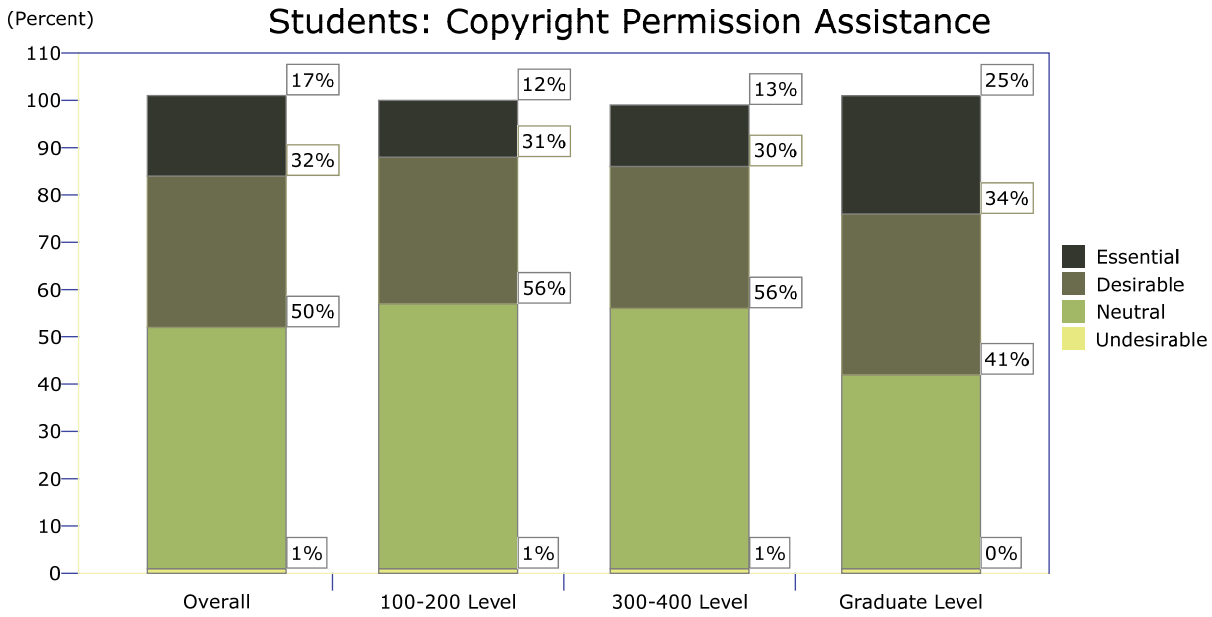
	Instructors	Students	F	p
Copyright permission assistance	1.3	0.6	10.54	.000
External, copyrighted materials posted online	1.1	0.8	2.26	.000
Accessible online content	1.1	1.1	n.s.	
Single login	1.0	1.1	1.17	.018
Coherent, unique course design	0.9	1.0	3.40	.009
Cell phone compatible lecture materials	0.3	0.3	n.s.	

(average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

Instructor – Student Online Custom Design by Course Level

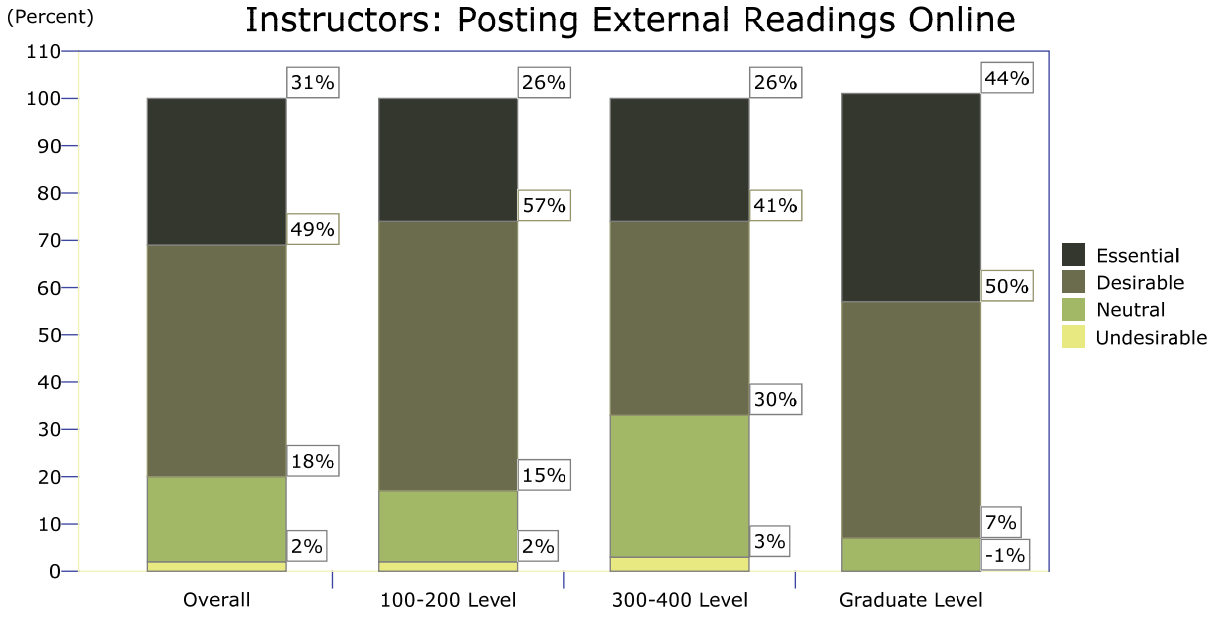
Students in graduate level courses were significantly more likely to consider providing instructors with copyright permission assistance essential than were students in lower level courses. This same trend occurred among instructors.

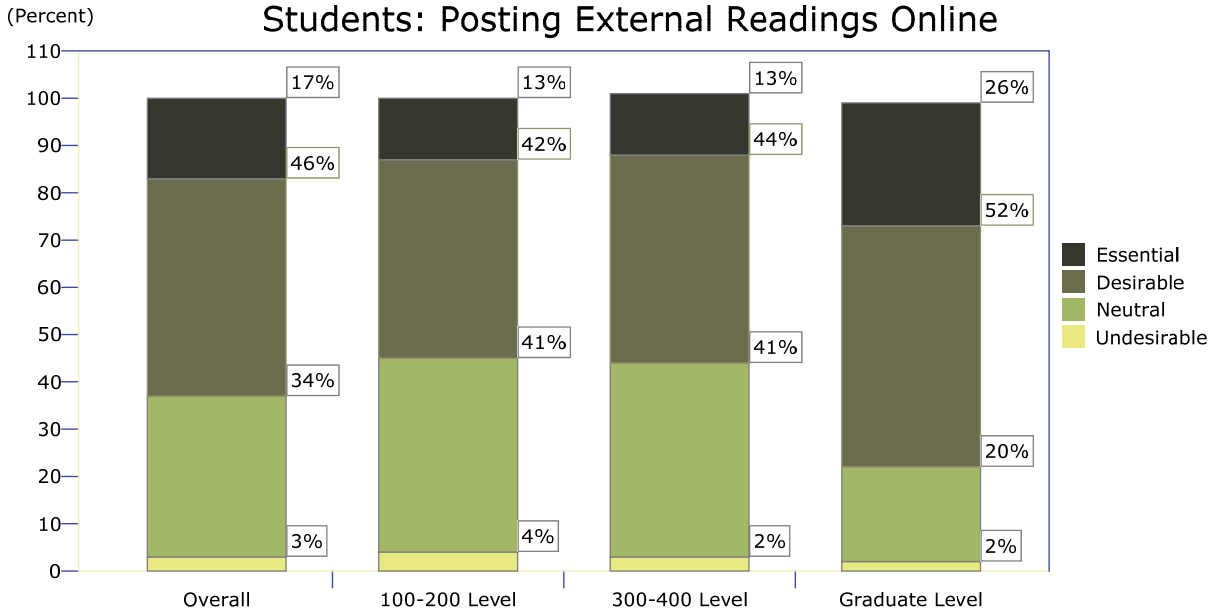




Students: Copyright Permission Assistance, χ^2=21.10, df=6, p=.002

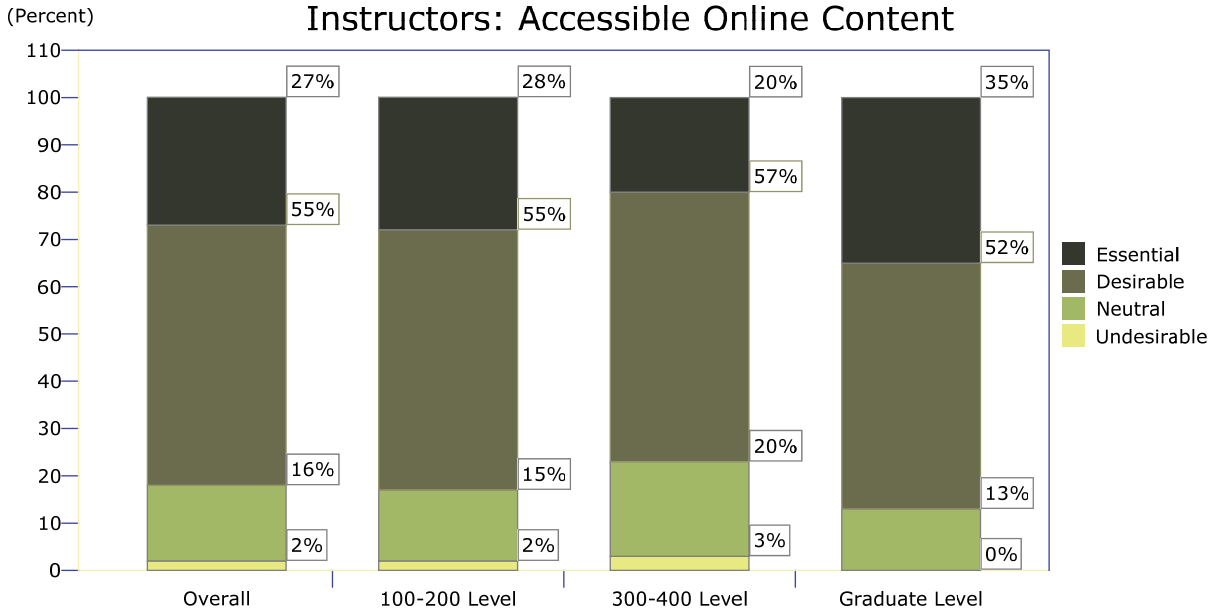
Graduate level students were significantly more likely to want to have external readings posted online than were lower level students (78% said this was either essential or desirable). Graduate level instructors showed a similar pattern, though the difference was not significant.

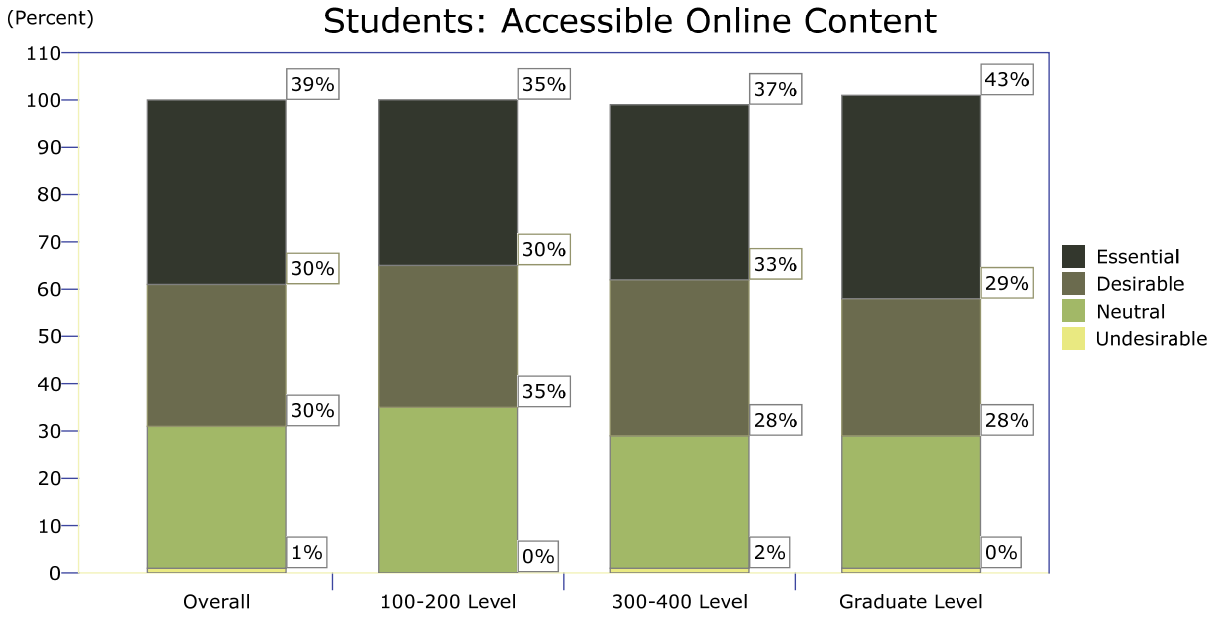




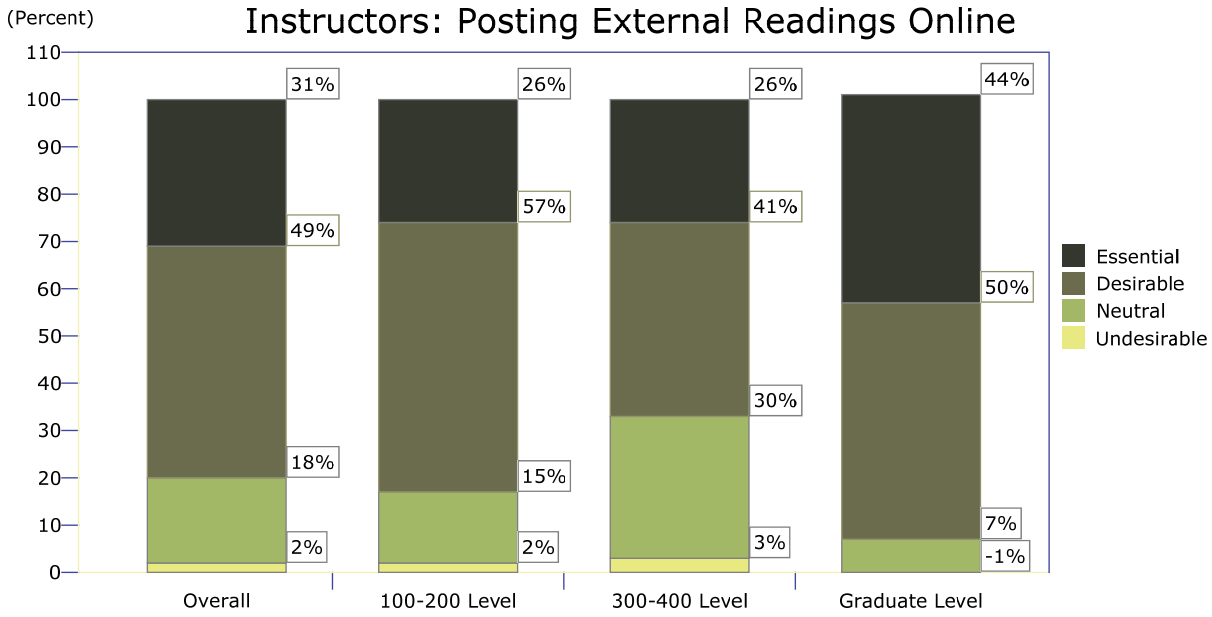
Students: Post External Readings Online, χ^2=39.98, df=6, p=.000

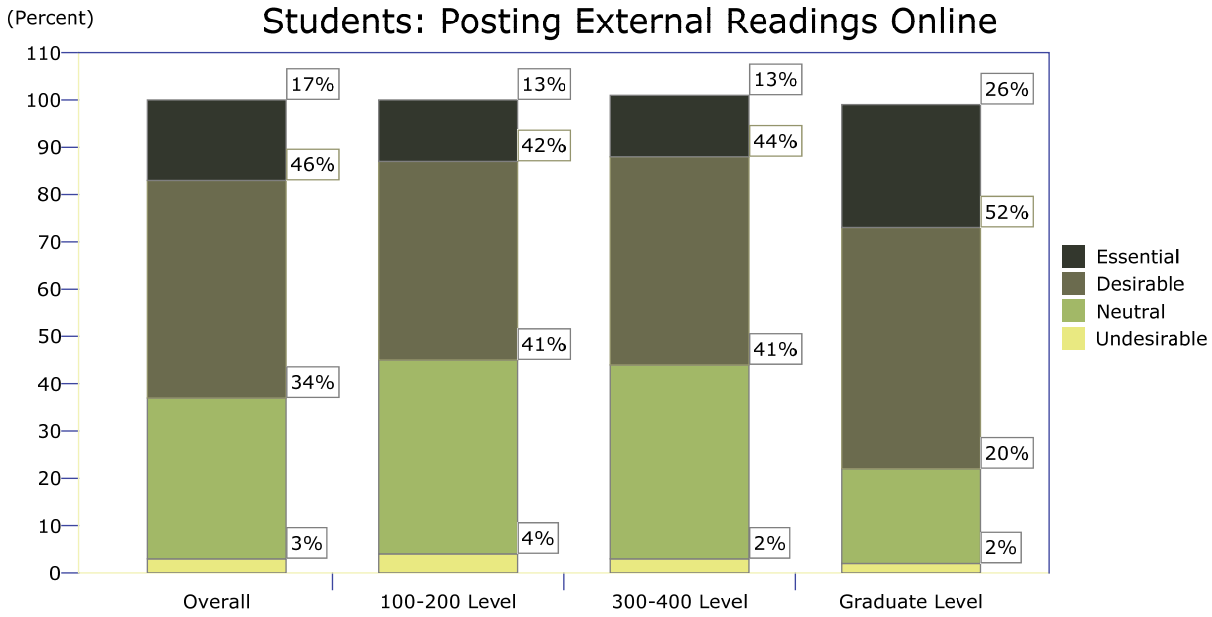
Neither instructor nor student ratings of the importance of accessible online content differed significantly by course level. Students were more likely to rate accessibility essential than desirable, whereas instructors were more likely to rate accessibility desirable but not essential.





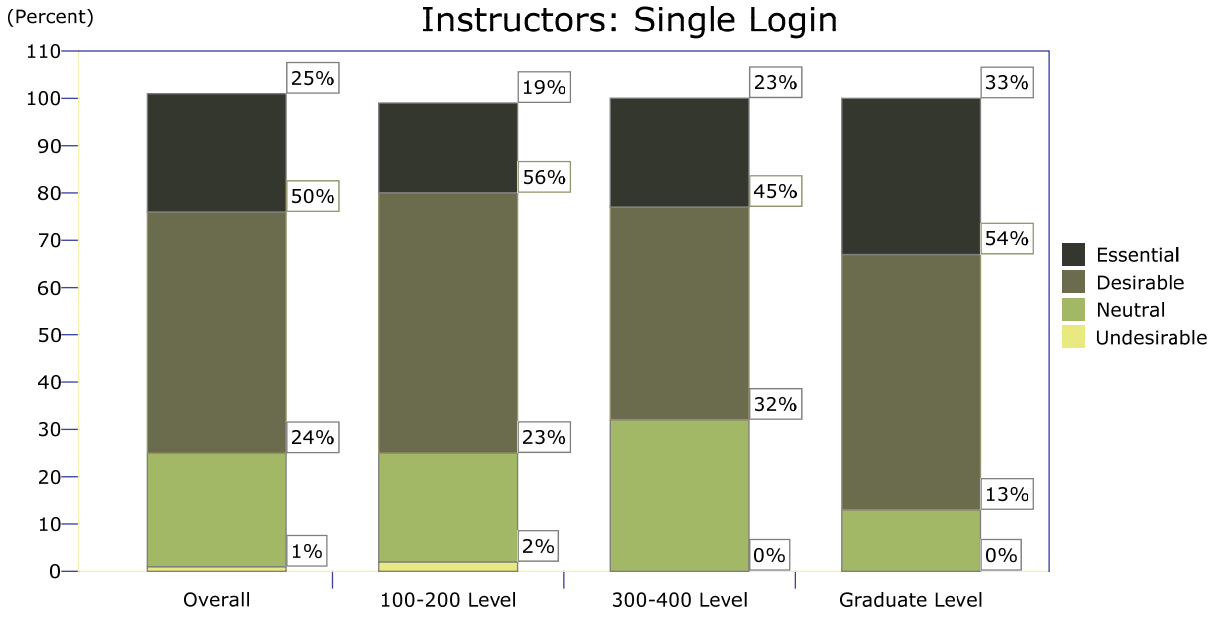
Instructors perceived greater value in posting copyrighted materials online to support in person instruction than students did. Graduate level instructors and students both valued online copyrighted course materials more so than those in lower level courses did.

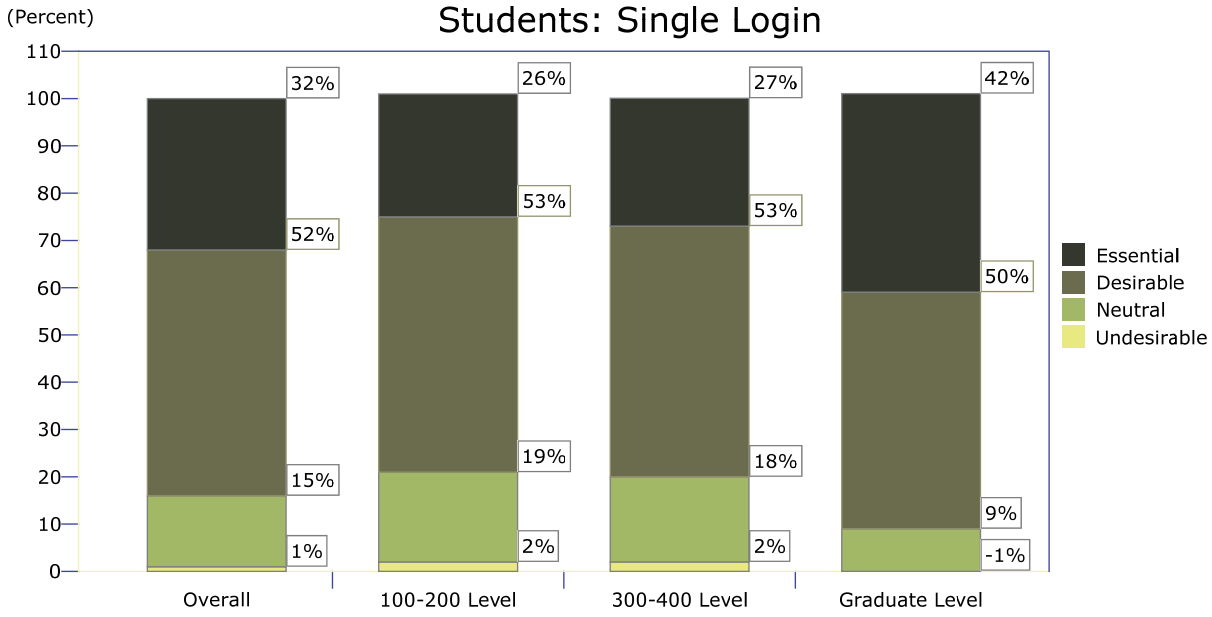




Students: Posting External Readings Online, χ^2=39.98, df=6, p=.000

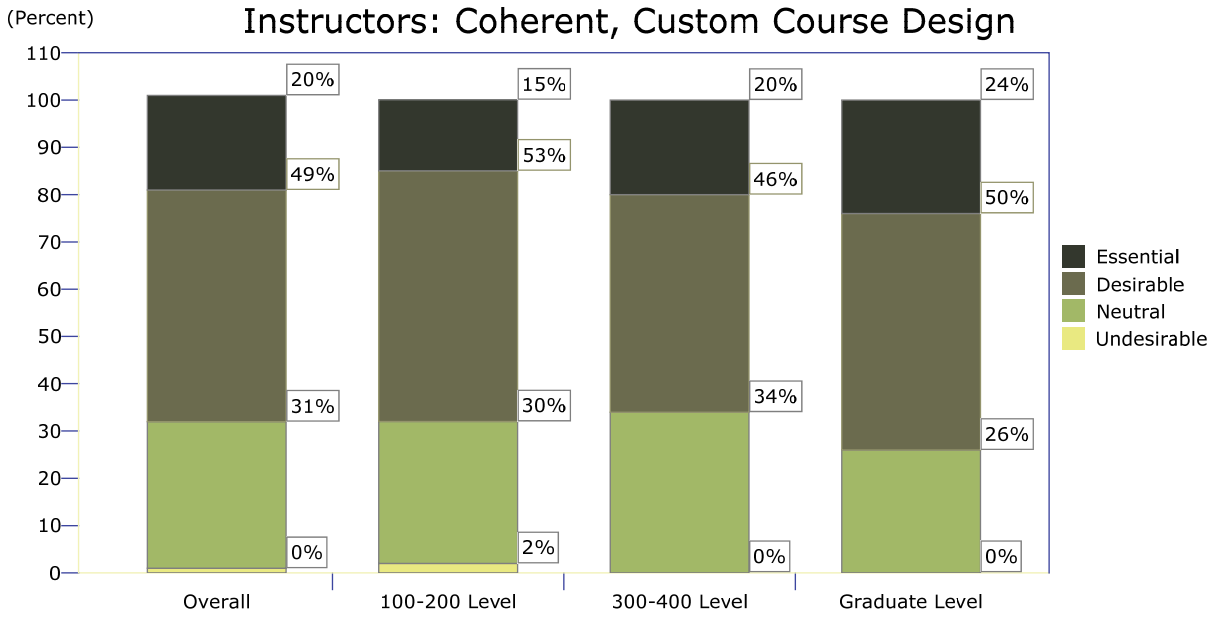
Students in graduate level courses were significantly more likely to consider single login to online materials for in person courses essential than were students in lower level courses.

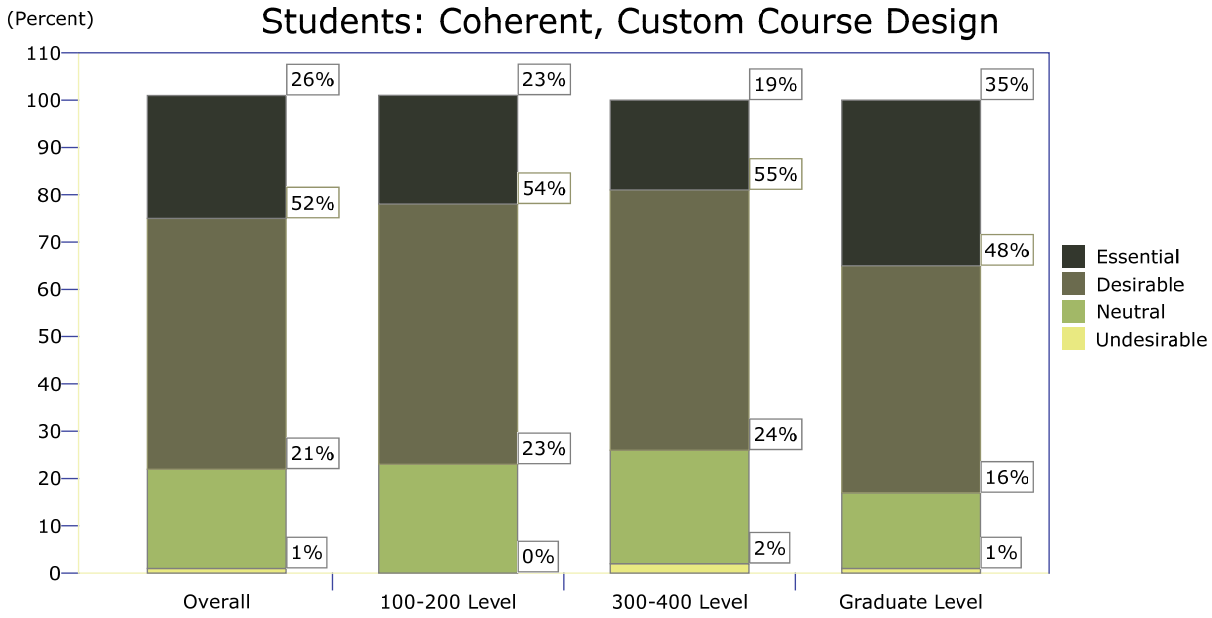




Students: Single Login, χ^2=24.42, df=6, p=.000

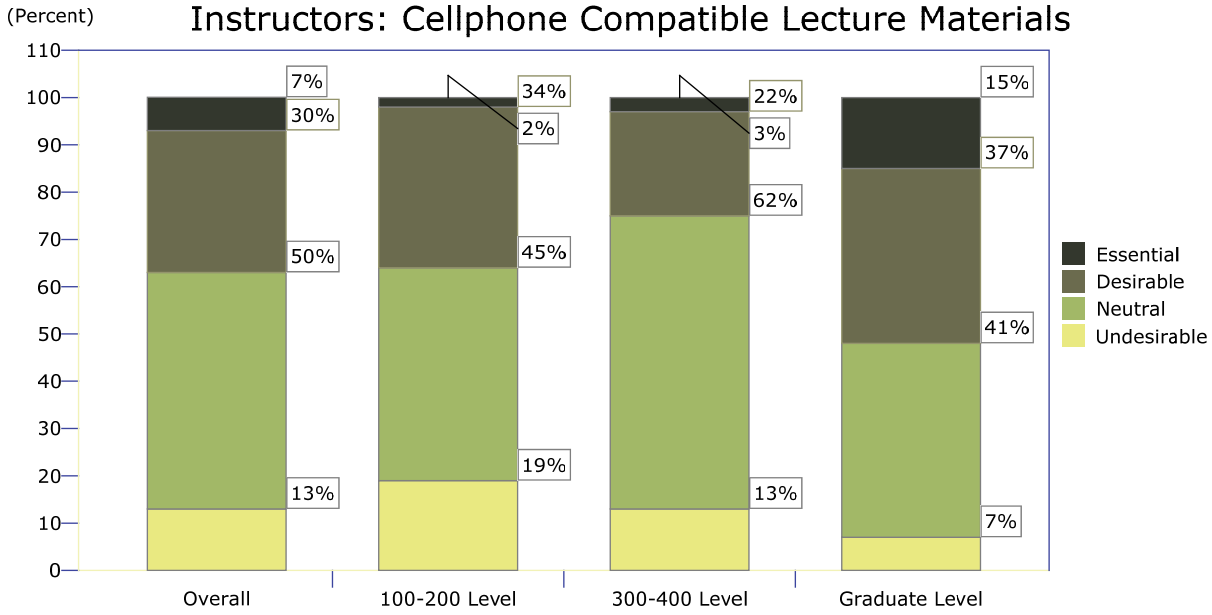
Students in graduate level courses were significantly more likely to value a coherent, custom online course design for in person courses than were students in lower level courses.

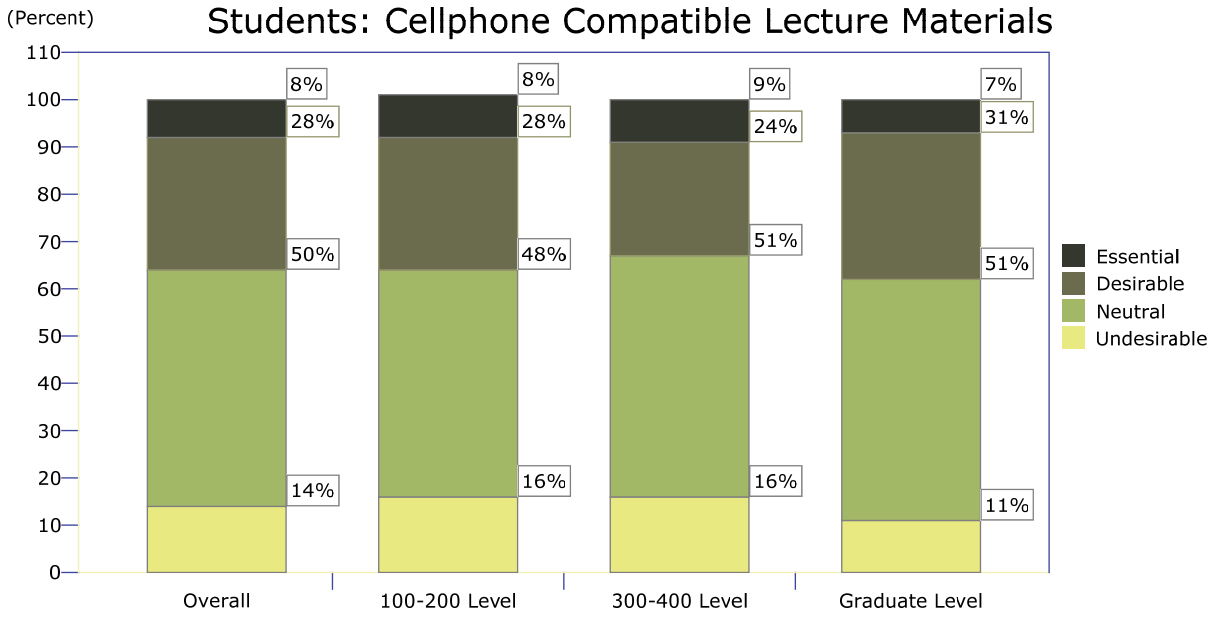




Students: Coherent, Custom Course Design, $\chi^2=25.42$, df=6, p=.000

There were no significant differences by course level for either instructors or students regarding development on cell phone compatible lecture materials for in person courses. Few considered this essential





Instructor Online Custom Design Ratings by College

The only significant difference by instructors' college related to the inclusion of copyrighted online materials. Instructors from Arts and Letters were significantly more likely so have indicated this was essential, and instructors from Communication Arts and Sciences were significantly less likely to do so. Communication Arts and Science was correspondingly lower on the perceived need for copyright permission assistance.

Instructor Custom Online Design Comparisons by College

	A&L	CAS	NS	SS	F	p
Copyright permission assistance	1.3	0.9	1.3	1.4	n.s.	
Accessible online content	1.1	1.0	1.1	1.1	n.s.	
External readings posted online	1.4	0.6	1.0	1.0	2.26	.039
Single login	0.7	0.9	1.1	1.0	n.s.	
Coherent, unique course design	0.8	0.8	0.7	0.8	n.s.	
Cell phone compatible lecture materials	0.2	0.3	0.1	0.2	n.s.	

(average response, on a scale from 2=essential, 1=desirable, 0=neutral, -1=undesirable)

Appendix: Instructor Comments

(7) Faculty Support

My general thought is that there has **not been enough consistency or overall push to bring new faculty into the digital classroom.** Older faculty will only go so far and any transformation has to come from below. Also, classroom tech is so varied from classroom to classroom that I would caution faculty about trying to innovate because the room, software, peripherals, may not be adequate.

Those who teach the online courses receive outstanding support. **Are there similar [support] services for those who teach live courses but want to add technology?**

My main concern is time and assistance. For many of the things I'd like to do, I either don't have the time or don't have the help to develop what I need done.

i want to emphasize my response to #6 . . . **MSU should offer and support top-notch state of the art cutting edge live in person courses, MSU should offer and support top-notch state of the art cutting edge online virtual courses, and MSU should offer and support top-notch state of the art cutting edge blended courses, so that students have choices** . . . all departments should offer some of each of these . . .

I am very pleased with the Virtual University Design Technology on MSU Campus.

In the non-ideal world we inhabit, there is much pressure to experiment with online blended courses whose enrollments are increasing. **More information about possibilities and existing practices is always welcome.**

I appreciate being able to provide this input and **hope MSU expands resources for instructors offering "blended" courses.**

(2) Better classroom connectivity

Need to have a much more reliable way to go online during class. It's often hit & miss.

I use Adobe Connect right now to broadcast my class live to students who are off campus. I use mostly my own technology--computer, camera, tripod, audio/video cables. Doing this would not be possible if I weren't computer savvy myself and if I did not own a majority of the tools. I must bring an internet cable to class each time too because the **wireless is very unreliable** for streaming audio, video, and my desktop via Adobe Connect. We use Skype often to carry the video and audio because Adobe Connect's audio and video is not so good. So far it is working well and I will continue to offer my evening graduate classes online. This will keep enrollment up--some commuters had started looking into classes in Detroit at Wayne State because they were tired of driving from the Detroit suburbs, but now with the online option, they are going to stay in my classes and will enroll in my class next semester. I just wish we had a room all set up for streaming the class. Hooking up all the equipment takes about 15 minutes, and 15 minutes to take down. I am often really rushing to get everything down before the next class starts. With just 10 minutes between classes, it is hard.

(3) About ANGEL

I wish there was an alternative to ANGEL. This semester has been a nightmare. The Help Desk was wonderful, but there were too many problems which resulted in a lot more hours of work. Most importantly, I work very hard to create a professional experience for my students, but all of the technology issues this term sent a message to the students that they do not matter.

I'd like to use the **gradebook** option in ANGEL, but it has a serious restriction -- all grades must be in the same format (percentages, or university number grades, or points) -- there is no mixing of formats. My son, who is a rookie economics professor at UMass Boston, complains about the same limitation there (where they also use a Blackboard-based online class system). This lack of flexibility gets in the way of combining lots of different types of instructional and evaluative activities that get graded, and forces me to do everything by hand plus emails to individual class members, rather than being able to post all grade-related activities in a gradebook-like place on ANGEL.

A big factor in whether or not the world is "ideal" is the quality of the online software. **The quality of ANGEL has become so bad,** and it has given me and my students so many problems, that I am considering eliminating the use of technology from my 200-level class. I spend so much time trying to fix problems with the software that it detracts from the time I can spend actually teaching.

(5) Other Specific Needs

My course is taken by students on campus and at Van Andel. I much prefer teaching to students live and in person. However, I cannot justify forcing students to travel 2-3 times/wk to attend class on campus. THUS, **we need robust videoconferencing tools between the two campuses.** I used Polycom. BUT, the system I used on campus is antiquated, and I had to set it up for each lecture.

Most recent version of Power Point in every classroom computer. I taught in two different classrooms this term and one had Office 2003 and the other had 2007. Very annoying. I have to keep the lowest common denominator version in my office, for this reason. I also expect that all the bugs be ironed out in Angel by the start of fall term when we switch to the newest version. A few bugs is expected, but there were major problems this term.

Some students believe that any material they can download (e.g., PowerPoint slides, podcasts) have been purchased and **are now their property** (no need to assign) authorship for future use/sharing in any way they like. We need to find appropriate ways to deal with this.

For blended and online classes, **greater access to large computer labs for supervised tests** would improve security and make planning less difficult.

i gave an instruction session for hst 452, medieval Spain**. I would have liked to have had all the students in the class use the International Medieval Bibliography**, one of the libraries' e resources, an index to books, articles, etc. this resource, as is true of some others for which we do not have oodles of use, we only pay for 5 simultaneous users, so it isn't

possible to have the students use the database in the class. i could do searches and they could watch on the screen but that is not optimal. being able to afford unlimited simultaneous users for this and some other e resources would be an advantage.

(5) Physical Classroom Comments

Live classes provide opportunities for discussion/explanation in ways that other modesto not. I find it much easier to coax hesitant students to participate live than at a distance. I can read comprehension on students (or lack of it) on students' faces and use that information to judge what my next step or example should be.

I have yet to teach in a class of more than 20 students where there is a sufficient **number of outlets** or power strips to allow all students to keep their laptops running for the length of the class. Also, the **inflexibility of the large lecture classes** (the "pits") is a real detriment to teaching in larger classes.

Just a comment about the usefulness of a **clock** in the classroom: This really depends on the location of the clock. When the clock is positioned in front of the classroom (directly in the student's line of sight but behind the instructor), the clock can have adverse effect because the students are constantly aware of the time while the instructor is not.

Some students bring laptops to class. Some use it to take notes during my lectures, while others seem to use it to read email or chatrooms. **I have very mixed feelings about laptops in the classroom.**

I expect my current students (in a 3-credit lecture class) **to do significant work on-line before and after class.** I also conduct all review sessions, at night, on-line. I find non-science majors expect to do all their work "in class" and they are surprised I expect them to put in 3-6 hours of work a week outside of class. (In practice most are on the low end of that scale, but still tell me it's the hardest they've ever worked for a class -- what does that mean?)

(5) The survey was confusing

Why are you asking only about on-campus? This type of technology offers the possibility to expand the campus beyond E. Lansing.

DIFFERENT MATTERS, as you give no space to elaborate: (a) Some technologies/options are either/or, don't need both. Answers won't allow respondent to indicate that. (b) There is tradeoff, e.g., media/technology also easily used for other purposes can hamper learning (doing personal stuff on laptops during class, not paying attention, etc.; chats that get out of hand). (c) The idea that interactive technology can SUBSTITUTE for faculty involvement with teaching is just false. Must help faculty in class, not be a cheap mass manufacturing of education widgets. So I'm very worried those interested in technology are trying to downgrade technology, even though I use a lot of technology in class to make better what I do in class. But *I* still have to do it and have more than an on-line relationship to students.

This survey was really confusing. I don't know what the difference between neutral and undesirable is. If I don't want or need something, I didn't know which to mark.

Question 5 was odd to answer because does neither mean it wouldn't be used at all?

The selection of "undesirable" would have been better written as "unnecessary." Some of these items are good things, just not needed in my class. that makes them unnecessary for my class, but not undesirable.

(6) Departments missing from the list

My department was not listed. It is: GBL.

my department is not listed above-- where did you get this list???

You did not list all the departments on campus and it would seem those not listed do not exist. That is really good public relations and professional respect.

For the future - Medical Technology Program named changed years ago to Biomedical Laboratory Diagnostics Program

There is not selection for the RCAH in the department listing.

my department is the msu libraries, not listed above.

Instructor write in Special Needs Software

Adobe

- Adobe Creative Suite
- photoshop; dreamweaver;
- Adobe CS4 (InDesign, Illustrator, Photoshop, After Effects, Flash)
- Illustrator, Photoshop, InDesign, Final Cut Express, AfterEffects, Flash, Dreamweaver
- Dreamweaver or other web design tools

Free downloads

- I use FLASH but that doesn't require them to use a special application other than free download.
- RealPlayer, Adobe Reader
- last version of Acrobat Adobe

Data Analysis Packages

- SPSS or other data analysis software
- Statistical software such as GraphPad Prism or SPSS, EndNote
- PASW/SPSS, Excel, Word, PowerPoint
- SPSS is essential for one of my classes.
- SPSS

Test data analysis SW

- BILOG and TESTFACT analysis software for analysis of test data.

- Proprietary scoring and interpretive software packages that accompany standardized tests that are the focus of instruction in my course.

Various

- access all the msu libraries electronic resources
- Audacity or other audio recording / editing program
- Topographic mapping and CAD software.
- Garage band or other simple music software.
- Google Earth (Pro - preferred)
- Skygazer planetarium software
- Endnote!!!!!!
- autocad;
- One Note
- DynEd
- Finale / Sibelius Notation Software
- Hematography, Urinalysis Tutor, we subscribe to an on-line professional continuing education source to provide some specialized programs

Classroom Software

- Computer based blue tooth reception of Rf and other signals generated by equipment monitoring soil physical and chemical properties during class/lecture/discussions.
- Students use their phones for twitter use in the classroom (we use twitter instead of clickers or other voting technology). It works well