CANVAS 2013: Evaluation Report

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EXECUTIVE SUMMARY

In Fall 2012, UW-IT made the Canvas Learning Management System available to all UW instructors, with training and support available at all three campuses. The UW Office of Educational Assessment (OEA) worked collaboratively with UW-IT to evaluate the pilot of Canvas in 2011-2012, and in Winter of 2013 conducted an evaluation of the first year of UW-wide Canvas adoption. The full report summarizes findings from online faculty and student surveys administered to all users from Fall 2012 and Winter 2013, and includes the faculty and student survey instruments.

Methods

OEA worked with UW-IT to develop brief surveys for faculty and students, based on the instruments used in the Canvas pilot project evaluation. The instruments were designed to address the following questions:

> SATISFACTION: Are faculty and students satisfied with Canvas?

> IMPACT: How has Canvas affected faculty teaching practices? How has using Canvas affected students' practices as learners?

> USE OF CANVAS: How are faculty and students using Canvas? Do faculty with previous experience use Canvas differently than those using it for the first time? Does use of Canvas differ across discipline, campus, class format (online or in person), or class type (e.g., large lecture, small seminar)?

Several questions on the faculty survey also served to assess the effectiveness of UW-IT training, and to connect UW-IT with faculty who might be willing to share their experiences with Canvas as "best practices."

Key Findings

- SATISFACTION: Participants were generally satisfied with Canvas; students' satisfaction ratings were higher than faculty's.
- IMPACT: Most students and faculty agree that Canvas increases efficiency.
- IMPACT: Grading features were linked to increased efficiency and innovation.
- IMPACT: Canvas supports innovation in flipping the classroom.
- USE OF CANVAS: Navigating the course site continued to be the most prevalently reported challenge for both students and faculty.
- USE OF CANVAS: With more experience, faculty try out new Canvas features.
- USE OF CANVAS: There were a few differences in feature use across campus, course format, class type, and discipline, but no patterns warranting strong conclusions.

BACKGROUND

Canvas is an open-source Learning Management System (LMS) launched by Instructure (www.instructure.com) in 2011. During the 2011-2012 academic year, University of Washington Informational Technology (UW-IT) piloted Canvas at all three UW campuses (Bothell, Seattle, and Tacoma). A small sample of faculty piloted Canvas in their classes in Fall 2011 and Winter 2012, then provided feedback to inform how to support use of the tool university-wide. In Fall 2012, UW-IT made Canvas available to all UW instructors, with training and support available at all three campuses. The UW Office of Educational Assessment (OEA) worked collaboratively with UW-IT to evaluate the pilot of Canvas in 2011-2012, and in Winter of 2013 conducted an evaluation of the first year of UW-wide Canvas adoption. This report summarizes findings from online faculty and student surveys administered to all users from Fall 2012 and Winter 2013.

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Several questions on the faculty survey also served to assess the effectiveness of UW-IT training, and to connect UW-IT with faculty who might be willing to share their experiences with Canvas as "best practices." For instruments in their entirety, please see Appendix A.

Surveys were implemented using Catalyst WebQ. For the faculty survey, UW-IT sent initial email invitations and two subsequent reminders to registered instructors of Canvas courses in Fall 2012 and Winter 2013 using existing mailing lists. Faculty also received a follow-up email from the UW-IT Associate Vice Provost of Academic Services.

Student Canvas users were recruited via system-wide announcements posted on UW Canvas, and some received announcements from their instructors on Canvas course sites. Student participants were entered into a drawing for 20, $25 cash gifts to be applied to their student ID cards.

PARTICIPANTS

Faculty Survey

A total of 1,285 instructors were invited to participate, and 416 responded to the survey (32.4% response rate). Information about disciplines taught and campus were gathered by linking faculty UW NetIDs to institutional data; results are shown in Figure 1.
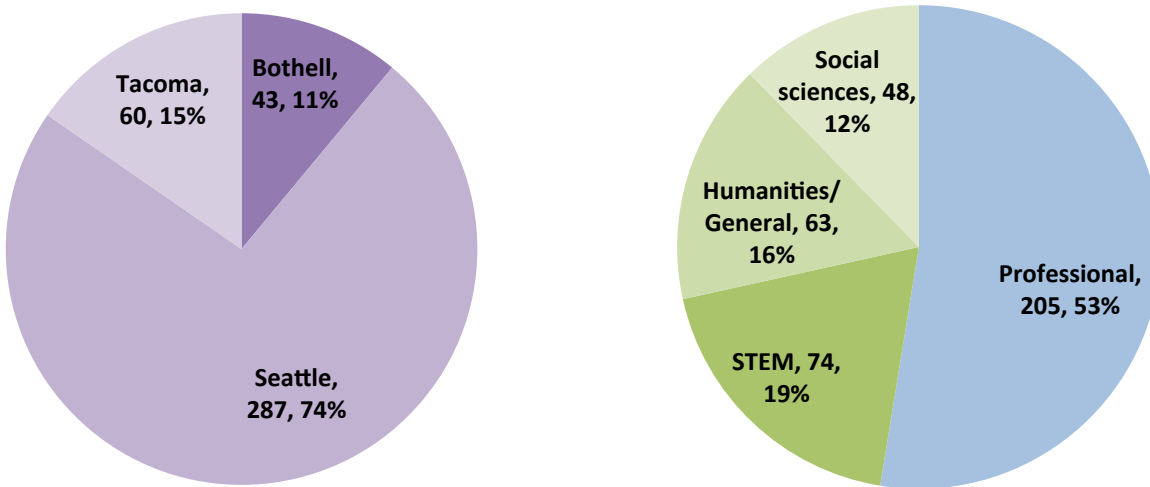
Figure 1. Distribution of faculty participants across campus and discipline[1]

Participants also provided information on their surveys about the type and format of their classes, as shown in Tables 1 and 2.

Table 1. Number and percentage of participants teaching different types of courses using Canvas

Feature/Function	#	%[2]
Seminar/small discussion-based class (<25 students)	163	39
Small lecture (<100 students)	145	35
Large discussion-based class (25+ students)	137	33
Large lecture (100+ students)	57	14
Field experience, practicum, or clinic (course-based)	37	9
Independent study	9	2

Table 2. Number and percentage of participants teaching various course-formats using Canvas

Course type(s)	#	%
In-person only	305	73
Hybrid only	26	6
Online only	19	5
In-person and hybrid	26	6
In-person and online	14	3
Hybrid and online	8	2
All three course formats	6	1
No response	12	3

Note that 121 participants (29%) listed more than one type of class from Table 1. For the purpose of comparison (see Part 2 of Appendix B), responses from participants who *only* taught either small seminars (n = 85) or at least one large lecture (n = 57) were compared to participants who taught all other types of classes (n = 205).

For course format, comparisons were made between those who had taught at least one fully online course using Canvas (n = 47); those who had taught at least one hybrid course, but had never taught a fully online course (n = 52), and those who had only taught in-person courses using Canvas (n = 305).

Faculty participants also indicated in which quarters they had used Canvas. Figure 2 shows the number and percentage of participants according to their first quarter of Canvas use. [3]

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[1] General studies courses (e.g., Interdisciplinary Arts and Sciences) were included in the same category as Humanities, because the courses would most likely be handled similarly in Canvas (e.g., grading of writing assignments and group work).

[2] Participants' responses were coded according to multiple categories; therefore, percentages will exceed 100%.

[3] The survey did not include an option to show whether participants were using Canvas during the current quarter. There was, however, an option to indicate if they were using it for the first time in Winter 2013.
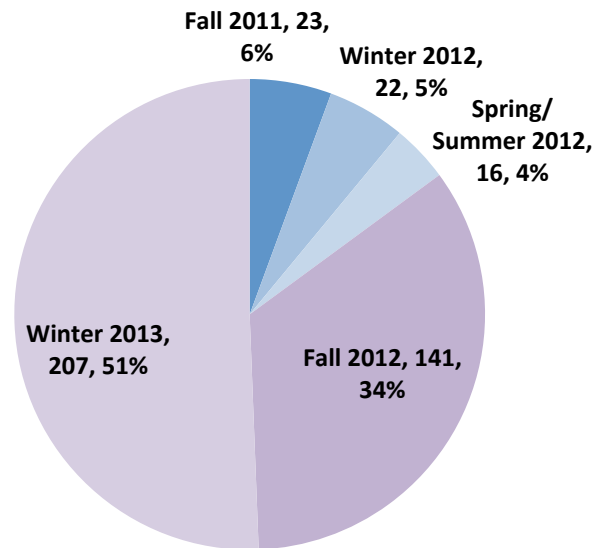
Figure 2. Faculty participants' earliest quarter of Canvas use (n = 408)

Student Survey

Of the 19,221 students enrolled in Canvas courses in Winter 2013, a total of 2833 individuals responded to the student survey (14.7% response rate). Participants reported their class level, as shown in Figure 3.
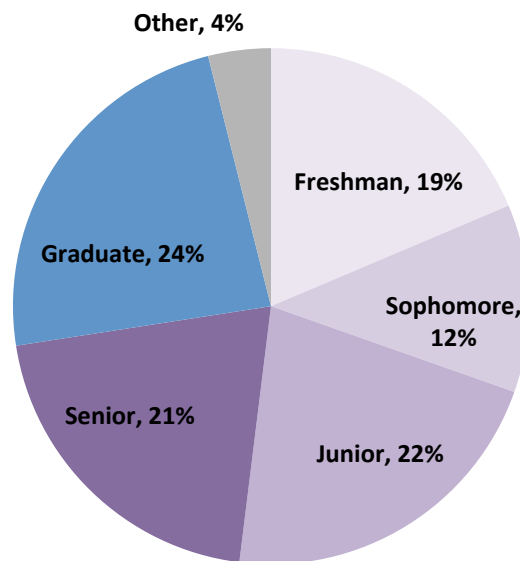

Figure 3. Percentage of student participants according to class level (self-reported)

SUMMARY OF RESULTS

This summary represents the evaluator's interpretation of key findings from the faculty and student surveys. For a more comprehensive reporting of all survey results, please see Appendix B.

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(1) SATISFACTION: Participants were generally satisfied with Canvas; students' satisfaction ratings were higher than faculty's.
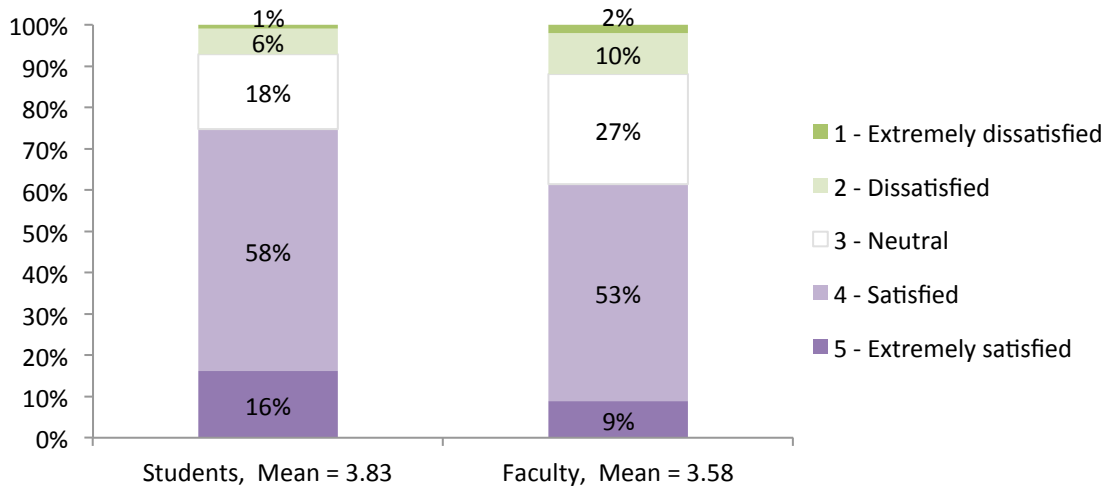

Figure 4. Frequency of satisfaction ratings and means for students and faculty

Satisfaction ratings among faculty **did not differ significantly based on any of the comparison variables examined** (discipline, campus, course format, class type, previous Canvas experience).

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(2) IMPACT: Most students and faculty agree that Canvas increases efficiency.

In a series of items for both faculty and students, participants were asked to indicate the extent to which they agreed or disagreed with statements about the impact of Canvas. For almost all of these items, the most frequent response was "neutral." The only exceptions were two items about increasing efficiency, as shown in Figure 5.
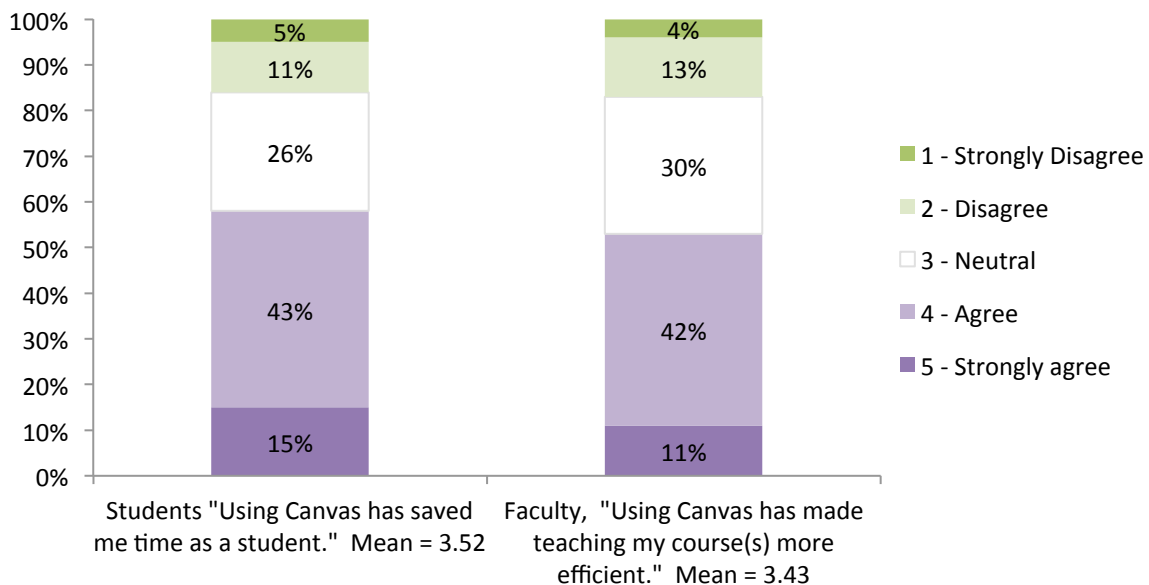
Figure 5. Frequency of endorsement ratings and means for students and faculty

It should be noted that approximately one in six participants (16% - 17%) disagreed or strongly disagreed with these statements. In addition, for faculty, there were some differences in this item across discipline; specifically, faculty from professional disciplines gave significantly lower ratings on this item ($\underline{M}$ = 3.23) than participants from all other disciplines.

(3) IMPACT: Grading features were linked to increased efficiency and innovation.

When asked about what they found most valuable about using Canvas, the second-most frequent type of response (n = 80) was that **grading and tracking student progress had been made easier and more efficient,** as in the following quote:

> *Love the Speed Grader. I can set quick assignments to the equivalent of check, check-plus, check-minus ... and I can download all & work offline, then upload all & return instantly!*

In addition, when asked what change or innovation they had made to their teaching because of Canvas, **the most frequently mentioned change was introducing online submission and grading of assignments**, as in the following quotes:

> *Removed a lot of paperwork through on-line submissions and grading. Feedback is faster to students and more organized.*

> *Speedgrader so far has been a great assistance and I will continue to incorporate it in my future classes.*

Beyond online grading, faculty were **strongly interested in enhancing their assessment techniques using Canvas' built-in rubrics or audio/video feedback.** Sixteen faculty indicated they had started using these tools, and eleven more expressed interested in doing so in the future (see quotes below):

> *I love the rubric option. It has greatly enhanced my ability to ensure consistency and clarity in certain assignments and has also enhanced my ability to mentor my TA.*

> *I understand that I can give verbal feedback in Canvas, so I am going to explore how to do this in the future.*

Data do suggest that after using Canvas for one quarter, faculty start using these tools more (see Figure 6, below).

There were also comments indicating that faculty struggled, somewhat, trying to fit their existing grading techniques into Canvas' Gradebook, and quite a few (n = 17) continued using existing tools. However, students indicated they were able to check their grades easily ($\underline{M}$ = 4.25 on a scale of 1 "Very difficult" to 5 "Very easy").

(4) IMPACT: Canvas supports innovation in flipping the classroom.

As mentioned above, faculty have begun innovating with Canvas in their grading and assessment. Comments also suggest that they are **using Canvas features to expand content covered outside of the classroom to reserve in-class time for discussion and engagement,** as in the quote below:

> *Using an online platform for my course allowed me to shift the lecture component almost completely online, thereby freeing the in person class time to take on a more seminar style of collaborative learning.*

Using Tegrity, a UW-IT supported tool, for lecture capture was mentioned most frequently, but faculty had also posted short videos on Canvas to explain specific concepts and developed online quizzes for students to complete *before* attending class.

(5) USE OF CANVAS: Navigating the course site continued to be the most prevalently reported challenge for both students and faculty.

While mean difficulty ratings for "Navigating the course space" were not notably lower than ratings for other items, open-ended comments suggest that those participants who did find the navigation challenging were quite frustrated (as in the quote below). Such strong comments about navigation may have emerged because, unlike other features, such as Canvas gradebook or discussion board, there was no alternate tool available.

> *The site is not organized very logically and it is difficult to figure how to adjust it (or sometimes there are not enough options for adjustment), especially when you're teaching a f2f class and just want to create a simplified version. For example, the new "outcomes" category is unnecessarily complex and I'm not sure how I can make it more straightforward without hiding the page and creating a new one to cut and paste my outcomes into.*

In preliminary reporting on students' comments about challenges they encountered, one theme that emerged was students' perception that faculty needed additional assistance in organizing their Canvas sites. Among faculty comments about navigation challenges, organization (e.g., using files, modules, or pages to organize the site) was also a theme. There did appear to be differences in site organization across discipline, with faculty from professional fields being significantly more likely to use modules in organizing their content. Veteran users were also more likely to employ Canvas organizational structures such as modules.

(6) USE OF CANVAS: With more experience, faculty try out new Canvas features.

As shown in Figure 6, veteran users showed significantly higher use rates of many different features. The median number of features used increased incrementally according to number of quarters faculty had used Canvas, with first-time users reporting a median of seven features used and those teaching two previous quarters reporting a median of nine features used.

Total # of features used, according to previous experience with Canvas

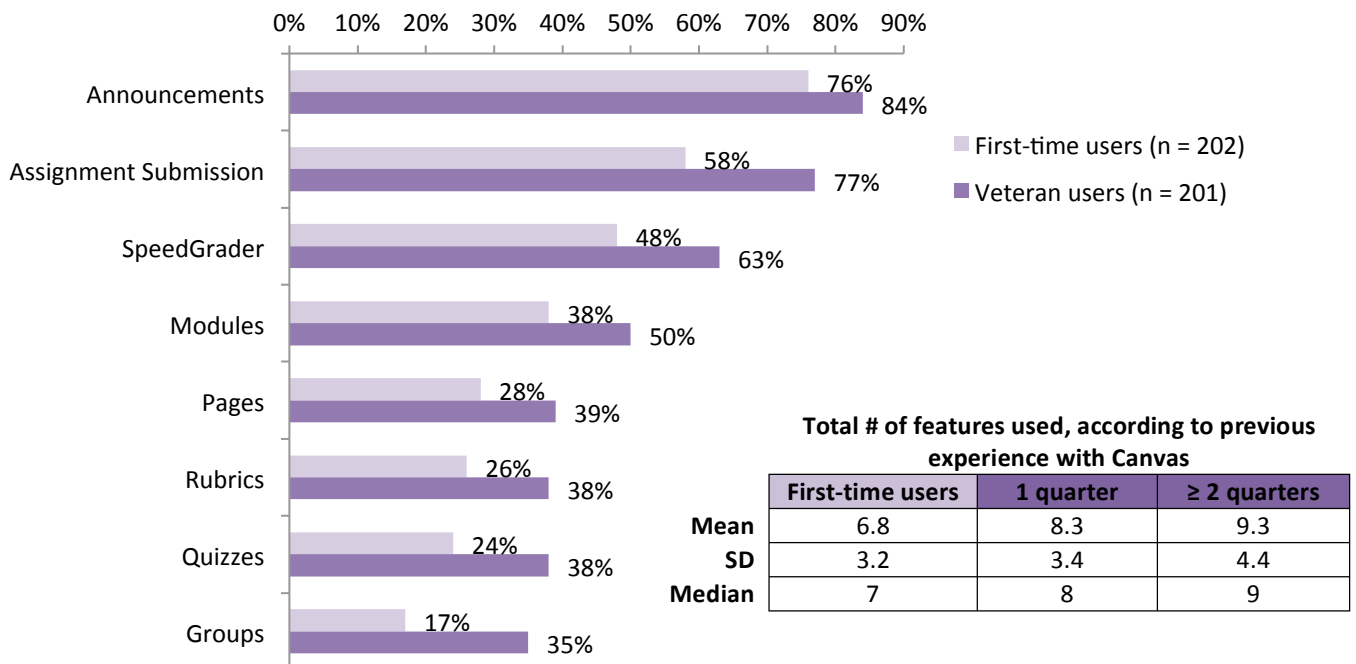|	First-time users	1 quarter	≥ 2 quarters
Mean	6.8	8.3	9.3
SD	3.2	3.4	4.4
Median	7	8	9

Figure 6. Percentage of participants reporting using Canvas features, for those who were using Canvas for the first time in Winter 2013 (First-time users) and those who had used it before (Veteran users), as well descriptive statistics for total number of features used

(7) USE OF CANVAS: There were a few differences in feature use across campus, course format, class type, and discipline, but no patterns warranting strong conclusions.

Overall, there were relatively few differences in use of Canvas across campus, course format, class type, and discipline. The differences that did emerge involved use of features, and were not particularly surprising given the variables examined, as follows:

- Faculty teaching small seminars were less likely to use online discussion board and the groups feature than those teaching larger classes.

- In general, instructors of online classes used more total features[4] ($\underline{M}$ = 9.6) than those teaching in-person classes ($\underline{M}$ = 7.3); specifically, they were more likely to use modules, discussion boards, wiki pages, and groups.

- There was some indication that faculty from UW Tacoma used more features than other campus' faculty, specifically modules and rubrics.

- Within professional disciplines, instructors tended to use modules and groups more frequently than those in other disciplines.

In addition to the primary findings above, results from survey items related to training for faculty were reported to UW-IT to inform the design of training curriculum. Faculty participants expressed a strong desire for more in-depth instruction about using various features, particularly those related to grading and assessment. **Based on these evaluation results, UW-IT will revise its introductory training course and provide additional in-depth workshops covering grading and assessment features,** including online assignment submission, SpeedGrader, gradebook, and rubrics.

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[4] According to a one-way Analysis of Variance with Tukey's HSD post-hoc tests, $p < .05$.

APPENDIX A: INSTRUMENTS

PART 1: FACULTY SURVEY

I: Previous Canvas experience and training

1. In which of the previous quarters, if any, have you used Canvas for teaching at UW? [Select all that apply]

- ○ I am using Canvas for the first time this quarter
- ○ Fall 2011
- ○ Winter 2012
- ○ Spring 2012
- ○ Summer 2012
- ○ Fall 2012
- ○ Other:

2. What led you to decide to use Canvas originally?

3. Did you attend the Canvas LMS Introduction training workshop through UW-IT?

- ○ Yes
- ○ No

3a. [If yes] Please rate how well this workshop prepared you to start using Canvas.

1 - Did not prepare me at all

2 - Provided some preparation: I spent a considerable amount of time after the workshop figuring out how to use the tool.

3 - Provided most of the preparation: After the workshop, I had to figure out a few things to get started.

4 - Prepared me fully: After the workshop, I was ready to use the tool.

3b. What additional content, if any, would have been helpful to include in the Canvas LMS Introduction workshop?

3c. Would you recommend the UW-IT workshop to a colleague planning to use Canvas for the first time?

- ○ No
- ○ Yes
- ○ Not Sure

4. [For all respondents] Other than UW-IT workshops, which of the following resources/methods did you use to familiarize yourself with Canvas to prepare for your class. Select all that apply.

- ○ Independent exploration of Canvas (i.e., just trying things out)
- ○ Canvas "Help" content on the UW LST Web site
- ○ Canvas "Help" content on the Instructure site
- ○ Colleagues who had used Canvas
- ○ One-on-one help from UW-IT, including email correspondence
- ○ Other:

5. UW-IT is considering providing more advanced workshops about particular tools in Canvas. Please provide any suggestions you might have for possible advanced workshop topics

II: Use of Canvas

6. For which of the following class type(s) are you using Canvas this quarter [select all that apply]

- Seminar/small discussion-based class (<25 students)
- Large discussion-based class (25+ students)
- Small lecture (<100 students)
- Large lectures (100+ students)
- Field experience, practicum, or clinic (course-based)
- Independent study
- Other

7. For which of the following class format(s) are you using Canvas this quarter [select all that apply]

- Primarily in-person
- Hybrid: Substantial online content with limited in-person meetings
- Online: Taught without any required in-person meetings

8. Which of the following best describes how you used Canvas in your course(s) this quarter?

- I used only Canvas (including any tools available on Canvas, such as Google Docs).
- I used Canvas but replaced some Canvas features with other tools (e.g., I used GoPost for discussions, I used a third-party tool for assignments).
- I used some features of Canvas but did not use Canvas as a course web site

8a. What tools outside of Canvas did you use and how did you use them?

9. Which of the following Canvas features have you used *this quarter* in your course(s)? [Select all that apply]

- Learning Outcomes
- Integrated Calendar
- Assignment posting
- Assignment submission
- Peer review
- Quizzes
- Modules
- Announcements
- Discussions
- SpeedGrader
- Rubrics
- Gradebook
- Files (File storage)
- Pages (Wiki)
- Video Chat
- Audio Chat
- Text Chat
- Conferences
- Groups
- Collaboration using Google Docs
- Collaboration using EtherPad
- Reporting (Monitoring course and student activity)
- Other:

III. Satisfaction with Canvas

10. How would you rate your overall experience with Canvas?

- Extremely dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Extremely satisfied

11. Please rate the difficulty of the following tasks in Canvas. Select "N/A" if you did not complete the task in Canvas or if it is irrelevant in your situation

1-Very difficult, 2, 3, 4, 5-Very easy, N/A

- Navigating the course space
- Grading assignments
- Communicating with students
- Collaborating with co-instructors and/or TAs
- Administering class discussion
- Creating and administering quizzes
- Assessing student learning

11a. Please explain what challenges you encountered for tasks you rated as "very difficult" or "difficult."

IV. Impact of Canvas

12. Please indicate the extent to which you agree with the following statements about your overall use of Canvas:

- Using Canvas has made teaching my course(s) more efficient.
- Using Canvas has increased students' participation and engagement with the course content.
- I find myself communicating more frequently with students in my Canvas class(es) than I did when teaching classes without Canvas.
- Students in my Canvas class(es) communicate with each other more than than they would without Canvas.
- Using Canvas has enhanced students' experience of the class.

Strongly disagree, Disagree, Neutral, Agree, Strongly Agree

13. Have you tried anything different or new in your teaching practices because of Canvas?

- Definitely Not
- Not really, only minor differences
- Yes, to some extent
- Yes, Definitely
- Not yet, but I plan to do so in the future

13a. [For Yes or Not yet] Please describe the most significant change or innovation you have made or plan to make in your teaching practices because of Canvas.

UW-IT will be documenting Canvas best practices. OEA will be forwarding responses to Question 13a. above to UW-IT for this purpose. Do you consent for OEA to attach your UW NetID to your response to Question 13a. so that UW-IT can follow-up with you about your use of Canvas?

- Yes, you may forward my response to the Question 13a. attached to my name and UW NetID.
- No, please forward my response without any identifying information.

14. As an instructor, what, if anything, would you say is most valuable about using Canvas?

15. Is there anything that could have improved your experience using Canvas in your course(s)?

Anything more you would like to add about your experience using Canvas?

PART 2: STUDENT SURVEY

I. Profile

1. Which of the following best describes your class level?

- ○ Freshmen
- ○ Sophomore
- ○ Junior
- ○ Senior
- ○ Graduate
- ○ Professional (non-matriculated)
- ○ Other:

2. In which of the following previous quarters have you used Canvas in a UW course?

- ○ I am using Canvas for the first time this quarter
- ○ Fall 2011
- ○ Winter 2012
- ○ Spring 2012
- ○ Summer 2012
- ○ Fall 2012
- ○ Other:

II. Experience

3. As a student, how would you rate your overall satisfaction with Canvas?

- ○ Extremely dissatisfied
- ○ Dissatisfied
- ○ Neutral
- ○ Satisfied
- ○ Extremely satisfied

4. Please rate the difficulty of the following tasks in Canvas. If the task is something you have not done for Canvas, select "N/A." (1-5, Very difficult....Very easy, N/A)

- ○ Learning to use Canvas (getting started)
- ○ Navigating the course space
- ○ Checking course schedule and due dates
- ○ Accessing course materials (lectures, readings, links, etc.)
- ○ Submitting assignments
- ○ Taking quizzes/exams
- ○ Participating in discussions
- ○ Collaborating with classmates
- ○ Communicating with instructor(s)
- ○ Checking grades
- ○ Other

5. Have you tried anything different or new as a student because of Canvas? For example, have you communicated in new ways with an instructor or students, tried a new method of note-taking, or altered your study habits?

- ○ Definitely Not
- ○ Not really, only minor differences
- ○ Yes, to some extent
- ○ Yes, Definitely

5a. [For Yes or Not yet] Please describe what new things you have tried because of Canvas.

6. Please indicate how much you agree or disagree with the following statements:

- ○ Using Canvas has allowed me to learn course content more effectively.
- ○ Using Canvas has saved me time as a student.
- ○ Because of Canvas, I feel more like an active participant than I would have without it.
- ○ I communicate with the instructor(s) of my Canvas class(es) more than I would without Canvas.
- ○ I communicate with other students in my Canvas class(es) more than I would without Canvas.
- ○ Overall, Canvas has enhanced my experience in this class.
  - 1 -- Strongly disagree
  - 2 -- Disagree
  - 3 -- Neutral
  - 4 -- Agree
  - 5 -- Strongly Agree

7. Overall, what, if anything, did you find most valuable about using Canvas?

8. Is there anything that could have improved your experience using Canvas in your course(s) including both features and support?

Anything more you would like to add about your experience with Canvas?

APPENDIX B: DETAILED FINDINGS

PART 1: FACULTY SURVEY, DESCRIPTIVE RESULTS

A. Previous Canvas Experience & Training

1. *Experience*

The first two questions asked participants to indicate the quarters since the launch of Canvas at UW in Fall 2012 during which they had used Canvas for their courses. Figure B1 shows the number and percentage of participants who selected each quarter as their first quarter of use. [5]
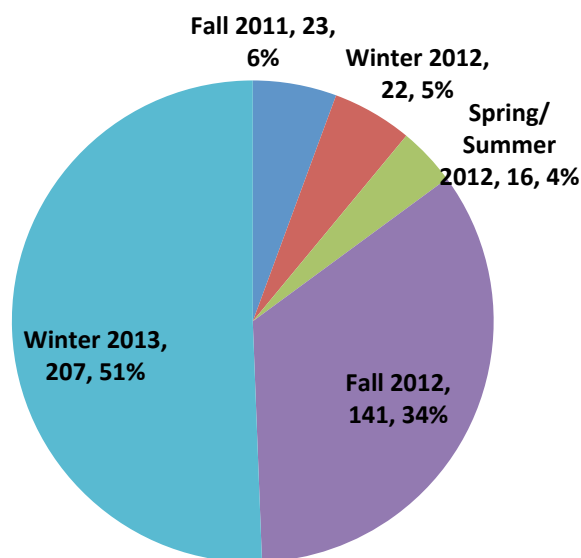

Figure B1. Participants' earliest quarter of Canvas use (n = 408)

As Figure B1 indicates, the sample was almost completely evenly divided into those using Canvas for the first time (n = 207) and those who had used it in previous quarters (n = 202).

2. *Motivation*

Participants were asked the following open-ended question: "What led you to decide to use Canvas originally?" The great majority of participants indicated that the school as a whole or their department was strongly encouraging or requiring the use of Canvas and had phased out other platforms such as Moodle and Blackboard. Note that although some participants gave responses that fit within multiple categories, 246 of the 252 participants who mentioned the campus-wide conversion to Canvas gave this as their *only* reason for using the tool originally.

Some participants also reported that they were under the impression that Catalyst would eventually be phased out as well. See Table B1 for categories, frequencies, and percentages.

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[5] The survey did not include an option to show whether participants were using Canvas during the current quarter, because the instrument was originally designed only for faculty using the tool in Winter 2013.   There was, however, an option to indicate if they were using it for the first time in Winter 2013.

Table B1. What led you to decide to use Canvas originally? (n = 389)[6]

Category	Frequency	Percentage
School/department is converting to canvas; other platforms (e.g., Catalyst, Moodle, Blackboard) being phased out	252	64.8%
Wanted to try a new technology/good fit with class	54	13.9
Better alternative to other platforms (e.g., Catalyst, Moodle, Blackboard)	35	9.0
Features available/general ease of use	19	4.9
Recommended by students/colleagues	9	2.3
Volunteered to try the platform	6	1.5
Took a workshop/training available	4	1.0
Opportune time to switch (e.g., redoing website, teaching class for first time)	4	1.0
Team teaching/prior teacher of course used it	4	1.0
Similar to site used at another institution	3	0.8
Other	8	2.1

3. Training and Preparation

Approximately **one-quarter of participants (107, 26%) attended the Canvas LMS introductory training workshop** through UW-IT.   See Figure B2 for participant ratings regarding how well the workshop prepared them to start using Canvas.
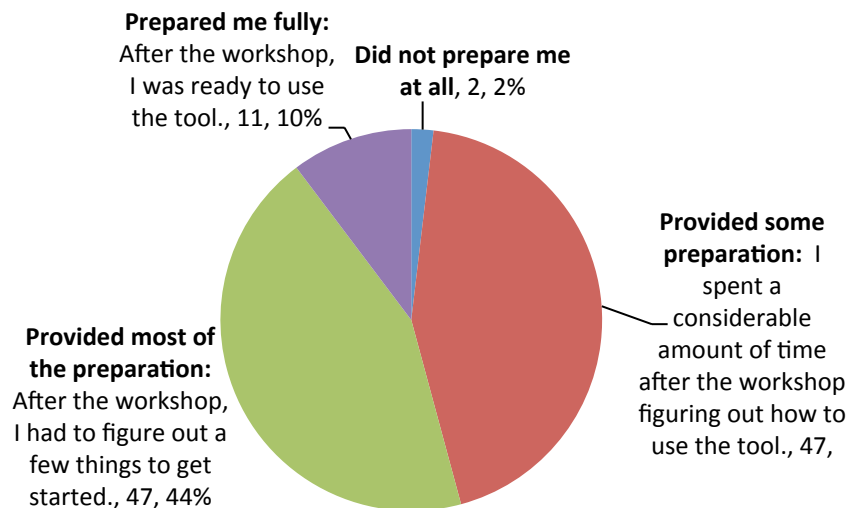

Prepared me fully: After the workshop, I was ready to use the tool., 11, 10%

Did not prepare me at all, 2, 2%

Provided some preparation: I spent a considerable amount of time after the workshop figuring out how to use the tool., 47,

Provided most of the preparation: After the workshop, I had to figure out a few things to get started., 47, 44%

Figure B2. Please rate how well this workshop prepared you to start using Canvas.

Participants were asked what additional content, if any, would have been helpful to include in the Canvas LMS introduction workshop; 59 participants provided an open-ended response – three added positive comments "it was a very helpful overview and demonstration."

The over-arching theme among these comments was that instructors wanted more in-depth information during these trainings, as opposed to an overview. Thirty-one of the fifty-nine respondents gave responses

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[6] Responses were coded according to multiple categories; therefore, percentages will exceed 100%.

indicated a desire for more content: some of these (n = 12) provided only suggestions on the topic, either about the content presented or the length of the workshop, as in the following quotes:

> *The tutorial was very useful, but it did not provide any training in some of the more sophisticated Canvas features. For example, in my second quarter of using Canvas, we decided to use the modules feature and embed Tegrity-captured lectures into the modules. It's a really simple thing once you figure it out, but it just takes some time to figure out and a tutorial would have been helpful…. As the TA in charge of setting up the course website, I spent a lot of time trouble-shooting. For example, there is a whole vocabulary associated with Canvas that may not be familiar to people and an easy-to-follow glossary of terms would help immensely!*

> *Our workshop was only 1 hour, so there were MANY things we didn't have time to cover that I have had to learn on my own - not even sure what I don't know yet.*

Twenty-two participants wanted **to learn more about specific topics, and by far the most frequently mentioned was grading in Canvas** (e.g., SpeedGrader, online submission, gradebook). Additional topics participants wanted covered in the introduction were quizzes (n = 3), groups (n = 2), integrating with Tegrity (n = 2), adding files (n = 2), adding video content, notifications, enrollment features, roles/views (student vs. teacher).

Another theme among comments, mentioned by nine participants, was to **include more hands-on and applied content.** Some suggested having "more practice time" either with their own site or one that was established. Others noted the importance of seeing an existing course site or discussing examples or best practices in Canvas sites.

Approximately 80% of participants indicated they would recommend the UW-IT workshop to a colleague planning to use Canvas for the first time, another 16% (n = 17) said they were "not sure" they would recommend it, and only four participants said that they would not recommend the workshop.

Participants were asked to "select all that apply" from a series of six resources/methods that they used to familiarize themselves with Canvas to prepare for their class.
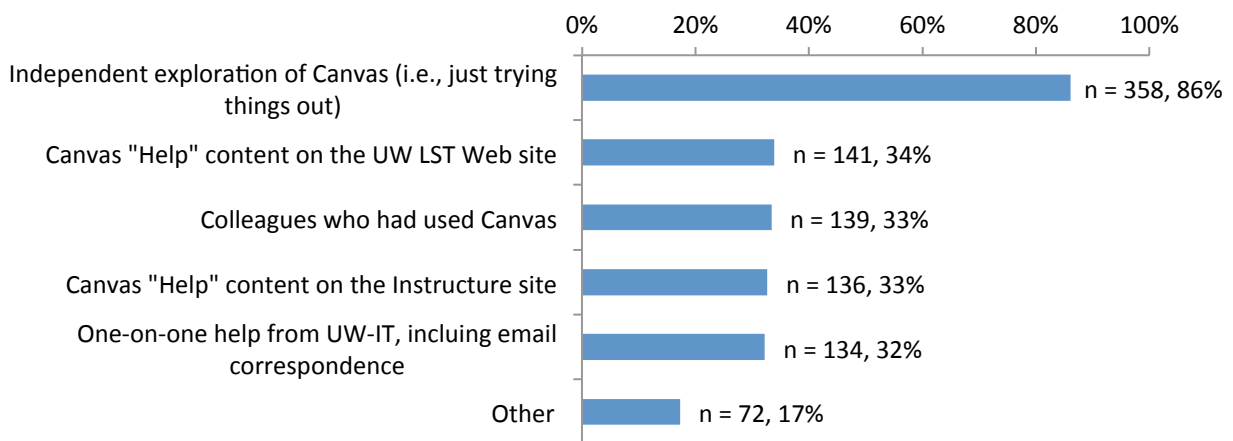

Figure B3. Other than UW-IT workshops, which of the following resources/methods did you use to familiarize yourself with Canvas to prepare for your class [select all that apply]

Of the 74 participants who chose "other," most (n = 39) mentioned either a **campus-specific training** at UW Bothell or Tacoma (n = 10) or a **department-specific training** (iSchool, n = 8; Nursing, n = 4; unspecified, n – 17).

Participants were next asked to provide any suggestions they might have for possible advanced workshop topics; 195 participants responded to this question. Of these, **142 (73%) provided suggestions for specific features or**

functions they would like to have covered in advanced workshops, and almost all suggested more than one topic. (see Table B2).

Table B2. Specific features or functions suggested as content for advanced Canvas workshops

Feature/Function	Frequency	Percentage[7]
Grading: Most of these comments focused on the use of the Gradebook, with most expressing a desire for more flexibility with this tool. Others wanted to know more about getting the most out of Canvas grading functionality.	48	25%
Quizzes: Participants expressed interest in online quizzes and tests, but few provided details about what, specifically, they were hoping to do with them.	20	10%
Groups: These comments were mixed between those who were interested specifically in the "groups" function, and those who generally wanted to know generally how to administer and support group projects using Canvas	19	10%
Assignments: Most of these comments focused on how to put together online assignments – two mentioned the possibility of ePortfolios via Canvas	17	9%
Structuring the site: Participants wanted to learn more about modules , as well as how to organize files, pages, and the syllabus function, and how all of these things differ and fit together.	18	9%
Discussion boards: Most comments about discussion boards were general requests for more instruction, although three mentioned specifically the link between grading and the discussion boards	14	7%
Integrating canvas with internal and external tools: The vast majority of these comments were about integrating with Tegrity, several also mentioned course registration and the Catalyst gradebook.	12	6%
Adding media content: How to add video and audio content to the Canvas site	10	5%
Web conferences	8	4%
Importing/exporting information	6	3%
Online submission/student drop boxes	6	3%
Peer review tools	6	3%
How to structure a course with multiple sections	4	2%
Calendar feature: & scheduling meetings with students	4	2%
Live chat sessions	3	2%
Outcomes	3	2%
Providing student feedback (e.g., writing, group work)	3	2%
Wiki pages	3	2%
Canvas email tools	3	2%
Voice activated features	2	1%
Blogging	2	1%
Real-time response (e.g., clickers, in-class voting)	2	1%

An additional forty participants (21%) **provided suggestions about the format, structure, or overall content of the training workshops.** Most frequently, they mentioned (n = 12) the need for the workshop to be built around

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[7] Participants responses were coded according to multiple categories; therefore, percentages will exceed 100%. Percentage is based on total number of respondents to this item (n = 195)

hands-on work with examples, either those generated by workshop participants prior to arriving at the workshop or via "best practices" from Canvas users. Nine participants suggested that the workshops be in **webinar format to accommodate faculty schedules**. Five participants mentioned the need to generally structure the workshop around faculty needs, and three noted that a workshop should be held about not just the tool itself, but innovative pedagogical techniques using Canvas.

Fourteen respondents (7.2%) provided other general comments, such as frustration with Canvas in general, or indications that no training was necessary.

B. Use of Canvas

1. *Class type and format*

The survey included several items intended to allow for comparisons across different factors. One of these was course type. Participants indicated all the different types of courses they had taught using Canvas; results are shown in Table B3.

Table B3. Number and percentage of participants who reported teaching different types of courses using Canvas

Feature/Function	Frequency	Percentage[8]
Seminar/small discussion-based class (<25 students)	163	39%
Small lecture (<100 students)	145	35%
Large discussion-based class (25+ students)	137	33%
Large lecture (100+ students)	57	14%
Field experience, practicum, or clinic (course-based)	37	9%
Independent study	9	2%

Note that 121 participants (29%) listed more than one class. For the purpose of comparison (see Part II of Appendix B), responses from participants who *only* taught either small seminars (n = 85) or at least one large lecture (n = 57) were compared to participants who taught all other types of classes, as shown in Figure B4.
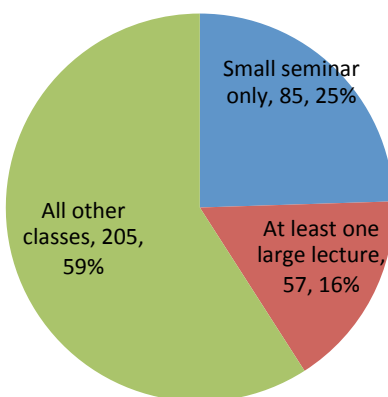

Figure B4. Number and percentage of participants listing various types of classes taught, as categorized for numerical comparisons

Class format (in-person, online, or hybrid) was also a factor of interest for analysis. Participants could select all the types of class formats they had taught using Canvas, and many had taught classes in multiple formats. Comprehensive results from these items are shown in Table B4:

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[8] Participants responses were coded according to multiple categories; therefore, percentages will exceed 100%.

Table B4. For which of the following class format(s) have you used Canvas?

Course type(s)	#	%
In-person only	305	73
Hybrid only	26	6
Online only	19	5
In-person and hybrid	26	6
In-person and online	14	3
Hybrid and online	8	2
All three course formats	6	1
No response	12	3

2. Feature use

For the purpose of comparisons, three categories were created: those participants who only taught in-person courses (n = 305); those who had taught at least one completely online course (n = 47), and those who taught at least one hybrid course, but had not taught a course completely online (n = 52).

Participants were asked to choose from a series of three choices, which best describes how they used Canvas in their courses; results were as follows:

- I used only Canvas (including any tools available such as GoogleDocs: n = 295, **73%**

- I used Canvas but replaced some Canvas features with other tools (e.g., I used GoPost for discussions, I used a third-party tool for assignments): n = 78, **19%**

- I used some features of Canvas but did not use Canvas as a course website: n= 32, **8%**

Ninety-three participants listed at least one non-Canvas tool they had used to supplement their Canvas course web site, with 30 listing more than one. Across all participants' lists of tools (n = 134), 53 unique tools were included, and about half of all listed tools (66 of 134, 49%) were Catalyst tools. Table B5 provides a summary of the functions served by these non-Canvas tools

Table B5. The number and percentage of participants replacing certain Canvas features or functions with external tools, either Catalyst or non-Catalyst, along an abbreviated list of tools used

Feature/Function	Tools	* Catalyst	Non-Catalyst	Total	%[9]
Assessment	WebQ*, WebAssign, Publisher sites	10	9	19	24%
Grading	Catalyst Gradebook*, Excel	17	1	18	23%
Lecture/screen capture	Tegrity**, Camtasia	N/A	13	13	17%
Course web site	Commonview*, personal web site	4	6	10	13%
Discussion	GoPost,* TodaysMeet	9	1	10	13%
Surveying	WebQ*, Poll Everywhere, Survey Monkey	7	3	10	13%
Blogging	WordPress, blogger.com	N/A	7	7	9%
Communication	Class email list**, Facebook, Twitter	N/A	7	7	9%
Assignment submission	DropBox*, CollectIt	3	3	6	8%

[9] Represents the percentage of participants who indicated they had used external tools (n = 78).

Feature/Function	Tools	* Catalyst	Non-Catalyst	Total	%[9]
Video content hosting	YouTube, Flickr	N/A	5	5	6%
Web conferencing:	Elluminate, Adobe Connect	0	5	5	6%
File sharing:	Shared space*, Dropbox	1	3	4	5%
Scheduling:	Google calendar, Doodle	N/A	3	3	4%
Collaboration	Google Drive**, PBWorks Wiki	0	2	2	3%
File storage	File manager*	2	0	2	3%

* Catalyst tool
** UW-supported tool

Participants indicated which Canvas features they had used, selecting all that apply from a comprehensive list. Results are presented in Figure B5.
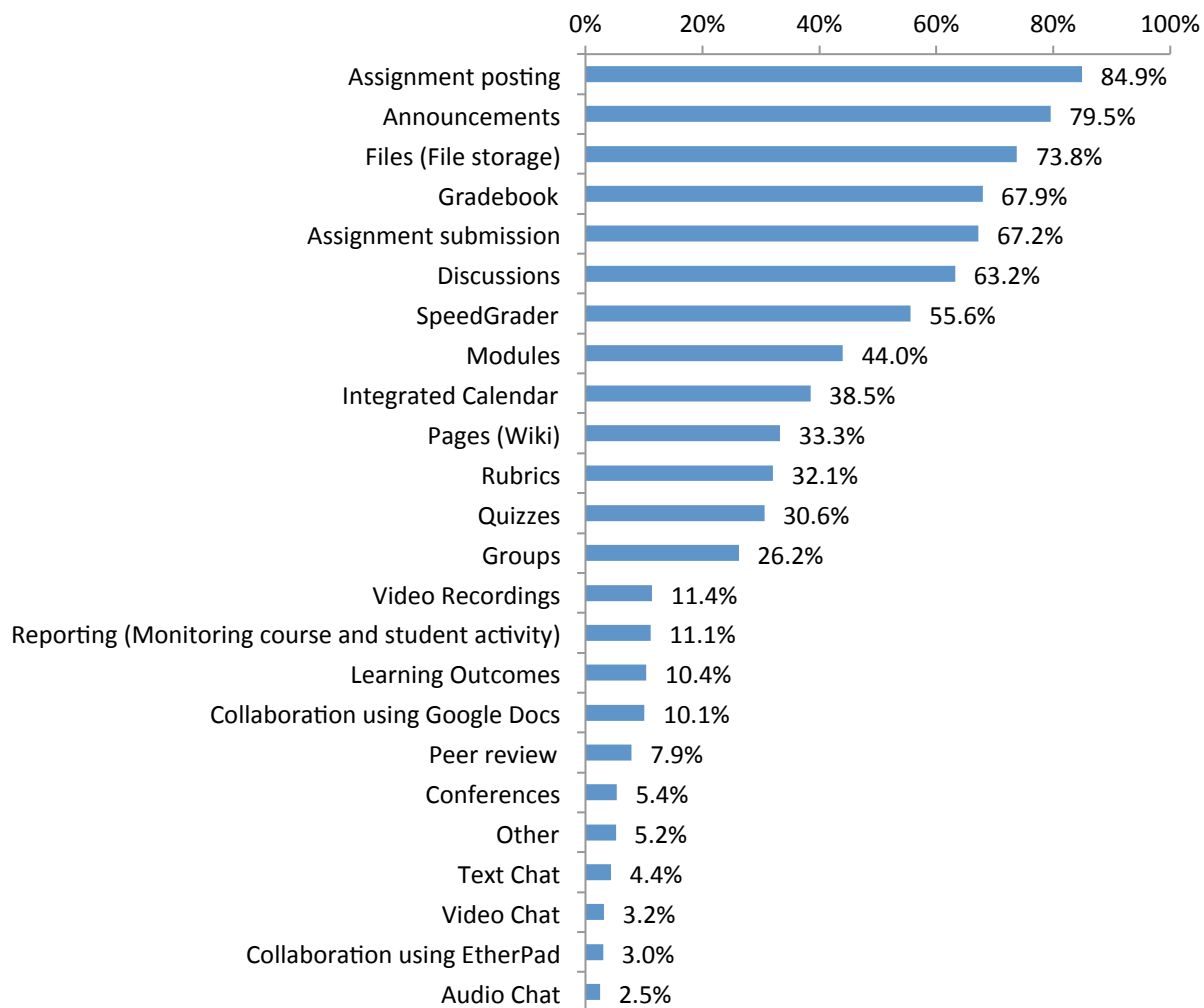
Figure B5. Which of the following Canvas features have you used in your course(s)? Select all that apply.

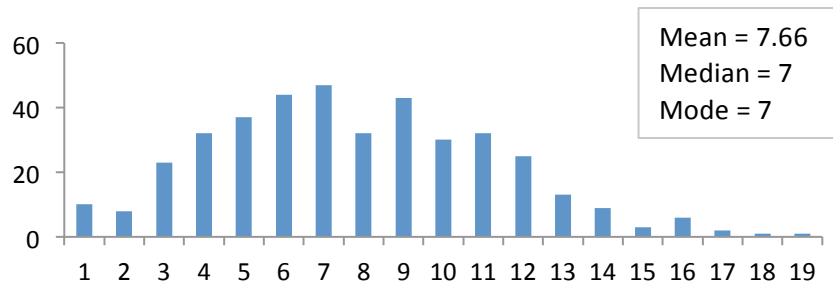Figure B6 shows a histogram of total number of features used, according to this list.

Figure B6. Frequency histogram and descriptive statistics for total number of features selected

C. Satisfaction with Canvas

Participants were asked to rate their overall experience with Canvas on a scale from 1 "Extremely dissatisfied" to 5 "Extremely satisfied." See Figure B7.
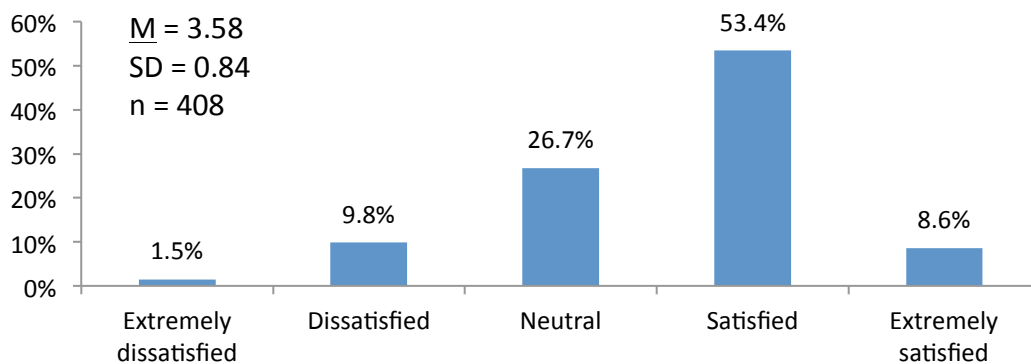

Figure B7. How would you rate your overall experience with Canvas?

Next, participants were asked to rate the difficulty of a series of seven tasks in Canvas. See Table B6 for all frequencies and descriptive statistics.

Table B6. Please rate the difficulty of the following tasks in Canvas.

	Very difficult				Very easy	*Mean*	SD	n$_{Mean}$
	1	*2*	*3*	*4*	*5*			
Communicating with students	7 (2.0)	41 (11.7)	91 (26.0)	104 (29.7)	107 (30.6)	**3.75**	1.08	350
Grading assignments	14 (4.8)	31 (10.7)	70 (24.1)	95 (32.8)	80 (27.6)	**3.68**	1.13	290
Collaborating with co-instructors and/or TA's	6 (3.4)	16 (9.2)	61 (35.1)	50 (28.7)	41 (23.6)	**3.60**	1.05	174
Administering class discussion	11 (5.0)	29 (13.1)	67 (30.3)	83 (37.6)	31 (14.0)	**3.43**	1.05	221
Navigating the course space	14 (3.5%)	51 (12.9%)	139 (35.2%)	137 (34.7%)	54 (13.7%)	**3.42**	.99	395
Assessing student learning	11 (5.2)	26 (12.3)	83 (39.3)	66 (31.3)	25 (11.8)	**3.32**	1.01	211
Creating and administering quizzes	11 (7.8)	25 (17.7)	38 (27.0)	49 (34.8)	18 (12.8)	**3.27**	1.13	141

If participants rated any of the previous Canvas tasks as "difficult" or "very difficult," they were asked to explain their ratings. A total of 215 participants responded. See Table B7 for categories of responses and selected quotes.

Table B7. Please explain what challenges you encountered for tasks you rated as "very difficult" or "difficult" (n = 215)

Categories	Selected quotes	n
Navigating the course space/general	*The site is not organized very logically and it is difficult to figure how to adjust it (or sometimes there are not enough options for adjustment), especially when you're teaching a f2f class and just want to create a simplified version. For example, the new "outcomes" category is unnecessarily complex and I'm not sure how I can make it more straightforward without hiding the page and creating a new one to cut and paste my outcomes into. For giving students feedback, I always download all the assignments and then re-upload them because I find that comments left in Canvas messages are tough for students to keep track of (too many other messages happening) and other options w/in Canvas have a tendency to fail or be difficult to access as well.*	70
Grading assignments	*The grade book is not very flexible or intuitive. There were multiple occasions where I could not do what I wanted and had to work around the system.*	62
Communicating with students	*The email interface is not very user-friendly. The way it groups conversations, etc. is not easy to track. I also wish I could just turn it off or forward it directly to my email, so I didn't have to check both inboxes. Maybe I can, but haven't figured it out yet and it seems like a headache.*	36
Class discussion	*Small group discussions are manageable, but a discussion for the whole class is hard to follow both for instructor and students. It would help if on the first screen there were a summary of all the threads so you didn't have to scroll through everything to find the next heading. I know you can collapse the discussion by thread but a summary screen would be much easier to use.*	31
Creating and administering quizzes	*Was unable to easily scramble questions on a quiz. Could only scramble answers. Wanted questions to randomly scramble--so that each test-taker encountered questions in a different order.*	31
Not Applicable	*I have not used canvas for many of the more complex tasks yet, but from what I see here, that is definitely going to be something I do next quarter.*	29
Collaborating with co-instructors or TA's	*We had a multi-section class with separate discussion groups. It was very hard to figure out how to set this up, and we ended up having to do a lot of work-arounds. Our school support person was not able to figure this out either. We never really did figure out how to get discussions to thread -- this was all so much easier in Catalyst.*	8
Assessing student learning	*Assessing student learning is not easy in general. Using the statistics such as the percentage of pages viewed by a student does not really contribute to being able to completely assess learning.*	1
Other	*The Pages wiki is terrible. I want to be able to add and subtract my own pages, and determine how they look and where they go, like in Catalyst.*	28

IV. Impact of Canvas

Participants were asked to indicate the extent to which they agree with a series of statements about their overall use of Canvas. See Table B8.

Table B8. Please indicate the extent to which you agree with the following statements about your overall use of Canvas.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	*Mean*	SD	n_{Mean}
	1	*2*	*3*	*4*	*5*			
Using Canvas has made teaching my course(s) more efficient.	17 (4.3%)	51 (12.8%)	119 (29.9%)	167 (42.0%)	44 (11.1%)	**3.43**	.99	398
Using Canvas has enhanced students' experience of the class.	28 (7.2)	58 (14.9)	156 (40.1)	127 (32.6)	20 (5.1)	**3.14**	.98	389
Using Canvas has increased students' participation and engagement with the course content.	25 (6.3)	65 (16.5)	188 (47.7)	98 (24.9)	18 (4.6)	**3.05**	.92	394
I find myself communicating more frequently with students in my Canvas class(es) than I did when teaching classes without Canvas.	40 (10.3)	116 (29.9)	148 (38.1)	69 (17.8)	15 (3.9)	**2.75**	.99	388
Students in my Canvas class(es) communicate with each other more than they would without Canvas.	39 (10.2)	105 (27.3)	184 (47.9)	46 (12.0)	10 (2.6)	**2.70**	.90	384

Table B9. Have you tried anything different or new in your teaching practices because of Canvas?

	Definitely not	Not really, only minor differences	Yes, to some extent	Yes, definitely	Not yet, but I plan to do so in the future	n
	1	*2*	*3*	*4*	*5*	
Have you tried anything different or new in your teaching practices because of Canvas	37 (9.3%)	162 (40.5%)	**132 (33.0%)**	**42 (10.5%)**	**27 (6.8%)**	400

Participants were asked to describe the most significant change they had made to their teaching practices because of Canvas. A total of 166 responded; the strongest themes among comments (from 143 participants) are presented in Table B10, including a description of the theme, representative quotes, and the number of participants who indicated they have already made this change and those planning to do so in the future.

Table B10. Please describe the most significant change or innovation you have made or plan to make in your teaching practices because of Canvas.

Categories	Selected quotes	Done	Planning	Total
Increased efficiency: Assignments submitted and graded online	*Removed a lot of paperwork through on-line submissions and grading. Feedback is faster to students and more organized.* *Speedgrader so far has been a great assistance and I will continue to incorporate it in my future classes.*	36	3	39
Flipping the classroom: Lecture capture, pre-lecture quizzes, online quizzes	*More short videos explaining concepts that some, but not all, students struggle with. For example, I'd like to make some video tutorials on Excel, so we can spend less class time helping the less prepared students and move on to other things. By doing this as a video, the students who need it can go at their own pace, and those who don't can skip it entirely.* *Using an online platform for my course allowed me to shift the lecture component almost completely online, thereby freeing the in person class time to take on a more seminar style of collaborative learning.*	25	5	31
Enhanced assessment: multi-media feedback, use of rubrics	*I love the rubric option. It has greatly enhanced my ability to ensure consistency and clarity in certain assignments and has also enhanced my ability to mentor my TA.* *I understand that I can give verbal feedback in Canvas, so I am going to explore how to do this in the future.*	16	11	27
Student-to-student interaction: Introduced online discussion	*On-line discussions have allowed me to get students to participate who normally do not do so in a classroom discussion. I demand in depth analysis on controversial issues and grade those discussions. Students seem to feel more free to respond. The on-line discussions have unexpectedly resulted in students to be more participatory in regular class as well.*	22	3	25
Student-to-student collaboration: Peer review or group work	*Group collaboration in Canvas- I made it optional this term but will make it mandatory next term-works great.* *Peer review has become easy to administer even in large classes, which has brought great benefits to my students in the form of critical reflection.*	14	7	21
Faculty-student communication: Posting or communicating via Canvas, virtual office hours	*I hope to incorporate on-line video office hours. I use Web ex sometimes for that now, but would like it to be coupled more strongly with the actual class web site.* *I sent a recorded video message to my class.*	12	9	21
Changes to course structure: Use of modules, online syllabus	*This quarter I adopted modules. I like it as a way to organize content.* *very simple, really--arranging my readings by units (modules) has enabled me to focus the uses of those readings*	8	4	12
Enhanced assignments: Additional or more creative assignments	*I plan to make use of the video aspects of Canvvas next quarter to encourage multiple forms of media-based student assessment.* *I have changed the format of some of my learning activities, and now I am beginning do more learning activities in an online format.*	6	2	8
Enriched content	*I also found myself including additional video content to expand student thinking.*	7	0	7

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Next, participants were asked what, if anything, instructors would say is most valuable about using Canvas; 293 participants offered a response.

Table B11. As an instructor, what, if anything, would you say is most valuable about using Canvas? (n = 293)

Categories	Selected quotes	n (%)
Standard secure platform for all teaching tools/organizes teaching	*These days, it seems like an online learning management system is almost required, given the tech-savvy population of students we serve. The most valuable feature I find, using Canvas, is the one-stop-does-it-all online option it provides.*	110 (37.5)
Grading (e.g., speedgrading, rubrics)/ Tracking student progress	*Love the Speed Grader. I can set quick assignments to the equivalent of check, check-plus, check-minus ... and I can download all & work offline, then upload all & return instantly!*	80 (27.3)
Better communication with students	*Students are very comfortable about communicating informally with me as their instructor through the inbox or in the comment boxes. They might be less inclined to send an email, but they respond immediately on Canvas.*	40 (13.7)
Flexibility/ease of use	*The integration of an LMS is a tremendous step forward over cobbling together a bunch of tools inside an html-based web-site. Mostly, the ability to create and edit on the fly is a positive experience.*	35 (11.9)
Assignment Submission	*Assignments are your strong point. The assignment turn in system seems rather well designed and makes a lot of sense. The options and fluidity work well making it easier to handle grading.*	26 (8.9)
Integrated calendar	*The calendar feature is the nicest and most valuable thing. It's a single place where I can store and push updates to students about assignment deadlines, events, etc.*	22 (7.5)
Nothing/ambivalent	*Canvas offers some more tools, but for the most part, I'm still just using the same things that I used in Catalyst. I'd be happy to go back to using Catalyst since it was simpler, and less confusing to me and the students.*	22 (7.5)
Students use and like it	*Reliability. Students reported no problems and were satisfied.*	11 (3.8)
Online storage/file sharing	*I am not an instructor, I just assist some instructors with their Canvas sites. It is valuable for storing content that will be used year after year.*	8 (2.7)
Other	*Condition-based features. Responding to unique learner conditions.*	8 (2.7)
Multimedia capacity (e.g., web conferencing/video)	*embedded multimedia and social media linkage*	7 (2.4)
Online quizzes	*Makes giving and grading quizzes easier.*	6 (2.0)
Managing groups	*Ease of setting up and managing groups.*	5 (1.7)
Opportunity for collaboration	*…potential for collaborating better with co-instructors.*	5 (1.7)
Available tech support	*good technical support (even if the answer is "no")*	3 (1.0)
Works well with a hybrid course	*Canvas promotes a new way of structuring a course website that will make the transition toward hybrid and online courses more smooth.*	2 (0.7)

PART 2: FACULTY SURVEY, COMPARISONS

Each of the following five sections describes comparisons made according to variables of interest. For each independent variable, numerical data from the following set(s) of items were made:

- Participation and effectiveness of training (for Campus comparisons only)

- Features used

- Satisfaction ratings

- Ratings of difficulty using various Canvas tools

- Impact of using campus

- Trying new teaching practices

For all items, only differences reaching statistical significance are reported.

A. Class Type

Participants were asked to select from a list of different types of classes which they had taught using Canvas. Of particular interest for comparison were extreme course sizes, so participants were placed in three categories:

- **Large lecture** (n = 57): Those who had taught at least one large lecture course using Canvas

- **Small seminar** (n = 85): Those who had *only* taught small seminars using Canvas

- **Other** (n = 205): All other participants

There were no significant differences in ratings of satisfaction or impact according to this variable. Below are results from differences in features used and in difficulty ratings for various features.

Features used

Figure B8 shows the features for which there were significant differences[10] in use across course type.
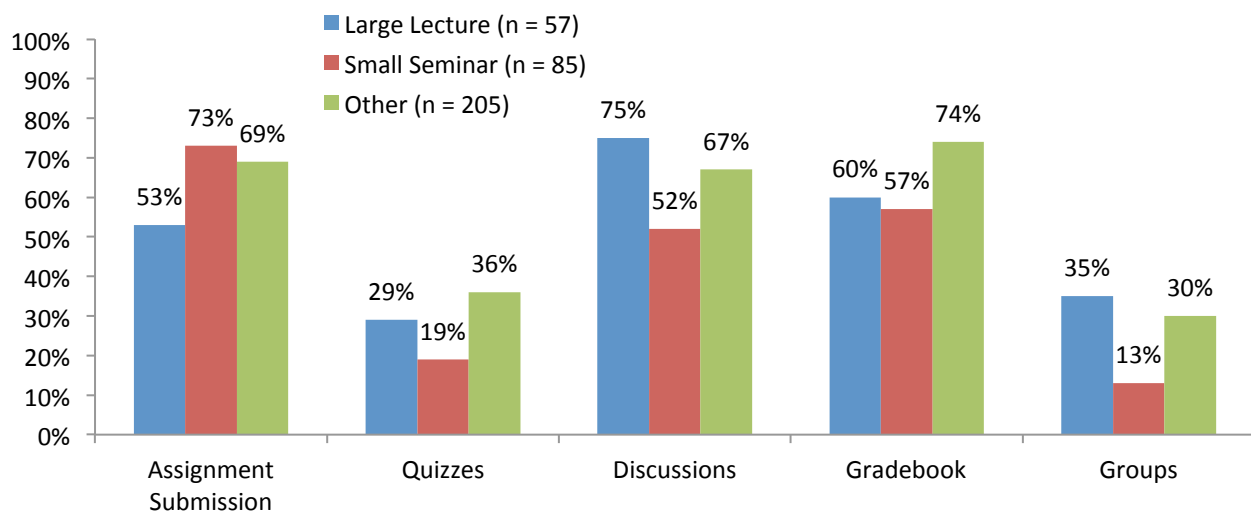
Figure B8. Percentage of participants who used Canvas features, according to class type, for items showing significant differences

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[10] According to Pearson's chi-square, $p < .05$.

Difficulty ratings

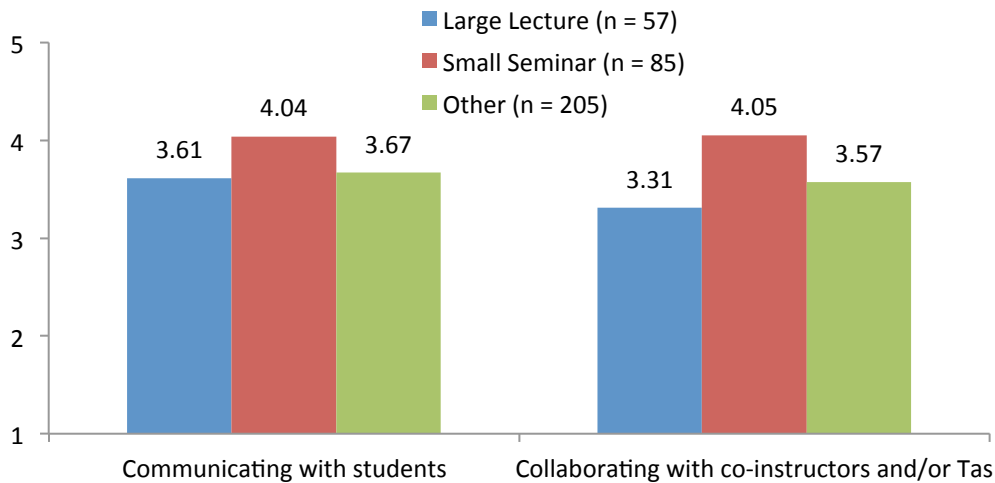Below are mean ratings for two items showing significant differences across class type.

Figure B9. Mean ratings of difficulty (from 1 "Very difficult" to 5 "Very easy") according to class type, for items showing significant differences

B. Course Format

Participants indicated whether they had taught online, hybrid, and/or in-person courses using hybrid. Fifty-four participants listed more than one format of course, and the following criteria were used to create three discrete categories.

- **Online** (n = 47): Participants who taught at least one fully online course using Canvas

- **Hybrid** (n = 52): Those who had taught at least one hybrid course, but had never taught a fully online course using Canvas

- **In-person** (n = 305): Participants who only taught in-person courses using Canvas

There were no significant differences in ratings of satisfaction or difficulty ratings according to this variable. Below are results from differences in features used and in impact for various features.

Features used

Figure B8 shows features for which there were differences in use rates based on class format.
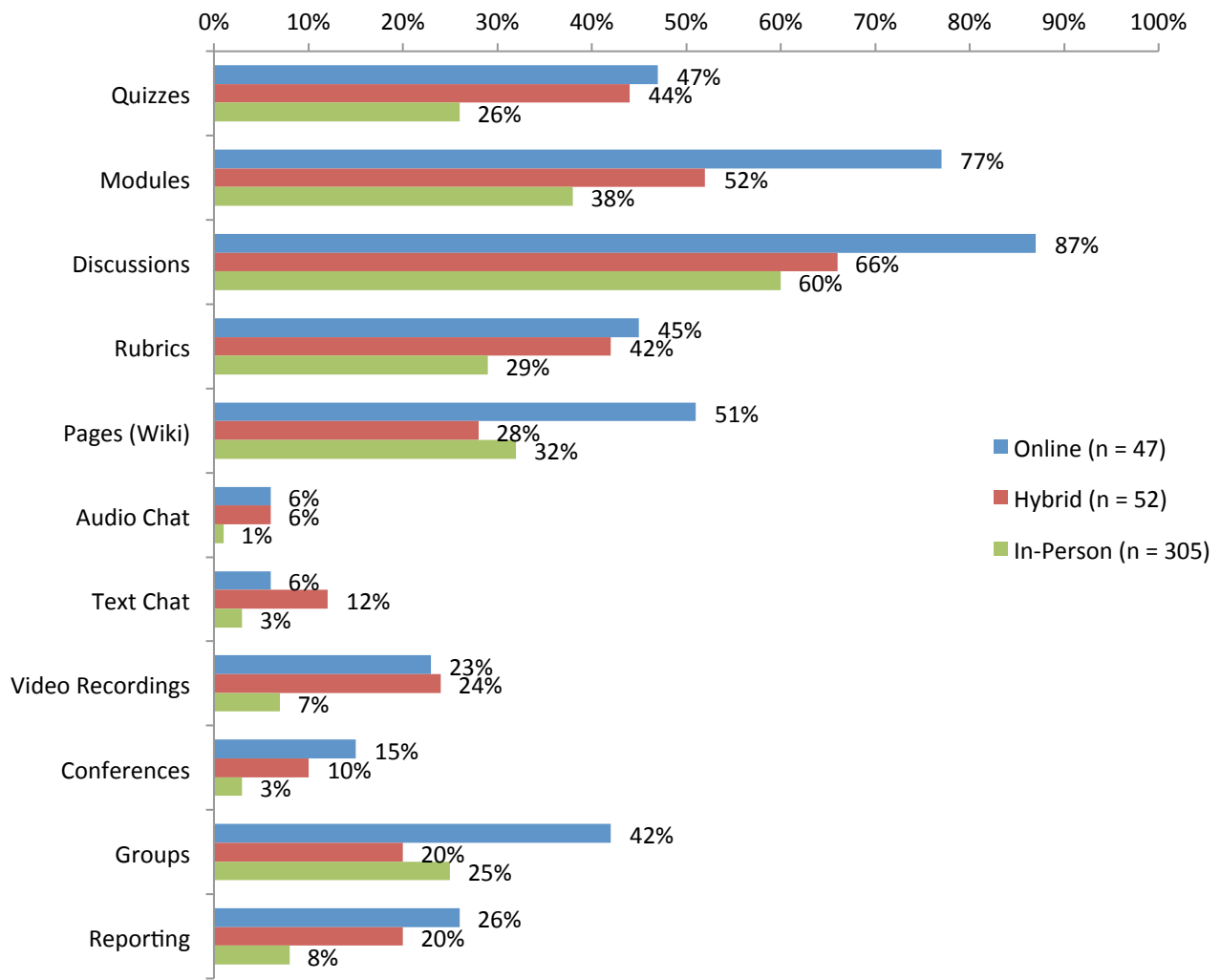
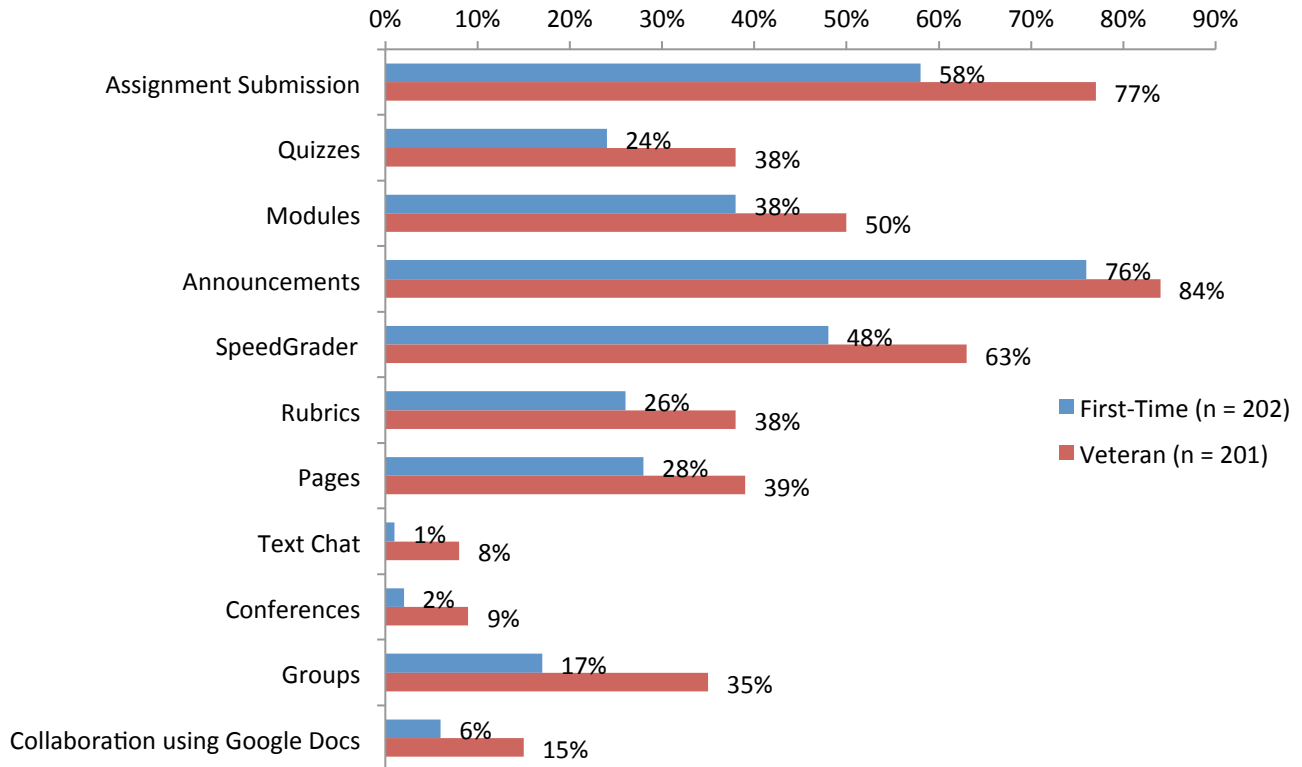**Figure B10.** Percentage of participants who used Canvas features, according to class format, for items showing significant differences
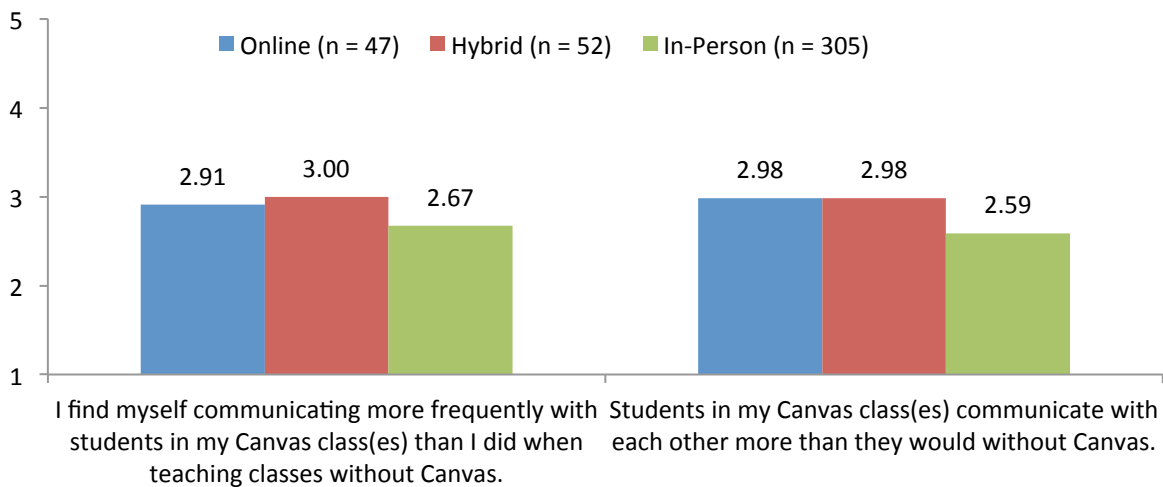
Figure B11. Mean endorsement ratings (from 1 "Strongly Disagree" to 5 "Strongly Agree"), according to class format, for items showing significant differences

C. First-time vs. Veteran Users

Participants were fairly evenly distributed between those who were using Canvas for the first time in Winter 2013 (n = 202) and those who had used it during at least one previous quarter (n = 201). There were no significant differences between these groups on ratings of satisfaction, difficulty using features, or impact of using Canvas. Below is a summary of differences in use of features as well as trying new teaching practices.

Features used

Figure B12. Percentage of participants who used Canvas features, according to their previous Canvas experience, for items showing significant differences

In addition to differences in specific features used, first-time users indicated a significantly lower mean number of total features used ($\underline{M}$ = 6.8) than veteran users ($\underline{M}$ = 8.6).
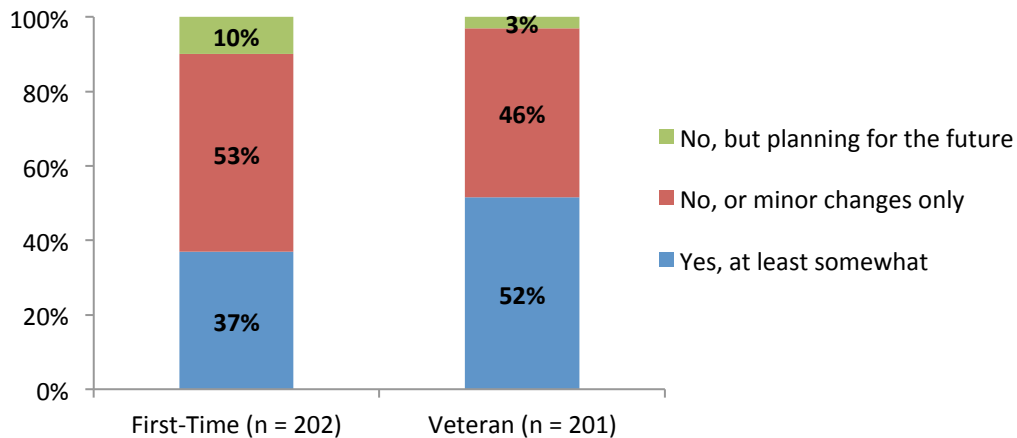
Figure B13. Percentage of participants who tried something new in their teaching because of Canvas, according to previous Canvas experience

D. Campus

Comparisons were made according to participants' campus: Bothell (n = 43), Seattle (n = 287), or Tacoma (n = 60). There were no significant differences in satisfaction or ratings of impact of Canvas. Because there were differences in training across campuses, items about students' experience in workshops were also compared across campus.
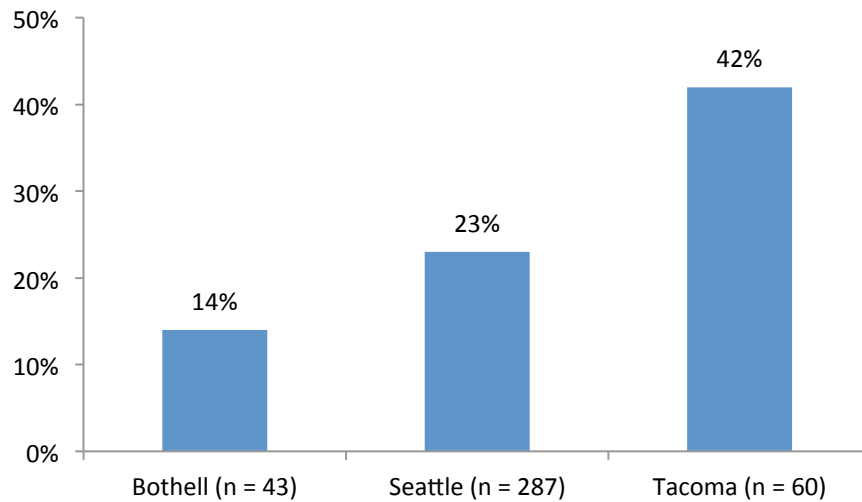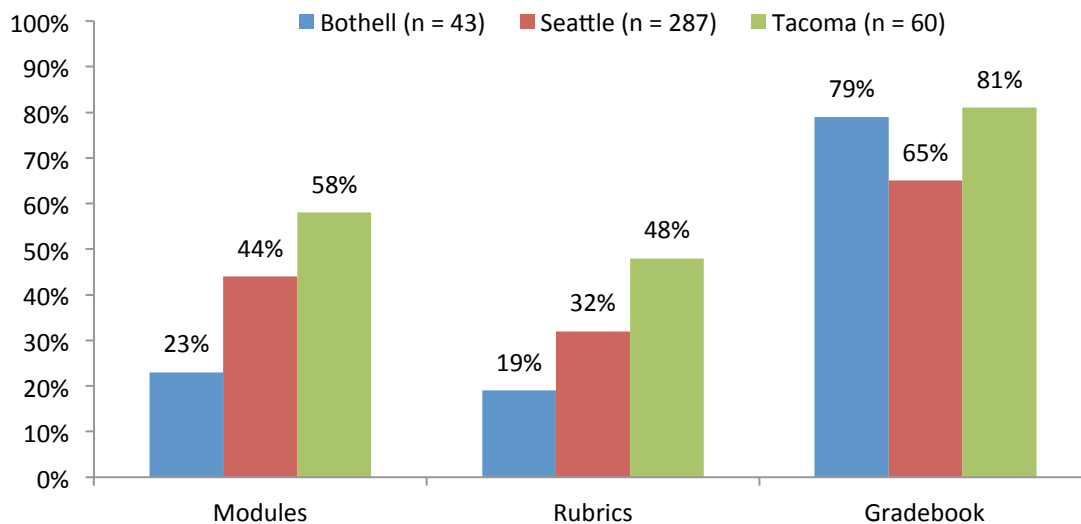
Training

Figure B14. Percentage of participants from each campus who indicated they took part in introductory Canvas workshops through UW-IT

Note that although more faculty took part in training in Tacoma than in Seattle and Bothell, the three groups did not differ in their ratings of how well the training prepared them to start using Canvas.

Features used

Figure B15. Percentage of participants who used Canvas features, according to campus, for items showing significant differences

Difficulty Ratings

Among the list of features for which participants provided ratings of difficulty, one showed a significant difference across campus, according to a one-way Analysis of Variance ($p < .01$); specifically, ratings from Seattle were significantly lower than ratings from Bothell.
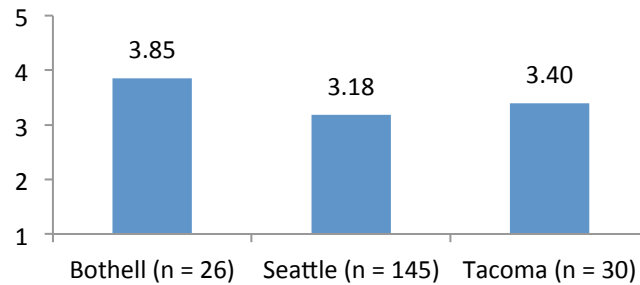

Figure B16. Mean difficulty rating (from 1 "Very difficult" to 5 "Very easy") for "Assessing student learning," according to campus

E. Discipline

Based on a list of courses taught by each instructor, participants were coded according to discipline using the following categories.

- **Professional** (n = 205): Education, nursing, medicine, dentistry, Information School, etc.

- **STEM** (n = 74): All science, technology, engineering, and mathematics courses not included in the "Professional" category.

- **Humanities/General education** (n = 63): Includes English writing courses, as well as Interdisciplinary Arts and Sciences courses taught at UW Bothell and Tacoma

- **Social sciences** (n = 48): Sociology and psychology, among others

There were no differences across discipline for satisfaction or difficulty ratings.
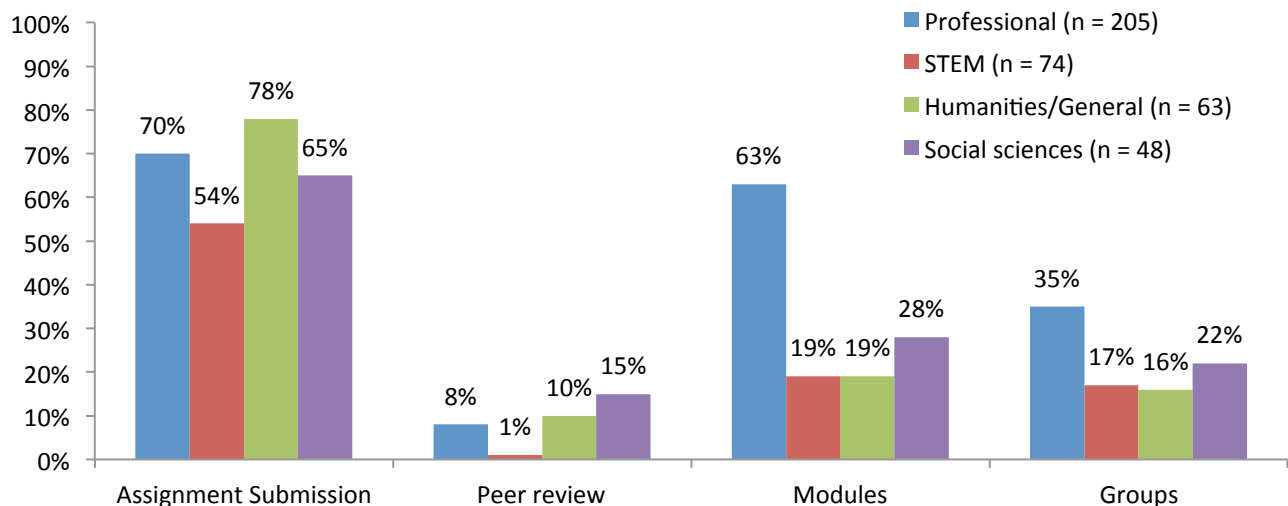
Features Used

Figure B17. Percentage of participants who used Canvas features, according to disciplines, for items showing significant differences
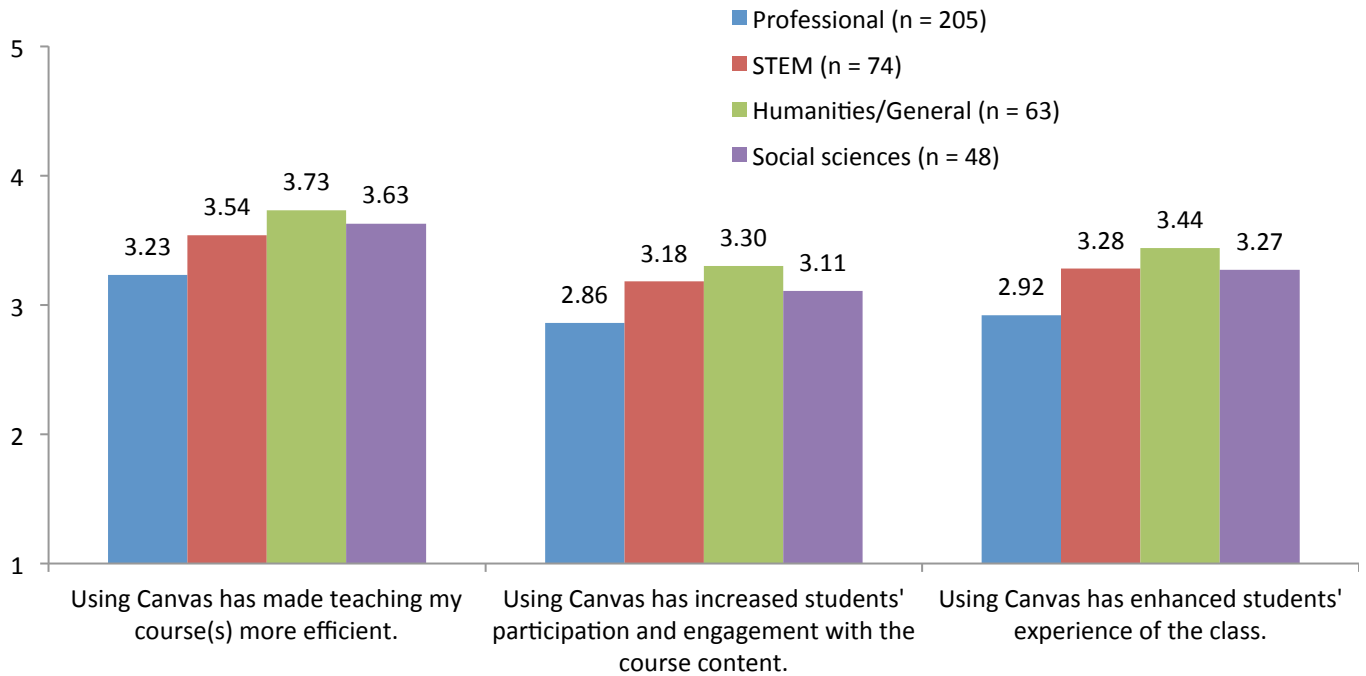
Figure B18. Mean endorsement ratings (from 1 "Strongly Disagree" to 5 "Strongly Agree"), according to discipline, for items showing significant differences
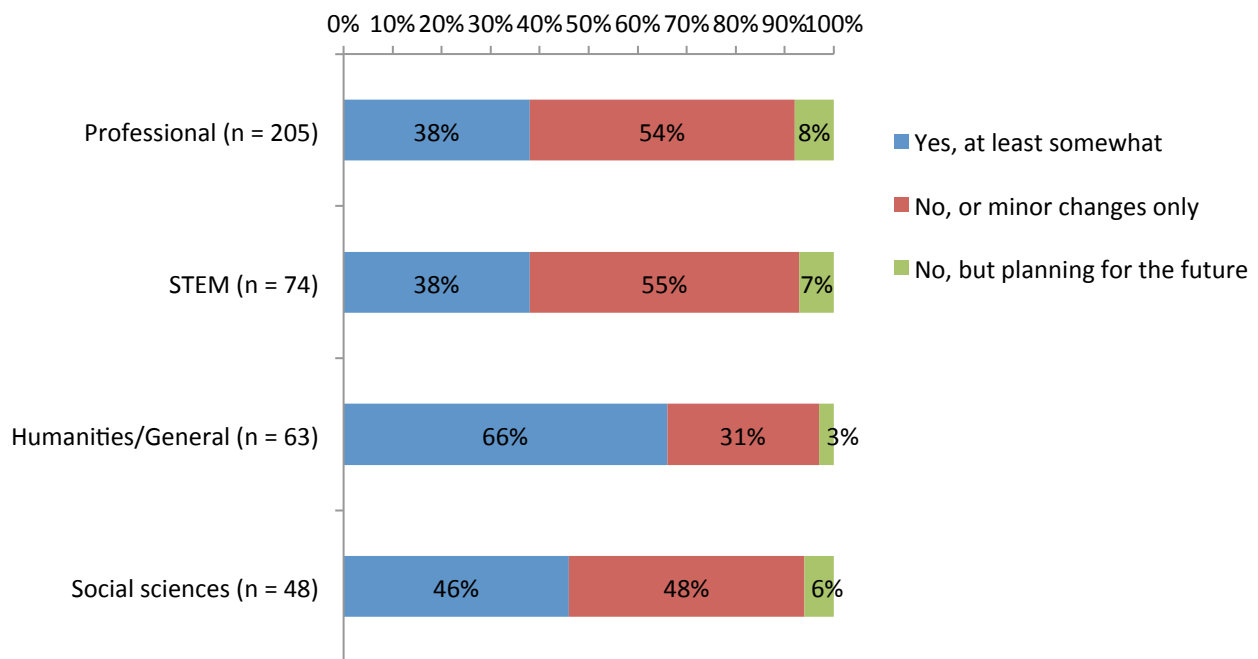

Figure B19. Percentage of participants who tried something new in their teaching because of Canvas, according to discipline

PART 3: STUDENT SURVEY, DESCRIPTIVE RESULTS

Below are basic, descriptive results from all closed-end student survey items. Note that analysis of open-ended responses was not performed, except for general categorization reported informally to UW-IT.
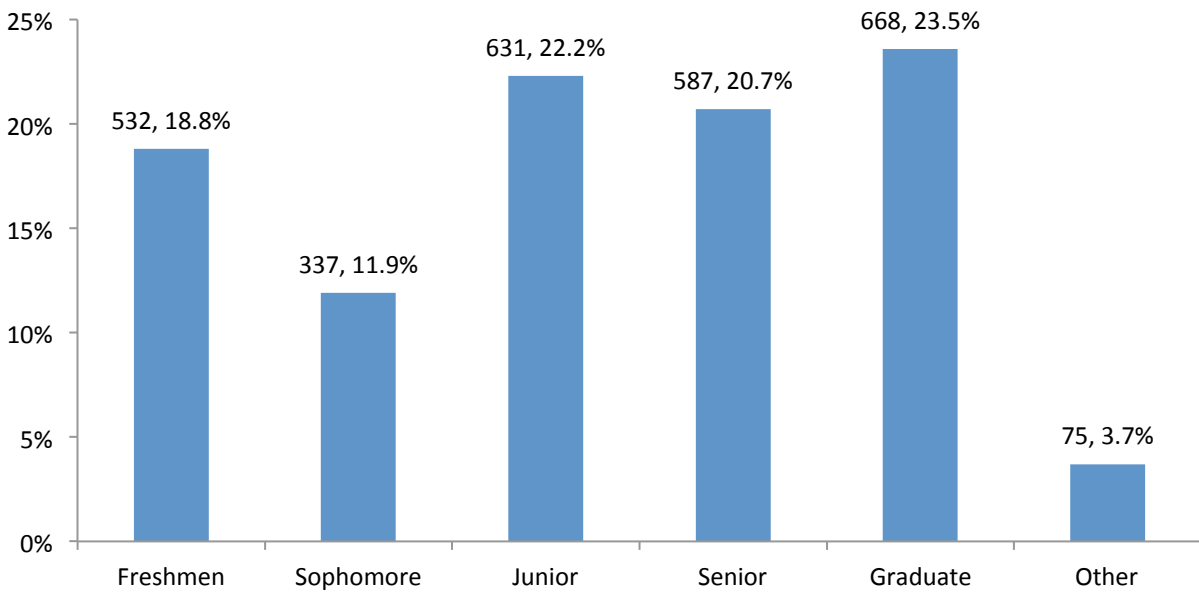
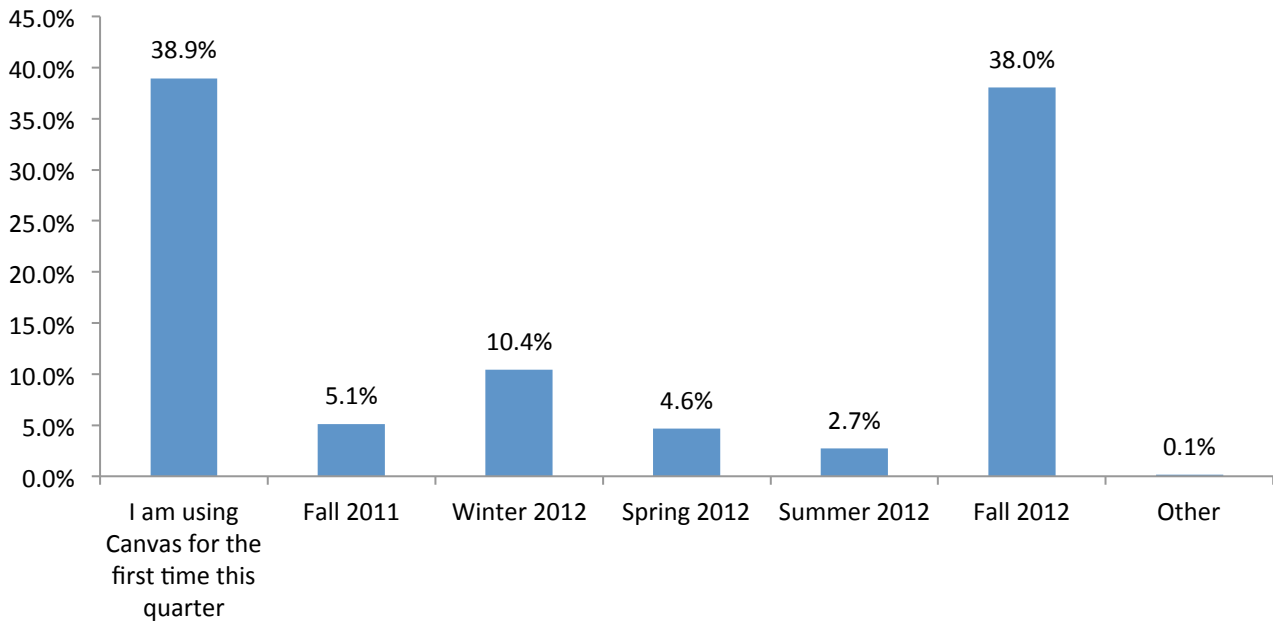**Figure B20. Which of the following best describes your class level?**

Figure B21. In which of the following previous quarters have you used Canvas in a UW course?
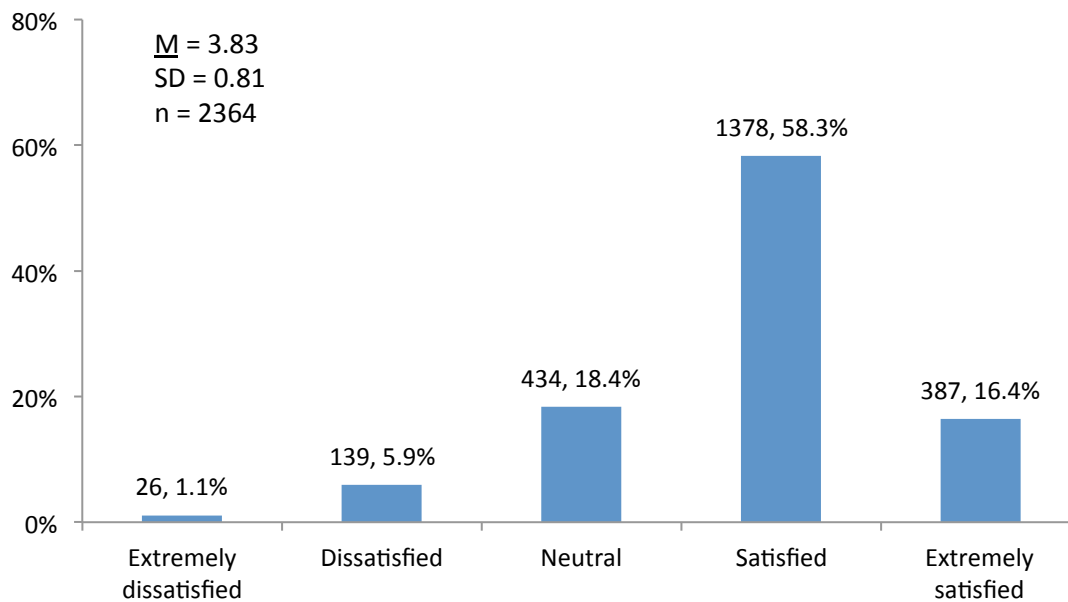
M = 3.83
SD = 0.81
n = 2364

Figure B22. As a student, how would you rate your overall satisfaction with Canvas?

Table B12. Please rate the difficulty of the following tasks in Canvas. If the task is something you have not done for Canvas, select "N/A."

	Very difficult				Very easy	NA	Mean[11]	SD	n$_{Mean}$
	1	2	3	4	5				
Checking grades	52 (1.8)	138 (4.9)	350 (12.4)	636 (22.4)	1432 (50.5)	218 (7.7)	**4.25**	1.01	2608
Submitting assignments	35 (1.2)	119 (4.2)	401 (14.2)	743 (26.2)	1194 (42.1)	332 (11.7)	**4.18**	.96	2492
Taking quizzes/exams	26 (0.9)	82 (2.9)	318 (11.2)	466 (16.4)	600 (21.2)	1322 (46.7)	**4.03**	.99	1492
Learning to use Canvas (getting started)	34 (1.2%)	188 (6.6%)	685 (24.2%)	1013 (35.8%)	864 (30.5%)	42 (1.5%)	**3.89**	.96	2784
Checking course schedule and due dates	60 (2.1)	243 (8.6)	651 (23.0)	799 (28.2)	942 (33.3)	36 (1.3)	**3.86**	1.07	2695
Accessing course materials (lectures, readings, links, etc.)	68 (2.4)	252 (8.9)	675 (23.8)	897 (31.7)	905 (31.9)	20 (0.7)	**3.83**	1.06	2797
Participating in discussions	53 (1.9)	223 (7.9)	554 (19.6)	675 (23.8)	724 (25.6)	595 (21.0)	**3.80**	1.07	2229
Communicating with instructor(s)	86 (3.0)	234 (8.3)	565 (19.9)	681 (24.0)	759 (26.8)	502 (17.7)	**3.77**	1.12	2325
Navigating the course space	71 (2.5)	292 (10.3)	804 (28.4)	908 (32.1)	734 (25.9)	10 (0.4)	**3.69**	1.07	2809
Collaborating with classmates	123 (4.3)	296 (10.4)	580 (20.5)	508 (17.9)	410 (14.5)	900 (31.8)	**3.41**	1.17	1917

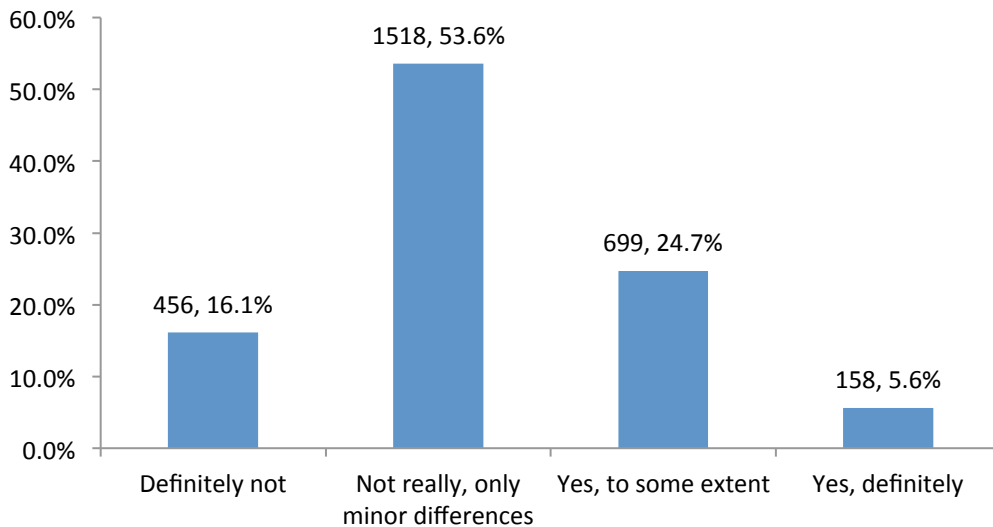[11] NA responses are not included in mean calculations.

Figure B23. Have you tried anything different or new as a student because of Canvas?

Table B13. Please indicate how much you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	*Mean*	SD	n*Mean*
	1	*2*	*3*	*4*	*5*			
Using Canvas has saved me time as a student.	142 (5.1)	311 (11.1)	716 (25.5)	1210 (43.1)	426 (15.2)	**3.52**	1.04	2805
Overall, Canvas has enhanced my experience in this class.	125 (4.4)	246 (8.7)	938 (33.3)	1157 (41.0)	354 (12.6)	**3.49**	.97	2820
Using Canvas has allowed me to learn course content more efficiently.	105 (3.7%)	324 (11.5%)	1300 (46.0%)	887 (31.4%)	208 (7.4%)	**3.27**	.89	2824
Because of Canvas, I feel more like an active participant than I would have without it.	148 (5.3)	543 (19.3)	1062 (37.8)	812 (28.9)	246 (8.8)	**3.17**	1.01	2811
I communicate with the instructor(s) of my Canvas class(es) more than I would without Canvas.	272 (9.7)	742 (26.4)	957 (34.0)	600 (21.3)	241 (8.6)	**2.93**	1.10	2812
I communicate with other students in my Canvas class(es) more than I would without Canvas.	293 (10.4)	729 (26.0)	970 (34.6)	612 (21.8)	202 (7.2)	**2.89**	1.08	2806