"Wow, I hope not?!": Instructor Use of LMS Data and Knowledge of LMS Privacy Practices

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Abstract—Learning Management Systems have implications for student and faculty privacy due to the range of activity they track, the data they generate, and the persistence of and extent of access to said data. It is unclear to what extent faculty understand the privacy implications of the assignments they give and the tools they use in their LMS. We surveyed instructors at two institutions of higher education in the United States and analyzed the results to determine which LMS tools instructors use and to what extent instructors use those tools in the evaluation of their students. We found that the overwhelming majority of instructors were unfamiliar with LMS data collection practices. Moreover, the instructors did not know who had access to these data or whether they were accessible after the end of their course. These results point to a striking divide between instructors' mental models of LMS and the actual capabilities and purpose of these platforms.

Index Terms—privacy, educational technology

1. Introduction

Perhaps the most dramatic change during the COVID-19 pandemic has been the widespread move to online classrooms connected to a large number of digital tools. Foremost among these tools are **Learning Management Systems** (LMSs), such as Canvas [7] and Blackboard [4], that aim to provide a central clearinghouse for all functionality needed to run a digital classroom. However, these LMSs have potentially troublesome implications for student and faculty privacy, given the range of activity they track, the data they generate, and the persistence of and extent of access to said data. Many universities are conscious of the need to be careful with data; as such, they have formed data governance policies or committees. In some cases, there may be an Office of Information Security or similar office, as well as high-level positions concerned with proper adherence to law and ethics, including a university's Office of the General Counsel. However, these groups and the policies they set are focused on meeting a wide array of goals and regulations; they are not focused primarily on student or faculty privacy, or on informing those parties of the data policies in use. Moreover, this level of care and

diligence is not required by law in the United States; indeed, as long as identifying student information, such as names and student IDs, are omitted, student data may be sold to data brokers [14]. Institutional incentives on this point are complex; student data are extremely valuable, and using student data to their fullest extent might be seen by some as judicious exploitation of a resource to give a school a competitive edge.

While several studies (e.g., [9]) have, in recent years, focused on students and their experiences and perceptions of LMSs, less attention has been devoted to instructors. In this study, we focus on the instructors' perspective. On the one hand, instructors decide the rules of engagement in their courses, including which features of the LMS platform the students are expected to engage with. On the other hand, most instructors have very limited control over which LMS their institution uses, which features of that platform are available, and how the institution itself might use the LMS-collected data during and after the course.

Our results seem to point to a divide between instructors' understanding of LMS data collection and usage practices, what data these platforms are typically collecting, and to whom these data are available.

2. Related Work

2.1. Edtech and Learning Management Systems

The use of LMSs is part of a shift toward digital tools that began long before the COVID-19 pandemic, and it will likely only continue to accelerate. During the pandemic, however, more and more learning contexts adopted an LMS, often in a hurried way without much opportunity for analysis or planning. What is more, instructor and institutional reliance on analytics accelerated, both as a result of fully remote learning and as a response to a declining student population. This trend shows no signs of abating, as Heather Abbott laid out in her dissertation on the history of LMSs [1]. As these shifts in the landscape of instruction and evaluation methods take hold, the attendant contextual shifts and flow of student data may be evolving too quickly

for a careful analysis of the surrounding procedures. This can result in a mismatch between student expectations and data handling practices that create risks of privacy-based discontent.

This precipitous rise in the use of learning analytics has been anticipated for nearly a decade. George Siemens' article "Learning Analytics: The Emergence of a Discipline", written in early 2013, is one of many that anticipated and described the challenges of a dramatic increase in the use of learning analytics, including potential privacy implications and the "immature" legal situation with regard to these analytics [15]. Siemens argued for more and better learning analytics; he wanted to improve their usefulness and viability, both for research purposes and to improve educational outcomes. However, he was also wary of the profit-motivated direction that analytics might take: "Corporate interest is high in analytics and learning. LMS providers are offering analytics in their software, and companies such as Pearson and McGraw-Hill are investing in or acquiring adaptive learning software" [15, p. 1936]. These companies are still in the mix in the learning analytics industry, but LMS providers such as Instructure and Blackboard now dwarf them.

2.2. LMS Capabilities

An LMS such as Canvas effectively instruments the online classroom, particularly when it is used to the full extent of its available features. Course meetings can easily be linked and recorded, and attendance records are automatically generated. Assignment descriptions, student submissions, and grades are all recorded and available for reference at any time by anyone with the right permissions to the course. Moreover, student online discussions can be captured and analyzed too, if those discussions take place on the LMS. Additionally, an LMS can allow a seamless integration of a wide variety of third-party tools, from external discussion boards to digital libraries.

In addition to all the aforementioned features, an LMS can also track student activity, including page views and student clicks. In Canvas, for example, students and faculty have the ability to view the data under a section labeled **"New Analytics"** on the homepage of each course. Tools such as these generate page view analytics for instructors, with the intention of allowing instructors to assess student engagement. One LMS maker, for example, advertises course analytics as being able to: "(1) Predict how students react to course activities. (2) See which students are at-risk and need help. (3) View how effective your teaching strategies are in allowing students to learn. (4) See a quick view of what your students are achieving in your course." [6].

With the tool described above, the number of independent pages a student clicked on (page views) can be viewed, as well as the number of comments made in discussions (participation). Some LMSs also allow the comparative assessment of participation, grades, and other collected metrics.

Additional analytics are available through the APIs and can be potentially accessed and used by third party tools, to the extent that a university allows the use of such tools and instructors enable them in their courses. For example, the Canvas Analytics API exposes the messages that users send on Canvas, including the comments that instructors make on student homework assignments. The fact that these data are available to instructors and exportable is clearly stated on the Instructure privacy policy page [8].

2.3. The Use of LMS-Collected Data

Researchers, including Slade and Prinsloo ("Learning Analytics: Ethical Issues and Dilemmas"), have expressed concerns about the use of learning analytics in and around the classroom, and they have proposed ethical frameworks for their use and interpretation [16]. The use of these data, however, is complicated by the number of instructors not trained in their use, as well as the large number of potential future uses of these data.

For example, the visualizations and comparisons available in LMS analytics are often used by instructors to assess student effort, particularly when students come to instructors for help or with complaints about the material being difficult, or when they ask for additional consideration [3]. Data about student clicks, time on pages, and other measures of engagement are used to generate these data. In effect, these data are being used to make decisions about evaluation or other matters that have a considerable impact on students, despite not necessarily being designed, collected, filtered, or presented with those purposes in mind.

In addition, despite Instructure's warnings to the contrary [5] ("Quiz logs should not be used to validate academic integrity or identify occurrences of cheating"), data such as the logs generated during student exams or quizzes are sometimes used as evidence of cheating [10]. Even if the generated analytics are not used by instructors in problematic ways, third-party and even first-party tools used to assess the data can also be problematic. As Marachi and Quill pointed out in their investigation of the datafication of Canvas analytics, the data in Canvas are advertised as being useful for predictive analytics and "dataveillance", which are sought with particular eagerness by universities: "At a recent investors meeting, the CEO of Instructure, Dan Goldsmith, described his vision of predictive analytics to include correlation 'across universities and curricula' in order to 'start making recommendations and suggestions to the student or instructor in how they can be more successful'" [12, p. 428]. These predictions, it hardly needs to be said, come with potential harms. In this article, we focus solely on the privacy-related harms, i.e., that student data may be used or misused in ways that violate the student's expectations of privacy. Other equally important issues, however, including those related to educational access and success, are also pointed out by Marachi and Quill.

2.4. Student Views on LMS Data

Jones et al. [9] examined student expectations of privacy in a study that interviewed over 100 students at 8 US universities. The researchers found that students were chiefly unaware of the data collection associated with learning analytics: "Respondents were largely unaware of LA practices, had very little idea how much data are collected about them, what is done with that data, or how such data collection and practices could harm them. [...]They saw potential benefits in some LA practices, but clearly expressed the desire to know about concomitant data collection and data use and frowned on data sales and some data sharing" [9, p.1055]. While there is more work to be done to assess student understanding of data collection and surveillance, there is clearly a gap in student understanding of data collection.

2.5. Potential Problems with LMS Data

There is a massive marketplace for student data, and student data are already being bought, sold, and sometimes even assessed as an asset on balance sheets, as the recent study by the Center on Law and Information Policy at Fordham Law School suggested [14]. When it comes to access and potential abuse of student data, three very different threat vectors exist in the space:

- Potential misuse of student data by the higher education institutions themselves,
- Potential misuse of student data by the LMS vendors, and
- Potential misuse of student data by the third party add-ons.

While each of these potential threat vectors may pose unique challenges, the biggest set of possible privacy challenges comes from student data being bought and sold, regardless of who might be transacting it.

The study by Russell, Reidenberg, Martin, and Norton [14] mapped the types of data queries that students receive and interact with, where student data come from, and how data brokers disseminate the data for sale. It is a powerful industry with little oversight. Since data brokers and educational technology companies are not schools or universities, they are not bound by FERPA, just as health-related tech companies are not bound by HIPAA, despite the fact that they interact with health data, because they are not legally classed as health care providers.

There exists the very real potential for combining data from an LMS with data bought from data brokers or collected in various other ways by educational institutions. It is not clear to what extent any university is currently trying to aggregate all of these data together, because the practice is not currently regulated by law or open to scrutiny by outside parties. Data governance committees at universities are responsible for this data use, to the extent that they have power and authority over the data. There is no documented proof that such large-scale data aggregation is taking place; the main reason to be concerned, as a student or faculty member, about the possible proliferation and integration of data from multiple sources, is the potential monetary incentives for universities. Better student tracking could mean easier or more effective recruitment, better retention, and more impressive student outcomes: any or all of these could lead to higher US News and World Report and other rankings, increased donations and fundraising, and ultimately more commercial and educational success. Indeed, some would argue that universities that are not using these data are missing out on opportunities to improve their efficiency and impact. However, from a privacy standpoint, the students and even the faculty and staff involved have much to lose.

3. Experimental Setup

Our goal in this study was to discover which tools in the Canvas LMS instructors use and to what extent they understand who has access to data, particularly student data, from the LMS.

3.1. Research Questions

- What LMS tools do instructors use in their classes?
- To what extent do instructors use these tools in their evaluation of students, both for performance and for participation?
- What is instructors' understanding of what happens to student data in Canvas after their course is over?

We focused particularly on services that can collect student information that includes disability accommodations, grades, student internet connection information, and student self-submitted personal information.

3.2. Population Surveyed

We conducted this investigation with online Qualtrics surveys administered at two institutions of higher education (IHEs): one US private university and one US public university. To recruit our subjects, we relied on a recruitment email distributed to various faculty distribution lists (d-lists). Our recruitment email indicated that participation was voluntary and provided no immediate benefit to participants, and that the expected length of time to complete our survey was about 10 minutes. (The survey is available in the Appendix.)

While we did not have a way to reach all of the faculty members at the two chosen institutions across their network of campuses, when advertising our study, we aimed to strike a balance across different academic disciplines, and we advertised our study to faculty members at computer science, electrical engineering, bioengineering, medicine, information sciences, law, and philosophy departments/colleges. Additionally, we distributed the survey to instructors at the main and branch campuses of these two universities. Unfortunately, the imperfect nature of impersonal d-list recruitment does not allow us to estimate how many faculty members may have received our email invitation.

Further, we did not collect demographic or potentially identifiable information about our subjects. We asked only college or university instructors to reply, and our first question after the informed consent asked whether the instructors used the Canvas LMS (at both of our chosen institutions, Canvas is the institutionally supported learning management system). If they did not, the survey skipped to the end and thanked the participants for their time. Future studies may incorporate other LMSs as well.

3.3. Survey Design

The first question in the survey was the unsigned consent form approved by the Northeastern University Institutional Review Board (IRB). If the user selected "decline to participate in this study", they were automatically skipped to the end of the survey and thanked for their time. If the user selected "accept", the survey continued. Our second question asked whether the instructor used the Canvas LMS; if they answered no, the survey sent them to the end of the survey and thanked them for their time. The survey then asked participants whether they had ever used Canvas Discussions, Canvas Quizzes (either new or old quizzes), Grades in Canvas, Assignments in Canvas, or New Analytics in Canvas. For any of the tools that the user had used, a follow-up question was generated asking how useful the tool was. Participants could rate the tool as extremely useful, very useful, moderately useful, slightly useful, or not useful at all.

We also asked additional follow-up questions for each tool the user said they had used. For Canvas Discussions, we asked whether the instructor had asked students to use the tool to post personal opinions on topics covered in class, or personal stories, including introductions. For Canvas Quizzes, we asked whether the instructor had ever looked at a student's quiz log in Canvas. As a follow-up to this question, we also asked whether the instructor had ever looked at a student's quiz log to determine if they disconnected from the internet while taking a quiz, as well as whether they had ever looked at a student's quiz log to determine if they might have cheated during a quiz.

For Canvas Grades, we asked whether the instructor had used Canvas to record student grades on course assignments; as a follow-up to this question, we asked whether the instructor used individual student deadline extensions or disability accommodations for assignments. For New Analytics, we asked whether the instructor had used New Analytics to determine a student's level of effort or engagement. We then asked all survey participants who had used Canvas how familiar they felt with Canvas student data collection policies, with five options ranging from not familiar at all to extremely familiar. We then asked all survey participants who had used Canvas who they believed had access to student data in Canvas. We asked them to select, from the following list, all parties that they believed had access to data: teaching assistants, administrators in their college, administrators in the university outside their college, third party companies who had tools integrated into Canvas, and

Canvas application developers. We also included an open-text fill-in option for instructors to list anyone else they thought might have access to these data.

The complete overview of our survey is included in the Appendix.

4. Experimental Results

We received results from 30 survey participants, one of whom had never used Canvas and so was excluded from our data. Not all participants answered all questions, even when the survey's conditional logic presented them with follow-up questions: for example, four participants only identified which tools they used and did not use, and did not answer questions on how useful these tools were for them or how familiar they were with Canvas data policies, etc. It is due to such examples of questions being skipped or not answered, as well as conditional questions, that the response numbers for our questions vary.

Canvas Assignments was the most commonly used tool. Twenty-five respondents said that they had used Canvas Assignments, whereas only one said they had not. The next-most-popular tool was Canvas Grades: 23 participants had used Canvas grades, while 2 said they had not. In addition, 14 participants said that the Canvas Grades tool was extremely useful, whereas 4 responded that it was very useful, 4 that it was moderately useful, and only 1 respondent said that the Grades tool was only slightly useful. Twelve participants had used Canvas Grades to give disability accommodations, while ten said they had not. Out of the 26 participants who responded, 15 of them had used Canvas Discussions. Of those who had used Canvas Discussions, 10 of them had asked students to include personal information in posts on Canvas Discussions at least some of the time.

Only 2 of the 10 instructors who had asked students to include personal information in posts on Canvas Discussions rated themselves as at least "moderately familiar" with Canvas data policies; the rest were "slightly familiar" or "not familiar at all". Only 3 of the 12 faculty who had used Canvas Grades or Assignments for disability accommodations rated themselves as "moderately" or "very" familiar with Canvas data policies; the other 9 were "slightly familiar" or "not familiar at all".

Only three instructors identified themselves as "moderately" or "very" familiar with Canvas data collection policies. These instructors correctly identified that the following parties, at minimum, may have access to Canvas data from their courses: teaching assistants (TAs), college administrators, university administrators, third parties with integrated tools, and Canvas developers.

The majority of participants, i.e., 16 respondents, rated themselves as "not familiar at all" with Canvas data policies (Fig1), and 6 of those said that they believed only TAs had access to Canvas data (Fig2). Two additional instructors said that only TAs and administrators within their college had access to the data, while six additional instructors said that only TAs, administrators in the college, and administrators in the university had access to the data. One respondent,
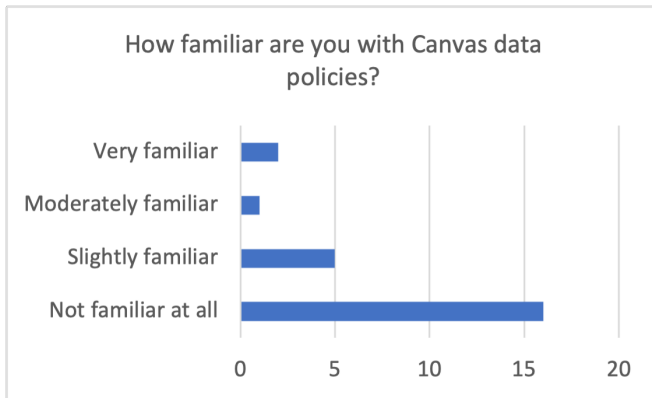
Figure 1. Instructor assessment of their familiarity with Canvas data policies.
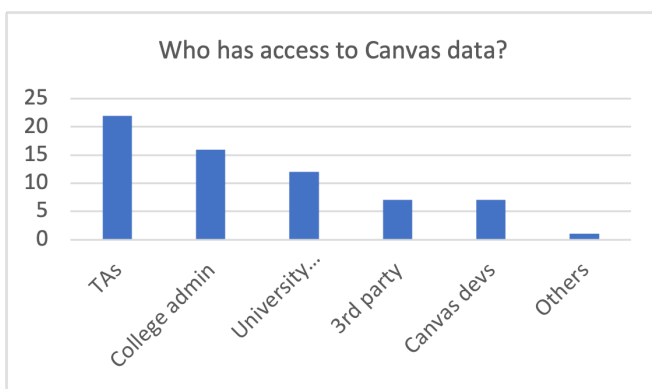

Figure 2. Instructor perceptions of who has access to Canvas data.

when answering the fill-in question asking if anyone else had access to Canvas data, responded "Wow! I hope not?!?"

5. Discussion of Results

Our experimental results, while preliminary and limited in sample size, show some concerning general trends. All but one person in our survey regularly uses an LMS in their class. Instructors regularly use their LMS to manage course assignments and administer course grades and find this feature useful. A third of instructors reported that they had asked students to include personal information as part of course assignments, and a third had put disability accommodations into their LMS. However, the majority of instructors reported they were unfamiliar with their institution's LMS data policy. Moreover, the majority of the instructors who participated in our survey were chiefly unaware of the ability of university administrators and others to access student LMS data or to export the data outside of the LMS. These findings raise several issues—none of them are legal transgressions, but rather potential harms and violations of expectations of privacy that may exist in the classroom context.

5.1. Student and Faculty Privacy

When instructors require students to reveal personal information in discussion posts, without knowing that conversations and student posts can be archived, accessed, and analyzed, there is a potential violation of the students' expectations of privacy that instructors may not even realize is happening. Similarly, when instructors do not know that disability accommodations related to course assignments and grading can be archived, accessed, and analyzed by looking at exported course assignment data, there is a potential violation of the students' expectations of privacy. There are additional concerns related to faculty privacy: instructors are not aware that their students' grades and assignment performance, as well as all student engagement metrics associated with their courses, can be archived, accessed, and analyzed long after the course is over. Instructors are therefore not aware it is possible to track the performance and engagement of students across assignments and courses to create a faculty performance portfolio. This does not require the use of additional third party tools, although many such tools exist and are being increasingly integrated into Canvas, including, for example, AEFIS [2].

5.2. Informed Consent

Although all of the practices related to data described here are legal in the United States, there is an open ethical question about the extent to which students and faculty are aware of this data collection and can consent to it. The highest standards of informed consent allow a participant to reject intervention, data collection, or study participation while still being able to use the service or product or receive the treatment [17, s. 13]. In this case, students cannot participate in the university as students, nor can faculty teach in the university, without accepting this tracking. While this practice is perfectly legal in the United States, it is on par with the controversial rise of many employee tracking systems [11].

5.3. Anonymized Data and Potential Data Loss

There is a perception that if you remove personally identifying information, data can be sold or transferred for analysis without the threat of someone's identity being revealed. Anonymized data, however, more often than not allow for easy de-anonymization and the loss of personal data and privacy [13], [18], [19]. This risk is heightened, of course, because any data that are archived may be lost, and high-value data are particularly tempting targets for theft and resale. Whether the data are stored with personally identifiable information or not, the risk of data loss is real; this risk should be weighed against any material benefit a university may gain from retaining the data.

Additionally, this risk should be weighed when considering that some of the data available in the dataset include potential information about students' disability accommodations. Such data, anonymized or not, create the potential

for technology-enabled discrimination, based on students' disability status.

6. Conclusions: Potential Mitigation and Future Work

The authors believe that many of the issues raised in this paper can be dealt with internally to universities by faculty and administrators as a matter of policy.

One particularly effective mitigation strategy that is both easy to implement and low-cost is adding a data use policy to all course syllabi, similar to Title IX or other required notifications, that in plain language explains to students where and how their data are being collected, and what the intended use of that data is. In this way, both faculty and students would at least have more information and awareness of their university's and LMS's data collection policies.

Further, universities with committees on the appropriate use of student data may expand their mandate to include LMS data collected from and about students or faculty, particularly as the long-term retention of this data may pose a risk to the reputation of the universities, by increasing the chance of a data breach. The potential reputation damage to universities creates another possible mitigation: the ranking of universities based on best-practice data privacy and retention policies, carried out by an unaffiliated non-profit or interest group. Such an effort could result in a sort of "Top 100" ranking for privacy and data protection. Such analysis and ranking would incentivize data best practices at all levels of a university.

For our future work, the authors are pursuing an IRB-approved study of student perceptions of and knowledge of LMS data collection practices. An additional project would include, with IRB approval, using an LMS API to export student data from one or more courses, including discussions and course assignments with disability accommodation information, to see the extent to which personally identifiable information can be extracted from this data set.

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Recruitment Email

Hello,

My name is Logan, and I am writing to invite you to participate in a Northeastern University research study. For this study you will be asked to fill out an online survey. In the survey, you will be asked to answer questions in either multiple choice or free-response format about your use of a Learning Management System in your courses. You must be at least 18 years old to participate, and an instructor at an institution of higher education in the US.

This survey can be accessed from any internet-enabled device, and it should take 15 minutes of your time. Your participation is completely voluntary, and compensation is limited to a virtual "hi-five" and heartfelt "thank you". You can access the study at the following link: https://neu.co1.qualtrics.com/jfe/form/SV_4VeUPcjPePho4JM

This study has been reviewed and approved by the Northeastern University Institutional Review Board (#22-05-14).

Please feel free to contact the study's principal investigator, **Logan Schmidt**, Northeastern University, Khoury College of Computer Science - Vancouver Campus with any questions about this study: l.schmidt@northeastern.edu.

Thank you in advance for assisting us with this research!

Sincerely,

Logan

Instructor LMS Use Survey

Survey Flow

Standard: LMS (13 Questions)

Page Break ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯

UnsignedConsent
 Northeastern University, Department of Computer Science Name of Investigator(s): Tamari Bonaci and Logan Schmidt

Title of Project: Investigating instructor uses of student data and their expectations of data privacy in a Learning Management System (LMS)

Request to Participate in Research

We would like to invite you to participate in a web-based online survey. The survey is part of a research study whose purpose is to learn more about the instructor perceptions of their Learning Management System (LMS), their use patterns, and their use of the student data collected by the LMS.

Key Information

•   Your consent is being sought for participation in a research project and your participation is voluntary.

•   The purpose of the research is to investigate which tools instructors use that gather student data, what they do with those tools, and what they think happens with that data when the class is over.

•   The anticipated amount of time that your participation will take will be about 15 minutes for an online survey. The last question will ask if you would like to volunteer for an additional 1-on-1 online interview, which would be scheduled later and take 30 additional minutes.

•   The procedures that you will be asked to complete will be answering questions in our online survey.

•   There are no foreseeable risks to you for participating in this study.

•   There are no direct benefits to you for participating in the study. However, your answers may help us to learn more about the instructor perceptions of their LMS, their use patterns, and their use of the student data collected by the LMS.

This survey should take about 15 minutes to complete. We are asking you to participate in this study because you are a university or college instructor who uses an LMS in your courses.

You must be at least 18 years old to take this survey. The decision to participate in this research project is voluntary.

You do not have to participate and you can refuse to answer any question. Even if you begin the web-based online survey, you can stop at any time.

There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you for participating in the study. However, your answers may help us to learn more about the instructor perceptions of their LMS, their use patterns, and their use of the student data collected by the LMS.

You will not be paid for your participation in this study.

Your part in this study will be handled in a confidential manner. Any reports or publications based on this research will use only group data and will not identify you or any individual as being affiliated with this project.

If you have any questions regarding electronic privacy, please contact Northeastern University's Office of Information Security via phone at 617-373-7901, or via email at privacy@northeastern.edu.

If you have any questions about this study, please feel free to contact Logan Schmidt at l.schmidt@northeastern.edu, the person mainly responsible for the research. You can also contact the co-Principal Investigator Tamara Bonaci at t.bonaci@northeastern.edu.

If you have any questions regarding your rights as a research participant, please contact Nan C. Regina, Director, Human Subject Research Protection, Mail Stop: 560-177, 360 Huntington Avenue, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@northeastern.edu. You may call anonymously if you wish.

This study has been reviewed and approved by the Northeastern University Institutional Review Board (# 22-05-14).

By clicking on the "accept" button below you are indicating that you consent to participate in this study.

Please print out a copy of this consent screen or download a copy of the consent form for your records.

Thank you for your time. Logan Schmidt and Tamara Bonaci

○ Accept (1)

○ Decline to participate in the study (2)

Skip To: End of Survey If UnsignedConsent = Decline to participate in the study

Q6 Do you use the Canvas Learning Management System in your classes?

○ No (1)

○ Yes (2)

LMSTools Have you used any of these tools in your classrooms' Canvas LMS?

	Have used (1)	Have NOT used (2)
Canvas Discussions (1)	○	○
Canvas Quizzes (New quizzes or Old quizzes) (2)	○	○
Grades in Canvas (3)	○	○
Assignments in Canvas (4)	○	○
New Analytics in Canvas (5)	○	○

Q18 How useful are the following Canvas tools?

	Extremely useful (46)	Very useful (47)	Moderately useful (48)	Slightly useful (49)	Not at all useful (50)
Display This Choice: If LMSTools = Canvas Discussions [Have used] Canvas Discussions (1)	○	○	○	○	○
Display This Choice: If LMSTools = Canvas Quizzes (New quizzes or Old quizzes) [Have used] Canvas Quizzes (New quizzes or Old quizzes) (2)	○	○	○	○	○
Display This Choice: If LMSTools = Grades in	○	○	○	○	○

Grades in Canvas (3)

Assignments in Canvas (4)

◯　　　◯　　　◯　　　◯　　　◯

New Analytics in Canvas (5)

◯　　　◯　　　◯　　　◯　　　◯

Q7 Have you asked students to post personal opinions on topics covered in class, or personal stories, including introductions in Canvas Discussions?

◯ Never (36)

◯ Sometimes (37)

◯ About half the time (38)

◯ Most of the time (39)

◯ Always (40)

Q9
Have you ever looked at a student's quiz log in Canvas?

○ No (1)

○ Yes (2)

Q10 Have you ever looked at a student's quiz log in Canvas to determine if they disconnected while taking a quiz?

○ No (1)

○ Yes (2)

Q14 Have you ever looked at a student's quiz log in Canvas to determine if they might have cheated during the quiz?

○ No (1)

○ Yes (2)

Q11 Do you use Canvas to record student grades on assignments?

○ No (1)

○ Yes (2)

Q13 Have you used individual student deadline extensions or disability accommodations in Canvas assignments?

○ No (1)

○ Yes (2)

Q12 Have you used New Analytics in Canvas to determine a student's level of effort or engagement?

○ No (1)

○ Yes (2)

Q16 How familiar do you feel you are with Canvas student data collection policies?

○ Not familiar at all (11)

○ Slightly familiar (12)

○ Moderately familiar (13)

○ Very familiar (14)

○ Extremely familiar (15)

Q15 Do you think that any of the following parties have access to your students' data and activity in Canvas? Please check all that you think have access to this data.

☐ Teaching Assistants (34)

☐ Administrators in my College (1)

☐ Adminstrators at my university outside my College (2)

☐ Third party companies who have tools integrated into Canvas (3)

☐ Canvas application developers (32)

☐ Anyone else? (33) _____

Page Break _____

Used discussions?	Discussions useful?	Personal info in discussions?	How familiar Canvas data policies?	Used Grades?	record grades?	disability accommodat	Grades useful?	Used assignments?	Assignments useful?
Have NOT used			Not familiar at all	Have NOT used				Have NOT used	
Have used				Have used				Have used	
Have used				Have used				Have used	
Have NOT used			Very familiar	Have used	Yes	Yes	Extremely useful	Have used	Extremely useful
Have NOT used			Not familiar at all	Have used	Yes	Yes	Moderately useful	Have used	Slightly useful
Have used	Not at all useful	Never	Slightly familiar	Have used	Yes	Yes	Moderately useful	Have used	Very useful
Have used	Not at all useful	Sometimes		Have used	No		Slightly useful	Have used	Slightly useful
Have used	Extremely useful	Sometimes	Slightly familiar	Have used	Yes	No	Extremely useful	Have used	Extremely useful
Have NOT used			Not familiar at all	Have used	Yes	No	Extremely useful	Have used	Moderately useful
Have NOT used			Not familiar at all	Have used	Yes	Yes	Extremely useful	Have used	Extremely useful
Have NOT used			Not familiar at all	Have NOT used				Have used	Slightly useful
Have used	Extremely useful	Always	Not familiar at all	Have used	Yes	No	Extremely useful	Have used	Extremely useful
Have NOT used			Not familiar at all	Have used	Yes	Yes	Extremely useful	Have used	Slightly useful
Have NOT used			Not familiar at all	Have used	Yes	No	Extremely useful	Have used	Extremely useful
Have used	Moderately useful	Always	Moderately familiar	Have used	Yes	Yes	Extremely useful	Have used	Extremely useful
Have NOT used			Not familiar at all	Have used	Yes	No	Moderately useful	Have used	Very useful
Have used	Moderately useful	Most of the time	Very familiar	Have used	Yes	Yes	Moderately useful	Have used	Very useful
Have NOT used			Not familiar at all	Have used	Yes	No	Extremely useful	Have used	Extremely useful
Have NOT used			Slightly familiar	Have used	Yes	No	Very useful	Have used	Moderately useful
Have NOT used			Slightly familiar	Have used	Yes	Yes	Extremely useful	Have used	Extremely useful
Have used	Extremely useful	Sometimes	Not familiar at all	Have used	Yes	No	Extremely useful	Have used	Extremely useful
Have used	Very useful	Most of the time	Not familiar at all	Have used	Yes	No	Extremely useful	Have used	Extremely useful
Have used	Extremely useful	Always	Slightly familiar	Have used	Yes	No	Extremely useful	Have used	Extremely useful
Have used	Slightly useful	Sometimes	Not familiar at all	Have used	Yes	Yes	Extremely useful	Have used	Very useful
Have used	Moderately useful	Sometimes	Not familiar at all	Have used	Yes	Yes	Very useful	Have used	Very useful
Have NOT used			Not familiar at all	Have used	Yes	Yes	Very useful	Have used	Very useful
Have NOT used			Not familiar at all	Have used	Yes	Yes	Very useful	Have used	Very useful

Used quizzes?	Quizzes useful?	Looked at quiz log?	Quiz log for disconnecti	Quiz log for cheating?	New analytics for engagemen	Used New Analytics?	New Analytics useful?	How familiar Canvas data policies?
Have NOT used						Have NOT used		Not familiar at all
Have used						Have NOT used		
Have used						Have used		
Have used	Very useful	Yes	No	No	No	Have used	Slightly useful	Very familiar
Have used	Slightly useful	No				Have NOT used		Not familiar at all
Have NOT used						Have NOT used		Slightly familiar
Have used	Not at all useful	Yes	No	No		Have NOT used		
Have used	Extremely useful	No				Have NOT used		Slightly familiar
Have used	Moderately useful	No				Have NOT used		Not familiar at all
Have used	Extremely useful	No			No	Have used	Slightly useful	Not familiar at all
Have used	Very useful	No				Have NOT used		Not familiar at all
Have NOT used						Have NOT used		Not familiar at all
Have used	Moderately useful	No				Have NOT used		Not familiar at all
Have used	Extremely useful	Yes	No	No	No	Have used	Moderately useful	Not familiar at all
Have used	Very useful	Yes	No	Yes	Yes	Have used	Very useful	Moderately familiar
Have NOT used						Have NOT used		Not familiar at all
Have used	Moderately useful	Yes	Yes	No	Yes	Have used	Moderately useful	Very familiar
Have used	Very useful	Yes	No	No		Have NOT used		Not familiar at all
Have used	Very useful	No				Have NOT used		Slightly familiar
Have used	Moderately useful	No				Have NOT used		Slightly familiar
Have NOT used						Have NOT used		Not familiar at all
Have NOT used						Have NOT used		Not familiar at all
Have used	Very useful	No				Have NOT used		Slightly familiar
Have used	Very useful	Yes	Yes	No		Have NOT used		Not familiar at all
Have used	Very useful	No				Have NOT used		Not familiar at all
Have used	Moderately useful	Yes	Yes	Yes	Yes	Have used	Not at all useful	Not familiar at all
Have used	Moderately useful	No				Have NOT used		Not familiar at all

Who has access to data in Canvas?	Do you think that any of the following parties have access to your students' data and activity in Canvas? Please check all that you think have access to this data. - Anyone else? - Text
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College,Third party companies who have tools integrated into Canvas,Canvas application developers	
Teaching Assistants	
Administrators in my College,Third party companies who have tools integrated into Canvas,Anyone else?	God
Administrators in my College,Adminstrators at my university outside my College,Third party companies who have tools integrated into Canvas,Canvas application developers	
Teaching Assistants	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College,Third party companies who have tools integrated into Canvas,Canvas application developers	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College	
Teaching Assistants	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College,Third party companies who have tools integrated into Canvas,Canvas application developers	
Teaching Assistants,Third party companies who have tools integrated into Canvas	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College,Third party companies who have tools integrated into Canvas,Canvas application developers,Anyone else?	anyone you give access to (depending on the role)
Teaching Assistants	
Teaching Assistants,Adminstrators at my university outside my College,Third party companies who have tools integrated into Canvas,Canvas application developers	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College	
Teaching Assistants	
Teaching Assistants,Administrators in my College	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College,Anyone else?	wow i hope not?!
Teaching Assistants	
Teaching Assistants,Administrators in my College	
Teaching Assistants,Administrators in my College,Canvas application developers	
Teaching Assistants,Administrators in my College,Adminstrators at my university outside my College	