Mission LMS – Sandbox Feedback Survey Results
LMS Resource Selection Committee
Brock University
August 2021

Executive Summary

Brock University is undergoing an evaluation of its current Learning Management System (LMS) and as part of this process has launched a sandbox experience showcasing the leading learning management systems on the market (Blackboard, Brightspace, Canvas, OpenLMS/Moodle, Sakai 21). As part of this process a feedback survey was administered to collect participant's likes and dislikes for each of these sandboxes. The goal of this review was to develop a list of criteria that Brock requires in an LMS in order to determine next steps for upgrade or acquisition of a new LMS. The following is a high-level summary of both the quantitative and qualitative results from the feedback survey (for a more detailed view of the results see the full report below).

The Mission LMS experience benefited from a high level of community engagement, particularly during a pandemic and the regularly slow Summer months, with **759** members of Brock community visiting the Mission LMS site. Of the **367** responses collected 308 were students (undergraduate and graduate), 36 were faculty members, and 28 were staff. Other roles were represented in smaller numbers. As expected with the creation of *Mission LMS* sandbox distribution tool, respondents were quite evenly spread between the five LMS sandboxes with slightly more people experiencing the Sakai 21 sandbox (n=89; 24.4%). The most common platform that respondents used to access the LMS sandboxes was their **desktop computers (n=341; 85%)** and the majority of respondents were **satisfied or very satisfied (n=245; 68.1%)** with their LMS sandbox experience.

The most common likes across all five LMS's were: **ease of use or navigation**, the **aesthetics** of the system, and **specific features** within the LMS. The most common dislikes across all five LMS's were: **visually unappealing and difficult to navigate**, **specific features** that did not function as desired, **unclear and limited functionality**, and **specific challenges with the sandbox** experience itself.

Participants found a variety of things they could do in these LMS sandboxes that they could not do in Brock University's current Sakai system, these items were categorized as follows: **more efficient navigation or use of the system** due to a visual change, **accessing specific tools or features** that do not have a similar counterpart in Brock's current LMS, the ability to **track student progress in one course or across all courses**, and more **options around assessments and grading**.

When asked for the most significant thing the LMS Review Team should know about each of these LMS's participants reported:

- the **straightforward and visually appealing** design of **Blackboard** (n=22).
- the **intuitive and user-friendly** system of **Brightspace** (n=23).
- the **unclear functionality** of the sandbox experience for **Canvas** (n=18).
- the **disorganized and confusing** layout of **OpenLMS/Moodle** (n=26).
- the **features and tools missing or needing improvement** that would enhance the teaching and learning experience for **Sakai 21** (n=20).

Overview

Brock University is conducting an evaluation of its current Learning Management System (LMS) and gathering information about expectations from the Brock University community.

In June of 2021 faculty, staff, and students were surveyed about the experiences, functionality, and features of Brock's current LMS. Following the conclusion and analysis of that survey an additional phase of information gathering was launched. During this new phase, the Brock University community was given the opportunity to explore the leading learning management systems on the market (Blackboard, Brightspace, Canvas, OpenLMS/Moodle, and Sakai) through a sandbox experience. Participants were randomly assigned to an LMS sandbox, through a novel process we dubbed *Mission LMS*, where participants could access, explore, click and create content to get a sense of the features and functionalities for each of these systems over a five week period.

Method

Following their exploration of each sandbox, users were asked to complete a feedback survey based on their experience. Each sandbox feedback submission entered the participants in a draw for prizes (tuition waivers for students and Brock spirit apparel for faculty and staff). The feedback survey was open from June 29th, 2021 to August 5th, 2021.

Sandbox access was made possible by the generous support of the vendors contacted by Brock University and Brock University's novel *Mission LMS* approach described in Appendix A.

Results & Analysis

Responses to the survey were analyzed by the project coordinator with expertise in qualitative research. Below are the summary results of the **367 responses** with full quotes provided Appendix B.

Question 1: Demographics – Please select your role at Brock University (select all that apply).
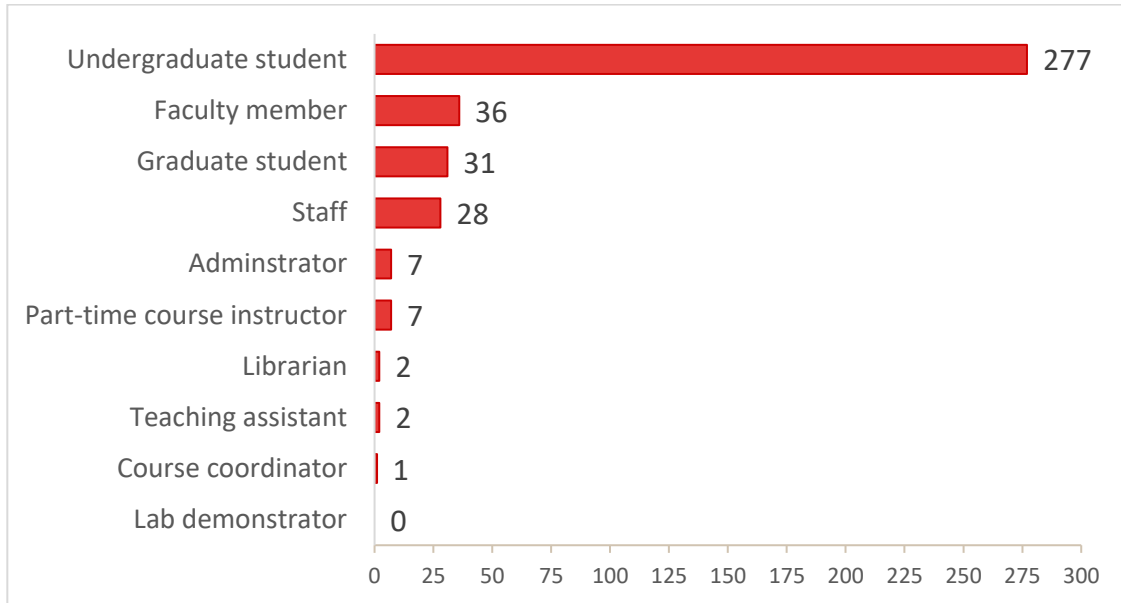
Role	Count (n=391)	Percentage (%)
Undergraduate Student	277	70.8
Faculty Member	36	9.2
Graduate Student	31	7.9
Staff	28	7.2
Administrator	7	1.8
Part-time Course Instructor	7	1.8
Librarian	2	0.5
Teaching Assistant	2	0.5
Course Coordinator	1	0.3
Lab Demonstrator	0	0

**Question 2: Which LMS are you submitting feedback for?**

As expected with the creation of our LMS sandbox distribution tool, respondents were quite evenly spread between the five LMS sandboxes with slightly more people experiencing the Sakai 21 sandbox (n=89; 24.4%).
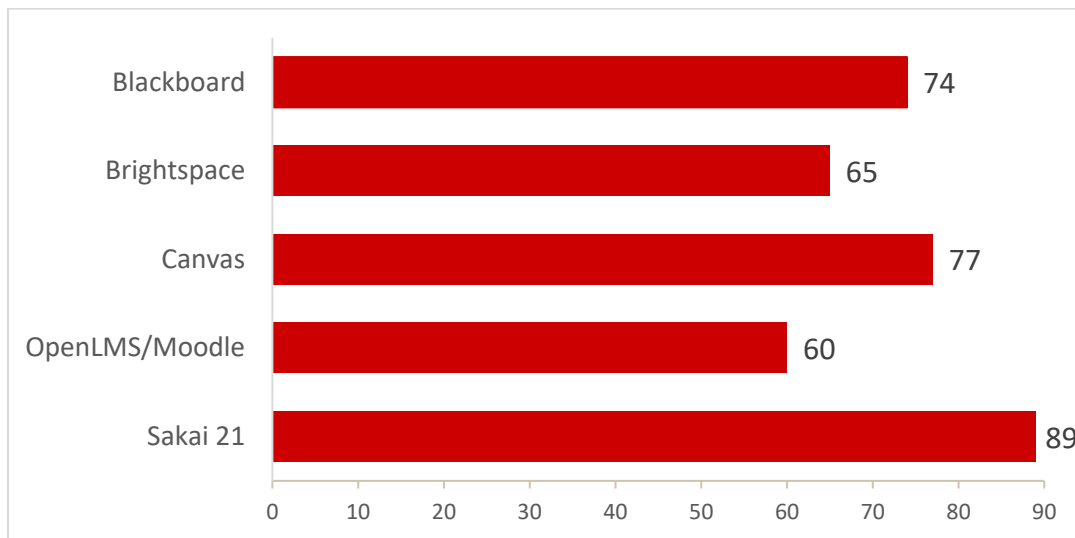
| LMS	Count (n=365)	Percentage (%)
Blackboard	74	20.3
Brightspace	65	17.8
Canvas	77	21.1
OpenLMS/Moodle	60	16.4
Sakai 21	89	24.4

Question 3: On what platform did you experience this LMS? Check all that apply.

The most common platform that respondents used to access the LMS sandboxes was their **desktop computers (n=341; 85%)**.
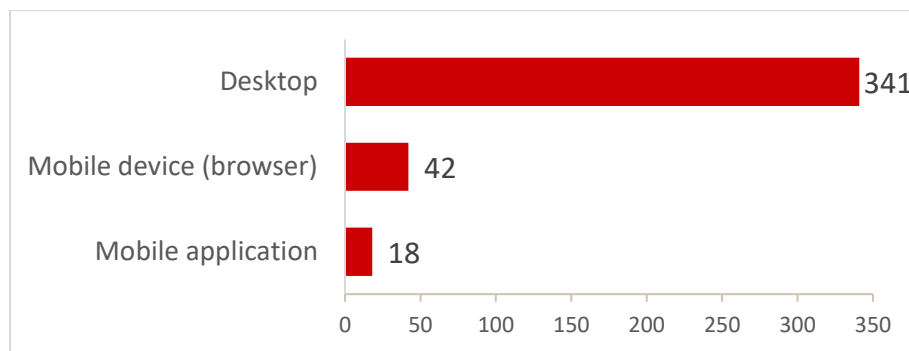
| Platform	Count (n=401)	Percentage (%)
Desktop	341	85
Mobile device (browser)	42	10.5
Mobile application	18	4.5

Stratified by LMS, the most mobile use occurred for the Brightspace and Sakai 21 systems with 16 users each accessing either the mobile browser or mobile application.
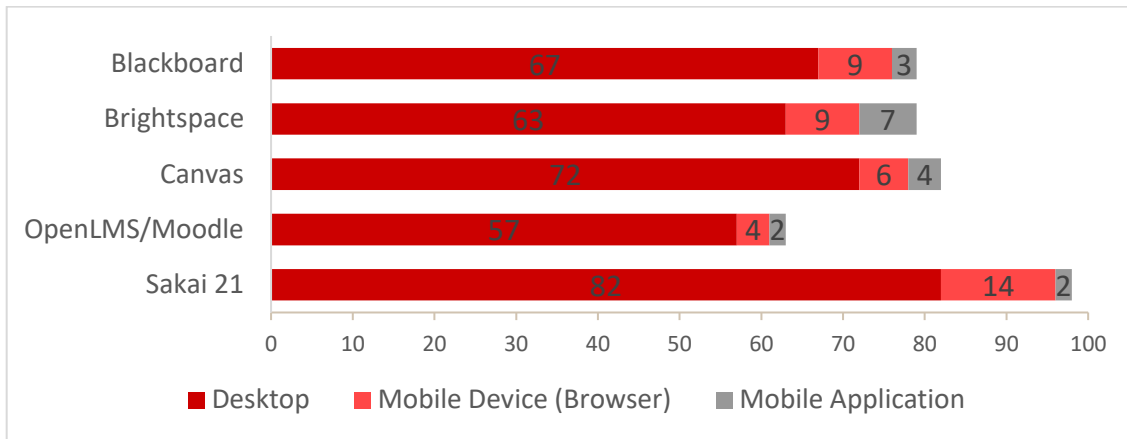
LMS	Desktop (n=341)	Mobile Device (Browser) (n=42)	Mobile Application (n=18)
Blackboard	67	9	3
Brightspace	63	9	7
Canvas	72	6	4
OpenLMS/Moodle	57	4	2
Sakai 21	82	14	2

Question 4: How would you rate your sandbox experience for this LMS?

The majority of respondents were **satisfied or very satisfied (n=245; 68.1%)** with their LMS sandbox experience.
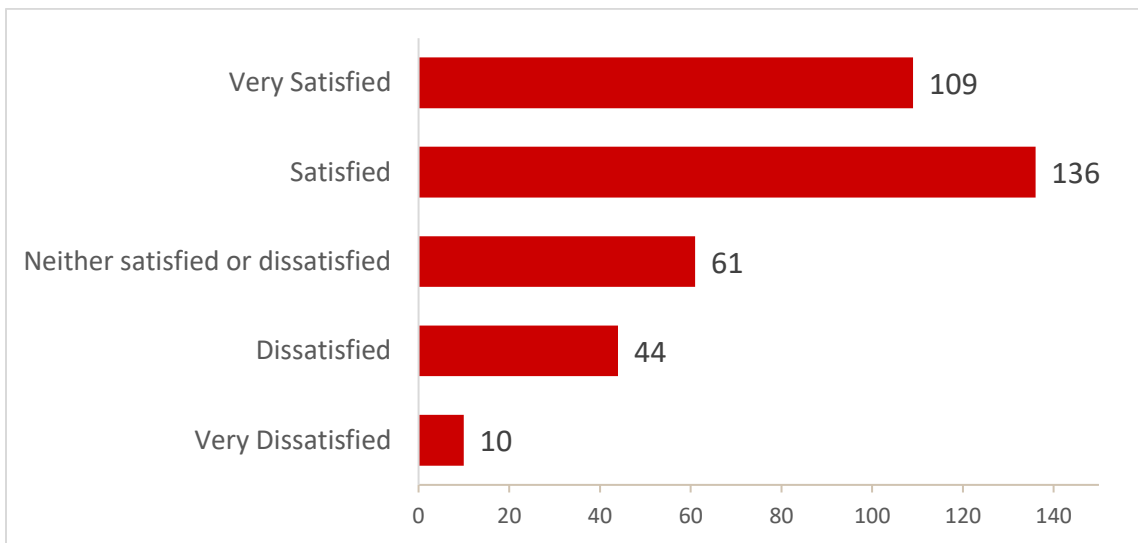
Rating	Count (n=360)	Percentage (%)
Very Satisfied	109	30.3
Satisfied	136	37.8
Neither satisfied or dissatisfied	61	16.9
Dissatisfied	44	12.2
Very Dissatisfied	10	2.8

The following data represents the respondents' satisfaction with the sandbox experience, by LMS:

- **77% (n=57) of Blackboard users were satisfied or very satisfied** with their experience
- **80% (n=52) of Brightspace users were satisfied or very satisfied** with their experience
- **65% (n=49) of Canvas users were satisfied or very satisfied** with their experience
- **47% (n=28) of OpenLMS/Moodle users were satisfied or very satisfied** with their experience, notably 27% (n=16) were dissatisfied
- **68% (n=59) of Sakai 21 users were satisfied or very satisfied** with their experience

Question 5: Describe up to 3 things that you liked about this LMS.

The top three themes for all five LMS's included a theme about **ease of use or navigation**, the **aesthetics** of the system, and **specific features** within the LMS. The rank of these themes and content in the specific features theme varied between each LMS, but the three categories were consistent across all systems. Of special note is an additional theme for Sakai 21 that marginally missed the top three but was significant in its importance to participants, the theme of familiarity with Sakai (n=25). Full quotations to support each theme can be found in Appendix B.

Across all five LMS's the most common likes by **Faculty** are: assessment and grading features, user friendliness in reference to creating and building a course, and desirable layout.

Across all five LMS's the most common likes by **Staff** are: visual appearance, intuitiveness, and assessment and grading features.

Top three **Blackboard** themes:

- Easy to use (n=37)
- Look and feel (n=34)
    - Respondents found the Blackboard interface to have a simple, aesthetically appealing design.
- Specific features (n=28)
    - Many Blackboard features were mentioned but the most common were: Activity Stream, streamlined assessments and grading, Assist feature, Messaging tool, combined Calendar tool, and the Organizations feature.

Top three **Brightspace** themes:

- Easy to use and navigate (n=38)
- Specific features (n=34)
    - More than half of the respondents mentioned how much they loved the Class Progress tool (n=18), and many others mentioned the Module Checklists, and Course Schedule.
- Clean and simple layout (n=18)
    - Respondents found the Brightspace interface to be just that, a modern and bright space that was visually pleasing.

Top three **Canvas** themes:

- Visually appealing design (n=34)
    - Respondents found the Canvas interface to be visually pleasing yet simple and clear.
- Specific features (n=31)

- o The most common features that respondents mentioned were the Calendar, Dashboard, and Inbox/Messaging tools.
- Easy to use and efficient (n=27)

Top three **OpenLMS/Moodle** themes:

- Specific features (n=33)
  - o A wide variety of features were mentioned, but the most consistent were: My Courses that track my progress, the within LMS Message function, and more efficient Assignment upload.
- Easy to navigate (n=24)
  - o Respondents liked how the breadcrumbs at the top of the page allowed for quick and easy movement through the LMS.
- Organized layout (n=21)
  - o Respondents liked the left-hand task bar and the clean and bright aesthetic of Moodle.

Top three **Sakai 21** themes:

- Visually appealing and organized (n=51)
  - o Respondents found the Sakai 21 interface to be an updated version of our current LMS which was easier to navigate with a cleaner aesthetic. Respondents appreciated the addition of the dark theme.
- Specific features (n=43)
  - o A significant range of features were mentioned but the most prominent were updates to the Lessons page layouts, updates to the Calendar tool, and a more streamlined grading of Assignments.
- Intuitive and easy to navigate (n=27)

Question 6: Describe up to 3 things that you disliked about this LMS.

When looking across all 5 LMS's there are four common overall themes that appear: visually unappealing and difficult to navigate, specific features that didn't function as desired, unclear and limited functionality, and specific challenges with the sandbox experience itself. The rank of these themes and the content varied between each LMS, but a combination of these four categories appeared for each of the systems. Full quotations to support each theme can be found in Appendix B.

Across all five LMS's the most common dislikes by **Faculty** are: limited functionality that doesn't allow for customization or easy import/export of content, a cluttered and confusing interface, and not user friendly.

Across all five LMS's the most common dislikes by **Staff** are: overwhelming visual interface, difficult to navigate and use, and unclear or limited functionality for specific tools.

Top three **Blackboard** themes:

- Confusing and cluttered layout (n=46)
  - o Respondents found Blackboard's layering page effect to be confusing and requiring too many clicks to navigate.
- Limited functionality (n=33)
  - o Participants explained that when testing some of the features on Blackboard they noticed some limited functionality such as in the profile settings restrictive options for language and gender identity, a lack of

accessibility and accommodation options, no document viewer for assignments, and less places to embed media.

- Specific features (n=15)
  - There were issues mentioned with a variety of features but the most consistent was the lack of a separate tab for Assignments and an unintuitive submission process for assignments and quizzes.

Top three **Brightspace** themes:

- Unintuitive layout (n=28)
  - Respondents found the Brightspace layout to be cluttered and difficult to navigate.
- Limited and unclear functionality (n=25)
  - Participants made note of many features they couldn't locate in Brightspace or if they were successful in locating them they didn't appear to function as desired.
- Slow and confusing sandbox experience (n=15)
  - Many participants noted slow loading times and other features of the sandbox that didn't appear to work as expected.

Top three **Canvas** themes:

- Disengaging experience (n=23)
  - The most common negative comment regarding the Canvas sandbox was that users had difficulties accessing their accounts and exploring because of lack of course content available to them.
- Not user friendly (n=23)
  - Respondents found it difficult and confusing to navigate and edit tools within the Canvas interface.
- Specific features (n=21)
  - Some of the most common features that users had issues with were the Calendar (hidden and not detailed enough), Notifications (too many), and grading process (insufficient plagiarism tool and unclear rubrics).

Top three **OpenLMS/Moodle** themes:

- Difficult to navigate (n=34)
  - Many users found the OpenLMS/Moodle sandbox layout unintuitive and requiring too many clicks to complete tasks.
- Specific features (n=14)
  - Some of the most common features users had issues with were submission and grading of Assignments, and Quiz creation and display.
- Unclear functionality (n=13)
  - Respondents were unclear of the functionality with many tools and features in the OpenLMS/Moodle sandbox, and some appeared to be missing entirely.

Top three **Sakai 21** themes:

- Difficult to navigate (n=30)
  - Many users found the Sakai 21 sandbox to not be very user friendly and especially challenging to navigate on a mobile device.
- Specific features (n=29)
  - A wide range of features were mentioned but the most common ones that users had issues with were the Calendar (lack of integration with external calendars and no ability to share events with peers), Gradebook (lack of comparative statistics, wish that items were clickable for easy access to see what

was missed, and a combined gradebook to show progress across all classes would be more effective), and Tests and Quizzes (more efficient ways of creating assessments).

- Lackluster visual appeal (n=27)
  - o Respondents found the Sakai 21 interface to be clunky and outdated.

Question 7: If you discovered anything that you could do in this LMS that you can't do in our current LMS (Isaak-Sakai), please describe.

When looking across all five LMS's there are four common overall themes that appear: **more efficient navigation or use of the system** due to a visual change, **accessing specific tools or features** that don't have a similar counterpart in Brock University's current LMS, the ability to **track student progress in one course or across all courses**, and more **options around assessments and grading**. The rank of these themes and the content varied between each LMS, but a combination of these four categories appeared for each of the systems.

For both OpenLMS/Moodle and Sakai 21 the count for each theme is significantly lower, with Sakai 21 only having two themes. From this data we can draw two possible conclusions: that users did not find anything they could do in these systems that they can't already do in our current LMS and/or that less users from these two systems answered this question on the survey. Full quotations to support each theme can be found in Appendix B.

Across all five LMS's the most common discoveries of new features by **Faculty** involved the assignment and grading tools (assignment annotation, bulk editing, import/export of grades, event log in gradebook, grader notifications and specific file type submissions) as well as the more robust lessons/modules.

Across all five LMS's the most common discoveries of new features by **Staff** were the mobile applications and more integrations (H5P, and virtual meeting/conferencing tools).

The top three things users found that they could do in **Blackboard** that they can't do in Isaak-Sakai are:

- Track their progress across all courses in one place (n=32)
  - o This includes tools like the Activity Stream, Attendance, and Calendar which allow students to more easily keep track of course assessments, deadlines, and grades. Instructors appreciate being able to have content all in one place so that students don't have to click into multiple tabs to access different aspects.
- Access specific features and tools that Blackboard has but Sakai does not (n=32)
  - o The most commonly mentioned features were the Conversations tool, Assist tool, mobile application, and ability to annotate assessments.
- Navigate the system more efficiently (n=10)
  - o Users found that having less clicks and being able to drag and drop content allowed them to navigate the Blackboard system faster and easier.

The top three things users found that they could do in **Brightspace** that they can't do in Isaak-Sakai are:

- Track course progress (n=25)
  - o This includes tools like the Class Progress tool, Calendar, list of upcoming assignments, and analytics all of which encourage students and instructors to stay accountable and organized.
- Navigate the system more efficiently because of the simple layout (n=24)
  - o Although some users didn't point to unique features in the Brightspace system they did indicate that it was easier to navigate because of its simple layout.

- Streamline the submission and grading process of assessments (n=17)
  - Users found the submission and grading of assignments to be more efficient with ability to bulk edit, view an event log in the Gradebook, provide video or audio feedback, and use a variety of other grading tools.

The top three things users found that they could do in **Canvas** that they can't do in Isaak-Sakai are:

- Access specific tools and features that Canvas has but Sakai does not (n=32)
  - The most commonly mentioned features were the Calendar that combined deadlines across all courses and was editable by students, History tool for quick access to recently visited pages, and the mobile application for ease of use on a variety of devices.
- Personalize and adapt content more seamlessly (n=13)
  - Users specifically commented on the ability to customize Canvas notifications, adjust the appearance of the interface on an individualized basis, and make small but impactful changes more easily.
- Utilize more robust assignment and grading options (n=12)
  - Users state that Canvas offers more options when it comes to assignment file upload type, video/audio feedback, and group collaboration.

The three things users found that they could do in **OpenLMS/Moodle** that they can't do in Isaak-Sakai are:

- Access specific tools and features that OpenLMS/Moodle has but Sakai does not (n=14)
  - The most frequently mentioned features were the general Search bar and H5P integrations.
- Track course progress in the My Courses tab (n=10)
  - Users appreciated the interactive checklists and upcoming due dates feature to help them visualize their progress through the course.
- View and utilize a Dashboard that made the overall system more user friendly (n=6)

The two things users found that they could do in **Sakai 21** that they can't do in Isaak-Sakai are:

- Access new tools and features (n=13)
  - The most commonly mentioned tools were the combined Calendar, Meetings, and Attendance due to their novelty in Sakai.
- Organize and utilize their course content in a more visually appealing manner (n=12)

Question 8: This is your last chance to provide feedback to the LMS Review Committee for this sandbox experience, keeping that in mind, what is the most significant thing we should know about the LMS that you've just experienced?

- The most significant aspect that **Blackboard** users want us to remember is the **straightforward and visually appealing** design (n=22).
- The most significant aspect that **Brightspace** users want us to remember is the **intuitive and user-friendly** system (n=23).
- The most significant aspect that **Canvas** users want us to remember is the **unclear functionality** of the sandbox experience (n=18).

- The most significant aspect that **OpenLMS/Moodle** users want us to remember is the **disorganized and confusing** layout (n=26).
- The most significant aspect that **Sakai 21** users want us to remember is that there are still **features and tools missing or needing improvement** that would enhance their teaching and learning experience (n=20).

Question 9: Would you be willing to be contacted to discuss your LMS sandbox experience in further detail (e.g., focus group)?

205 respondents agreed to be contacted to discuss their LMS sandbox experience in further detail.

Implications and Next Steps

The above results achieved four outcomes:

1. Supporting the need for an LMS review
2. Identifying the priorities and qualifications the Brock University community wants and needs in a LMS moving forward
3. Informing Brock members on the current LMS landscape as well as helping to situate our current LMS (Isaak-Sakai) within that landscape
4. Helping to inform the next steps in our review and procurement process.

From here we will begin framing out a list of LMS priorities and qualifications to be used to inform the procurement process.

Appendix A
Description of the *Mission LMS* methodology

The Mission LMS approach is, as far as we know, a novel approach to inviting full institutional feedback on all major LMS alternatives. Several institutions that currently or formerly use Sakai have inquired about this approach.

After over 12 years of using Sakai, if you ask almost anyone in the Brock University community what an LMS is or should do, they would describe Sakai. Which is fine, as a significant re-investment in Sakai is certainly an option Brock University is considering, but before the Brock University community considers LMS requirements it needs to inform itself about the broader context of what LMS have to offer to the teaching and learning experience.

Brock University was fortunate to be supported by industry leading vendors in offering sandbox experiences for the full Brock University community. This included:

- Blackboard Learn Ultra
- D2L Brightspace
- Instructure Canvas
- OpenLMS and their version of Moodle, provided by the worlds largest Moodle host
- And Longsight, Brock University's current Sakai support provider, generously provided an instance of Sakai 21, the next version of Sakai, also implemented more ideally than Brock University's legacy instance.

Each vendor is obviously a greater expert on their specific LMS than members of Brock University's resource selection team, so the sandbox process was deliberately designed to embrace the recommendations of vendors and use this non-comparative process to help inform the Brock University community. This meant that while a recommend sandbox experience task list for all LMSs was developed, each vendor worked with the Brock team to tailor their sandbox instances help participants efficiently learn about what the different LMSs offer. We were committed to embracing opportunities and not creating false-equivalencies in this non-comparative phase.

This approach meant the participant on-boarding processes varied with each LMS. An issue that was identified by the Resource Selection Team was the need to distribute feedback evenly across all five LMSs.

In response both challenges the *Misson LMS* experience was created (See Figure 1 Mission LMS hub).

From June 29th, 2021 to August 5th, 2021 the Brock University community was invited to accept a mission in the *Mission LM*S Sandbox experience. It was assumed that when engaging the broader community initial participant motivation would decay quickly. The experience was designed quickly take advantage of that initial motivation.

Participants were randomly assigned an LMS sandbox mission when they first accessed the site. Each LMS has a mission card that gives instructions on where to begin (See Figure 2 Each LMS' "mission card").

Each sandbox feedback submission will entered the participants in a draw for prizes. Students could win prizes to be applied to their student account, up to $1,000. Faculty and Staff could win Brock University spirit apparel.

After the first feedback submission participants gained access to all five LMSs. Each additional LMS sandbox experience feedback submitted gave the participant an extra ballot for the prize draw, up to a total of five.

This approach successfully distributed feedback across all available LMSs. Sakai 21 received the most attention, which intuitively makes sense as the LMS the Brock University community would be most interested in exploring.

Figure 1 Mission LMS hub

LMS Review Campus Survey Result https://lms.brocku.ca/x/FXH4TF | Mission LMS - Sandbox Feedback Survey Results https://lms.brocku.ca/x/qc2XTt

Figure 2 Each LMS' "mission card"

LMS Review Campus Survey Result https://lms.brocku.ca/x/FXH4TF | Mission LMS - Sandbox Feedback Survey Results https://lms.brocku.ca/x/qc2XTt

Question 5: Describe up to 3 things that you liked about this LMS.

Blackboard themes:
- Look and feel (n=34)
  - *"Layout and visual design is very good. It has a crisp modern look while also being very user friendly. The layout makes it easy for new users to grasp how black board works."*
  - *"Not too many information on most screens, therefore very low "visual pollution", which is very good for productive and effective studying/learning"*
- Specific features (n=28)
  - *"The activity stream is extremely useful. I like how it differentiates between items that are important with due dates and items that were posted recently. I also find how the important items are highlighted in red to also be very useful since it really grabs the attention of the user. This feature is so good that I believe I would use it in a class setting"*
  - *"I was most impressed by the process of grading assignments. I love that I can annotate the assignment in my web browser and that I can do that while filling out the rubric on the side. Having to download all of the assignments on my computer and then load them individually in Word was a hassle. This is much more streamlined"*
  - *"The calendar feature to me has been implemented very well. I like that how I can easily access it from the side bar. I like how all my assignments are and tests get put up on it. I also like how I can either look at the calendar as individual days or the entire month."*

Brightspace themes:
- Easy to use and navigate (n=38)
  - *"The top tool bar for each of the courses seems intuitive to use I found that Brightspace is structured and easy to use. Brightspace is easy to navigate for staff and students. In the prepared course I visited, it was fluid the way you could go from one section to another with ease."*
- Specific features (n=34)
  - *"Killer feature #1: The Class Progress tool. I haven't seen something like this anywhere else, and it's spectacularly useful. If a student emails me with a question they should know the answer to, I can now verify whether they've read the requisite material before answering their query. Is the issue that they didn't do the required work or that they are genuinely confused? It's usually difficult to determine this when teaching online. No more!"*
  - *"The first thing I liked about bright space was the Course schedule tab provided under the course. I found that feature extremely helpful as it will reduce the chances of me missing a quiz or assignment as everything is provided in a systematic order with due dates mentioned properly."*
  - *"The orientation checklist seems helpful. I like that everything I may need to do is right there."*
- Clean and simple layout (n=18)
  - *"Easy to use the formatting was well layed out, good size font and sizing easy to find things, tabs made it simple to find what you needed"*
  - *"Customization is the key. It's simple to drag and drop content, and adjust things on the fly without having to go through 3 or 4 steps and windows to make changes. There are drop down menus for all pieces."*

Canvas themes:

- Visually appealing design (n=34)
  - *"The interface is excellent. It is fluid and clean, yet accommodates a lot of information."*
  - *"Much more aesthetically pleasing - love the way this one looks! GIFS, colours, buttons!"*
- Specific features (n=31)
  - *"Lastly, I enjoyed the messaging feature, which allows the student to directly message classmates. The message function would be helpful in group projects especially."*
  - *"The "Dashboard" looks like it would be of great use in laying out everything that requires immediate attention (i.e. assignments, etc.) Dashboard functions as the notification centre"*
  - *"Calendar: The calendar looked a lot cleaner to me and was more efficient because you can view your schedule in three ways; weekly, monthly and list view (agenda). This is great because sometimes a list can help you prioritize more. i.e. I might have a project due on July 20th and then another one on the 22nd. By looking at the calender you would think you should start working on the earlier one first but looking in list view, I might be able to see that the later one is weighted more or is a larger project and prioritize that way."*
- Easy to use and efficient (n=27)
  - *"The system is intuitive and easy to navigate. The vertical bar at the left provides a quick and easy path to several sites in the system, which makes it very easy and pleasent to use. It is easy to see assigments grades and how the make up the courseś overall grade. It is easy and intuitive to find materials related to each part of the course."*

OpenLMS/Moodle themes:
- Specific features (n=33)
  - *"I also liked the progress bar. Where each week of the course has a "0/5" for example and as you complete things you can see what's left for that week. It would help to keep track for times that you as a student might have overlooked a project or something."*
  - *"The communication/messages tab is pretty handy. All of the messages will be in one place."*
  - *"Uploading assignments too is much easier on this version."*
- Easy to navigate (n=24)
  - *"The course flowed more smoothly. the pages were coordinated and were in order, so i did not need to search through all the sakai pages to find what i need."*
  - *"I liked how at the top you could see the sections you went into"*
- Organized layout (n=21)
  - *"I like how this platform was set up to present the course contents with a good webpage design. Every week's content is visible on the left-hand side of the page and I can always go back to the course dashboard by clicking on it."*

Sakai 21 themes:
- Visually appealing and organized (n=51)
  - *"I really enjoyed the visually pleasing appearance of this LMS. It is very bold and it contains a consistently solid and simple layout with a nice colour pallet that represents the Brock school community."*
  - *"I really like the dark theme. I sometimes find Sakai to be to bright and have always wanted this addition. What would make make it better would be to add a few more themes since I believe that people would want a theme not as bright as the default but not as dark as the dark theme."*
- Specific features (n=43)
  - *"Finally, I liked how the weekly lectures were displayed. It is not monotonous and appears to be engaging in and of itself, making it easier to actively participate and concentrate with curiosity. The option to add a layout is also very effective!"*

- o *"The calendar was an excellent addition to the LMS, as it can assist students and enhance their time management skills listing all the important events for a course."*
  - o *"The update for grading assignments is great. That was my biggest beef with SAKAI. You can now do it (mostly) in the browser."*
- Intuitive and easy to navigate (n=27)
  - o *"its still very laid out the same as Sakai now but it definitely feels like it will be easier to navigate."*

Question 6: Describe up to 3 things that you disliked about this LMS.

Blackboard themes:
- Confusing and cluttered layout (n=46)
  - o *"The interface leaves much to be desired. In some places, there are wonderful touches of modern design (ribbons, widgets, and so on). But in the places that really matter (i.e. the course itself), the interface really gets in the way. It's nearly impossible to distinguish between contiguous course items like assignments, quizzes, discussion topics, and so on. I love reading, and even I didn't want to read the course pages. Yuck"*
  - o *"Some things I disliked about Blackboard was that the screen can get cluttered while using this LMS, there are sometimes too many things being displayed at once and it can be overwhelming for the eye."*
  - o *"I also found the lines and circles with plus signs were not intuitive to me. For example, I struggled to determine how to create another module after I'd created my first one. It's a nice looking product overall and the UI is slick but I think it could be more intuitive. The fact that they needed to provide so many instructional videos seemed like a bad sign to me. Great UI shouldn't need instructional videos in order for someone to navigate it."*
- Limited functionality (n=33)
  - o *"In the Account set-up, the gender section only has male, female, or non-disclosed. This section is not inclusive of non-binary or trans-identified persons. It should be eliminated entirely as it does not provide real value for coursework completion or be redesigned to be more inclusive of a diverse population."*
  - o *"there does not seem to be a way to apply alternative due dates or due times to assignments and tests. Given the proliferation of SAS accommodations, being able to give individual students different due dates and due times is essentially a requirements for LMS if it is to be at all useful."*
- Specific features (n=15)
  - o *"I found it hard to find exactly how to submit an assignment as there was no dedicated assignment/quiz tab on the course pages."*

Brightspace themes:
- Unintuitive layout (n=28)
  - o *"there was a lot of information on the home page. Overwhelming to navigate - The homepage will take some getting used to."*
  - o *"it feels like there are a lot of "clicks" to find information about the courses and the course components"*
- Limited and unclear functionality (n=25)
  - o *"accessibility (finding the captions setting, using a dark mode or screen reader) was challenging to figure out, if at all possible."*
  - o *"Unsure if each module can be released at a certain date in the future or if all need to be made accessible at the same time?"*
  - o *"Having a proper calendar with a to-do list would have been a plus point."*
- Slow and confusing sandbox experience (n=15)
  - o *"Some UI animations seem a bit sluggish and take away from the experience."*

- o *"it was difficult to understand in the sample course what was completed vs incomplete, feedback was not immediate"*

Canvas themes:
- Disengaging experience (n=23)
  - o *"I did not find their approach engaging or their sandbox organization particularly appealing."*
  - o *"There is no way to create my own course in it. Is this a feature or a bug? It is difficult to evaluate this if I can't design my own course. If what I am seeing is the student perspective, there is no content to evaluate. Thus, I can't even pretend to evaluate it from the student perspective."*
- Not user friendly (n=23)
  - o *"It was confusing to see where you were a different times navigating through the site. I felt like I got lost in the number of options as things opened up. It would take a bit of time to get used to this for faculty and students."*
  - o *"The UI was very bare and not clear where to go for certain things."*
  - o *"Cannot change the tool names easily. I.e. Modules > Weekly Lessons. Not possible at the account level, only at admin level."*
- Specific features (n=21)
  - o *"The calendar doesn't seem very detailed, I like a more detailed calendar to view my upcoming classes and due dates"*
  - o *"notifications at the top right, can get excessive/annoying"*
  - o *"Rubric shows up in tight panel, on the right hand side of the document, making it difficult to read/grade."*

OpenLMS/Moodle themes:
- Difficult to navigate (n=34)
  - o *"The content was confusing to view. I thought I had completed everything but then there was a "Next" button that brought me to questions? and then I had to "check" certain boxes off to show I did them. Too much work."*
  - o *"not an easy layout I did not like this one, it was more difficult to use and find everything I wanted. I actually stopped going through it because I really hated this one."*
  - o *"Completely useless dashboard. Impossible to navigate. I have to loop through pages at least 5 times just trying to get back to a page that was only linked under a page, that's only shown under another, and only some show up on the top navigation options. There didn't seem like any intuitive choices were made while designing this, it all made no sense. Way too many ways to view your grade, that were on separate pages, and took more of that complex navigating to get back to and between them. Just seemed like a mess to find your grades."*
- Specific features (n=14)
  - o *"PDF annotation in assignments did not work for me"*
  - o *"Way more steps to hand in an assignment"*
  - o *"The "Communications" page in Week 3 featured a quiz, but only half of the question appeared on screen: "In a recent survey, what percentage of employees believed that there were issues with the way their-" The rest was not visible."*
- Unclear functionality (n=13)
  - o *"Something I do not like about Open LMS however is the fact that some lessons could not be viewed more than once. This is concerning considering that people make mistakes and if a student were to click next there is no option to go back. Furthermore, I like the option to go back a page to see if I missed something. Also, before tests and exams it is nice to be able to review a previous lesson."*

- o *"This LMS seems designed for doing things one way (the OpenLMS way) rather than being flexible and supporting diverse Faculty needs. For instance, the grading interface forced me to view and grade each assignment one by one in the web browser. I didn't see any option anywhere to import/export all assignments, which meant if I needed to download all student assignments, I would have to click through each page one-by-one and download each assignment one-by-one. This is just one example of where much of this LMS felt half-baked to me. If OpenLMS does include more robust grading tools, I couldn't find them (further to point 2 above about the clunky interface)."*
- o *"Also, when you click home on the nav-crumb, turns out the home page is not the same as the course page, instead its the useless page that we started at in the beginning of the tutorial. This is inconvenient especially if I'm clicking from one course to another, to keep being directed to this, for lack of a better term, useless page."*

Top three **Sakai 21** themes:
- Difficult to navigate (n=30)
  - o *"The main thing I don't like about it is that it's not very user friendly, i.e. Sakai is not great to navigate."*
  - o *"Two column content is hard to read in a mobile browser, as is opening the menu versus native app navigation."*
- Specific features (n=29)
  - o *"Being able to share calendar events with classmates (such as for a study group) would be helpful."*
  - o *"Their should be combined section which shows current gradebook of each course this will help to figure out where we actually stands showing our current capability"*
  - o *"the tests feature could give some more efficient ways of creating items"*
- Lackluster visual appeal (n=27)
  - o *"Layout is not very inviting or creative. Sometimes I felt like there were too much information on the screen, making it a little slower to access other functions and places in the system."*
  - o *"Unappealing/boring LMS visually, too little graphics to help lighten the amount of information on the webpages."*

Question 7: If you discovered anything that you could do in this LMS that you can't do in our current LMS (Isaak-Sakai), please describe.

The top three things users found that they could do in **Blackboard** that they can't do in Isaak-Sakai are:

- Track their progress across all courses in one place (n=32)
  - o *"Through the activity stream, you were able to see all tasks for all your courses. Then, you were able to click on each individual task and information would pop up regarding the grades or the assignment. This sort of information is not as easily accessed on Sakai."*
  - o *"Pages such as grades featured all course grades in one location with a breakdown ability possible, unlike Sakai in which grades can only be accessed through designated course pages."*
  - o *"I liked how a page or section could integrate assignment, quizzes, content, etc. neatly and directly onto that section. You didn't need to create links to other tools, it was all just present on one page."*
- Specific features and tools that Blackboard has but Sakai does not (n=32)
  - o *"Conversations features on in assignments, pages. I really like this! Great way to gather relevant questions (and keep them in the right spot) and interact with students without having to email or create*

an announcement. I think it is very nice way to keep assignment or lesson specific questions nice and organized."
  - *o* "We cannot access a page like the assist page on Sakai. This will be useful as students can continue to learn and get more involved on campus with support."
  - *o* "The mobile app was a great addition. Helps when I need to access my account when not at home"
  - *o* "More flexibility with annotating documents between students and instructors"
- Navigate the system more efficiently (n=10)
  - *o* "The organization of content is significantly improved in the Blackboard-more intuitive and less searching required"
  - *o* "Everything just felt cleaner and efficient, having the pages stack on top of one another whereas Sakai has everything single screen"

Brightspace

The top three things users found that they could do in **Brightspace** that they can't do in Isaak-Sakai are:

- Track course progress (n=25)
  - *o* "Class Progress - an overview of what is done and not done without clicking all over the place. It was streamlined to one tab. I really like this feature."
  - *o* "The Calendar tool is excellent. Students can see upcoming assignments listed in a calendar interface. I don't think Sakai has this (?)"
  - *o* "In this LMS, a visual progress bar for each week of coursework is available on a course homepage which helps with accountability and organization."
- Navigate the system more efficiently because of the simple layout (n=24)
  - *o* "Also, the format of the class forum section seems more interactive and intuitive than Sakai"
  - *o* "easier design and a way to work online. I really enjoyed how quick and easy it was to work on"
- Streamline the submission and grading process of assessments (n=17)
  - *o* "I liked the idea of video and audio record for feedback on assignments. This is esp. helpful for online courses. "
  - *o* "The event log in the gradebook is a killer feature. This is especially useful for courses that involve overseeing multiple TAs. "
  - *o* "Very good online submission and grading experience. This feels like a huge opportunity to make instructors and students more effective and improve their experience."
  - *o* "The submission page is much simpler than the one on Sakai/Isaak especially when it comes to submitting video or audio files which could be beneficial to certain majors."

Canvas

The top three things users found that they could do in **Canvas** that they can't do in Isaak-Sakai are:

- Access specific tools and features that Canvas has but Sakai does not (n=32)
  - *o* "Canvas allows you to create, edit, and track your own calendar whereas Sakai's calendar is filled out by the professor/TA and cannot be edited by the student. I love this function on Canvas."
  - *o* "you can view previous pages that you've visited recently quickly using the history tab"
  - *o* "The mobile experience is also excellent, which helps students immeasurably."
- Personalize and adapt content more seamlessly (n=13)
  - *o* "notification options: includes daily summary AND weekly summary options; also includes option for including scores in alerts about returned grades."

- o *"A small thing, but Canvas was all about accessibility and that is very important. The fact that the students could change things (background colour, font size and intensity) is important."*
- o *"Can assign singular students to an assignment without having to make an exception"*
- o *"It looked like Canvas was more adaptable in its overall presentation. One of my biggest frustrations with Sakai is that fact that the links etc are written in a tiny font which could not be changed."*
- Utilize more robust assignment and grading options (n=12)
  - o *"Collaborations tool can allow students to work on a doc together right in the LMS."*
  - o *"I really liked the "view grades" section like I mentioned in the previous page. I think that having our grades in one space with details about assignments would be very beneficial and a lot easier to check how I am doing in my classes."*
  - o *"Assignments: you can restrict file type upload (i.e. only accept .pdf files). You can also enable anonymous grading. Both very useful features."*

OpenLMS/Moodle

The three things users found that they could do in **OpenLMS/Moodle** that they can't do in Isaak-Sakai are:

- Access specific tools and features that OpenLMS/Moodle has but Sakai does not (n=14)
  - o *"The ability to search through course content in a key term style search bar"*
  - o *"integrate H5P activities a bit easier than we can currently in Sakai"*
- Track course progress in the My Courses tab (n=10)
  - o *"The student progress/completion marker, our current lms does not give students a report of how much of the content they completed in a lesson page, (unless the instructor enables the checklist on the lesson tool and links all assessments to the lesson and requires them.)"*
- View and utilize a Dashboard that made the overall system more user friendly (n=6)
  - o *"On this LMS, there is a course overview, including the contact information of the instructor, which is a nice, efficient addition"*
  - o *"This LMS had a course dashboard page which was really nice to see a general overview of it all, rather than the tabs at the left hand side on Sakai."*

Sakai 21

The two things users found that they could do in **Sakai 21** that they can't do in Isaak-Sakai are:

- Access new tools and features (n=13)
  - o *"I like the ability to add things to one large calendar from several courses."*
  - o *"The meetings integration is very interesting. It's a purposeful interface, and BigBlueButton has come a long way and feels very session/class focused as opposed to (ironically) the meetings focus of MS Teams and Zoom. That is to say, Zoom and Teams seem to default to all participants being peers, and that's not the social practice in lecture halls - Meetings/BBB seems to better reflect the social construction of lecture halls."*
  - o *"the attendance feature is good to have as the student can know if he or she is marked present or absent."*
- Organize and utilize their course content in a more visually appealing manner (n=12)
  - o *"It was just very clean and organized and very similar to Sakai which is nice"*
  - o *"Dark mode is so great for those of us with light sensitivity, and would be so useful."*

Question 8: This is your last chance to provide feedback to the LMS Review Committee for this sandbox experience, keeping that in mind, what is the most significant thing we should know about the LMS that you've just experienced.

The most significant aspect that **Blackboard** users want us to remember is the straightforward and visually appealing design (n=22).

- *"The most significant is probably it's simple layout - there's not a whole bunch of ways something can be portrayed - there's only a few ways so it's not overwhelming."*
- *"Visual and layout are amazing, functions are clear and there is only as much information on the screen as it is required"*
- *"Visually, this experience is more simplified in terms of layout providing an improved and more intuitive experience for finding information."*
- *"It is so smooth and satisfying. It is easy to find all resources and folders for classes, it is easy to see your grades for all your courses, sending messages seems smooth. It is just an overall great and stress-free LMS."*

The most significant aspect that **Brightspace** users want us to remember is the intuitive and user-friendly system (n=23).

- *"I found this version much easier to use and a much faster learning curve."*
- *"quite user-friendly as compared to the other LMS that I have reviewed"*

The most significant aspect that **Canvas** users want us to remember is the unclear functionality of the sandbox experience (n=18).

- *"Overall, I did not enjoy testing this LMS. It was very confusing as to where everything was and what was expected of me. When looking at Sakai there were front pages where checklists can be and such and that does not seem possible on Canvas. There also was not a sidebar with all of the different categories which I did not enjoy."*
- *"unable to explore some of the more significant functions of the site since it did not load any of my courses"*

The most significant aspect that **OpenLMS/Moodle** users want us to remember is the disorganized and confusing layout (n=26).

- *"This platform is less intuitive than Sakai and feels very disorganized Overall it was a bit more complex than the other LMS that I tested."*
- *"This experience requires a lot of clicking around to find information, if not moreso than the current Sakai system which is something we should be moving away from."*
- *"It was very confusing and felt like you had to dig to find exactly what you needed to look at or do."*

The most significant aspect that **Sakai 21** users want us to remember is that there are still features and tools missing or needing improvement that would enhance their teaching and learning experience (n=20).

- *"Make an mobile app would be great"*
- *"I would like a section that displays all current course marks with a current course and overall average available"*
- *"improve appearance of discussions"*
- *"would like to see more goal-oriented features."*