BLACKBOARD ALLY SANDBOX TESTING: FINAL REPORT

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Abstract

The following document outlines the results of Blackboard Ally testing as part of a nine-month sandbox pilot project facilitated by BCcampus. The project ran from April-December 2018 and involved five B.C. post-secondary institutions:
University of British Columbia, Vancouver Community College, Langara College, Camosun College, and North Island College.

Clint Lalonde, Manager, Education Technology, BCcampus

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Executive Summary

1. The ability for students to convert learning materials to alternative formats, including translation to another language, was viewed as a highly beneficial feature of Ally, although one institution noted that the language translation may not be quite as accurate as Google Translate.
2. Course development tools in Ally are very useful for both correcting inaccessible content and for raising the overall level of awareness within the institution about accessibility issues. However, they could be made even more useful with better integration with existing LMS content creation tools.
3. With some exceptions, testing institutions noted that the accessibility guidance and feedback provided to course developers in Ally is clear, useful, and instructional.
4. While the institutional reporting tool is useful, it may be too rigid to provide all the required information institutions would like.
5. Ally can provide an important avenue for students who do not wish to identify as having a disability, allowing access to services that would normally require them to disclose.
6. If not rolled out thoughtfully and deliberately, Ally could be viewed by faculty and instructors as an encroachment on their instructional autonomy, or as a criticism of their work.
7. While generally regarded as a very useful tool in addressing accessibility issues, Ally is viewed as one piece in a wider accessibility strategy within the institution, and one that can prompt wider discussions about the importance of accessibility.
8. Cost is a significant factor, which provides support that further exploration into the possibilities of a shared system-wide shared service and/or licence agreement is warranted.

Project Overview

From April to December 2018, BCcampus conducted a limited sandbox testing project to assess the functionality of Blackboard Ally, a web-based application that works with institutional Learning Management Systems (LMS) to help ensure that digital learning content is technically accessible to learners.

The sandbox testing project was done as a multi-institutional collaborative project, with five post-secondary institutions participating in the evaluation of the application.

This report contains a summary of the findings of the institutional testing and is provided as an openly licensed resource to others to assist in their evaluation of Ally. Individual institutional reports and project support documents are available on the BCcampus website.

Project Rationale

Ensuring learners in the B.C. post-secondary system have access to accessible learning content requires a multi-pronged approach. No single solution or service can account for the myriad of situations where digital learning content is used within post-secondary systems. Supports such as CAPER-BC, course and content design guidelines such as Universal Design Principles (UDL), and resources such as the B.C. Open Textbook Accessibility Toolkit are all vitally important components of the accessible digital learning content picture.

However, a gap exists when faculty create their own digital learning content. Institutions have traditionally had difficulty ensuring that accessible digital learning content is created by instructors or course developers without the appropriate technical knowledge. Instructors often inadvertently and unknowingly create inaccessible learning content. While the resources and services mentioned above remain vitally important, Ally may help address the issue of instructors who create digital learning content on their own without knowledge of accessibility principles or Universal Design processes. Additionally, Ally may provide institutions with institutional data to help them strategically address accessibility issues at an institutional level.

Specifically, Ally has the potential to:

- Improve student learning by providing flexible content formats for students who may require them.
- Increase access to post-secondary education for equity-seeking students by ensuring that barriers to learning resources are reduced and content is accessible to all students.

The goal of this sandbox project was to provide an independent assessment of Ally to help assist British Columbia post-secondary institutions make decisions around its effectiveness.

About Blackboard Ally

Blackboard Ally is a tool developed to assist with the development and deployment of accessible learning content. Specifically, Blackboard Ally is a tool that works within institutional Learning Management Systems (LMS) and provides three key features.

1. **Course development tools.** As learning content is developed within the LMS, Ally provides as-needed checks and real-time advice to course developers on whether the content meets content accessibility guidelines. It also provides tips on how to fix common accessibility problems as content is being developed.
2. **Alternative formats for students.** For content delivered from within the LMS, Ally provides on-demand content transformation into numerous languages and alternative technical formats, providing learners choice in how they wish to engage with their learning content.
3. **Institutional reporting tools.** Ally provides institutional reporting and content audits of all content within the institutional LMS to ensure that content meets accessibility guidelines.

Ally currently integrates with three of the four LMS systems in use in B.C.: Blackboard, Moodle, and Canvas. Brightspace/D2L integration is in the works and is expected to be complete in the fall of 2019.

BCcampus Role

The project was funded by BCcampus as part of its mandate to support the B.C. post-secondary system with the evaluation of emerging education technologies.

BCcampus coordinated the project, specifically providing the following:

- A project manager to coordinate the project with both the vendor and participating institutions.
- Funding to cover installation and a six-month licence of Ally at each institution.
- Funding to cover a two-hour orientation training session for participating institutions.
- A virtual knowledge sharing community for all participating institutions, for the duration of the testing, to provide support from their peers as the project progressed.
- An evaluation template completed by each institution at the conclusion of their testing period.

Participating Institutions

Invitations to participate in the testing were sent to each institution in British Columbia. Emails were sent to institutional representatives within IT Services, Teaching & Learning Centres, and Accessibility Centres at each institution. CAPER (Centre for Accessible Post-Secondary Resources) was also invited to participate and was kept informed of project progress.

From the initial pool of 25 institutions, 14 institutions attended an introductory webinar in March 2018 where the project was presented and described. Of the 14 institutions that participated in the webinar, five expressed interest in participating with the testing of Ally. The five institutions represented both colleges and universities, as well as a cross-section of four major Learning Management Systems in use within B.C.

Participation agreements with the five institutions were signed in May 2018, with each institution conducting their testing over a six-month period from June to December 2018.

Participating Institutions

Institution	Level of Participation	Institutional LMS	Testing LMS	Ally Features Tested		
				Alternative formats	Course development tools	Institutional reporting
UBC	Self-hosted. Ally was installed on institutional LMS	Canvas	Canvas	x	x	x
Vancouver Community College	Self-hosted. Ally was installed on institutional LMS	Moodle	Moodle	x	x	x
North Island College	Self-hosted. Ally was installed on institutional LMS	Blackboard	Blackboard	x	x	x
Camosun College	Hosted service. Ally was installed and tested on LMS provided by Ally.	D2L Brightspace (see note)	Moodle (hosted by Ally)	x	x	
Langara College	Hosted service. Ally was installed and tested on LMS provided by Ally.	D2L Brightspace (see note)	Moodle (hosted by Ally)	x	x	
***Note on D2L Brightspace Support**: Because Camosun and Langara used an LMS that was unsupported at the time of testing, they each conducted their testing on an instance of Moodle, a hosted software-as-a-service (SaaS) platform provided by Ally. Because of this, institutional reporting tools were not available for Langara and Camosun to test.*						

Testing & Reporting

Institutions were provided a final reporting template from BCcampus and were asked to report back on the following areas.

1. **Technical Issues**, including reporting any issues with installing, configuring, or otherwise administering the application within their LMS.
2. **User Testing**, broken into subsections representing the three different tools within Ally (Alternative Formats, Course Development Tools, Institutional Reporting). Institutions were asked to report on the following questions for each tool.
    1. Did the tool work as expected? If not, what was unexpected?
    2. Did testers find the tool easy and intuitive to use? If not, what parts of the application did testers find unintuitive or difficult to use?
    3. What did users like most about the tool? What did they dislike about the tool?
    4. What kind of support did each institution provide for testers during their testing session?
    5. Additional comments about the specific tool.
3. **General questions**
    1. What features did institutions feel were missing from Ally?
    2. How does Ally compare to similar tools?
    3. What do institutions see as the top benefit for adopting Ally?
    4. What do institutions see as the biggest challenge for adopting Ally?
    5. What advice do institutions have for others who may be interested in piloting Ally?

While BCcampus provided the final report template, each institution developed its own internal testing plans, protocols, and assessments to answer these questions.

Of the five participating institutions, both VCC and UBC conducted surveys with some of their testers to gather quantitative data. Langara, Camosun, and NIC conducted most of their testing with staff from their respective Teaching and Learning Centres. VCC included administrators in the testing.

For more details on how each institution conducted their internal testing, please refer to each institutional report.

Summary of Findings

Technical Information

Of the five institutions, three installed Ally on their internally hosted LMS: UBC (Canvas), VCC (Moodle), and NIC (Blackboard). As previously noted, the two D2L Brightspace institutions, Camosun & Langara,

used a Moodle instance hosted by Ally for their testing because the integration with D2L was not complete at time of testing.

Four of the five institutions reported no significant technical issues during the installation and operation of Ally.

UBC Technical Issues

UBC reported technical issues with both the installation and operation of Ally.

UBC expressed concerns that the Ally integration with Canvas required an overly broad level of permissions within Canvas to operate. UBC worked with Ally to reduce the level of permissions needed by the Ally application account for the testing. UBC stated that if they choose to deploy Ally , they would revisit the level of permissions required by the application more closely.

Once the permission levels were adjusted and Ally was operationalized, UBC noticed the access token for the Ally API stopped working and accessibility indicators for the courses were not working correctly. An uninstall and reinstall fixed the problem. UBC subsequently noted that Ally's indicators were appearing to several users not involved in the pilot. Seeing this as unexpected behaviour and fearing a bug, UBC uninstalled Ally again and then discovered this was actually default behaviour of Ally. They reinstalled Ally, issued communications to explain the unexpected behaviour and, within a week, Ally had made a code change which addressed the unexpected default and hid Ally from all but the intended users.

UBC noted that while there were bumps in the road, the Ally team was responsive and worked with them quickly to help identify and fix the problems.

User Tool Testing

Alternative Formats

Of the three features, Ally's ability to transform learning content into multiple alternative formats was noted as a highly beneficial feature by all participating institutions.

UBC student testers reported that the ability to generate PDF documents of course materials was the most useful feature, followed by the ability to generate audio files, and the ability to translate course content into another language.

Langara testers were similar, with PDF and audio versions both scoring highly, although they also noted that the could not fully test the electronic braille alternative format.

For VCC, the ability to translate content into another language was viewed as "a great benefit for ELL students". However, when it came to language translation, Langara discovered some problems with the machine language translation, notably that Google Translate appeared to do a more accurate job translating Portuguese, and one language, Malay, was mislabeled on the user interface as Malayalam.

All institutions noted they provided minimal support to users who tested the alternative formats, and the user interface of the tools seemed intuitive and straightforward to use.

Course Development Tools

All five institutions tested the course development tools and reported they worked as expected, with a few exceptions.

Most institutions rated the feedback and guidance provided by Ally to course developers highly. Several remarked that having clear feedback and guidance available, along with suggestions on how to fix accessibility issues within the course development tools, significantly raised the overall level of awareness of accessibility issues with faculty and course designers.

Both Langara and UBC did note that there were a few instances of "coming soon" in the feedback and guidance messages, with Langara commenting that "testers felt the indicator should not be available if there was no guidance available for a certain section."

While the course development tools were generally applauded by all testing institutions, there were a few surprises.

Three of the five institutions noted that Ally did not seem to convert native LMS content (i.e. quizzes, pages, and other LMS-specific tools) to alternative formats, and two noted that Ally did not provide video captioning when they felt it should.

Finally, Langara noted some issues not reported by other institutions, notably that there appeared to be some inconsistencies between accessibility issues reported by Ally and accessibility issues reported by other accessibility checkers, in this case the built-in accessibility checker in Microsoft Office. Langara also noted that Ally missed some issues they had purposefully introduced, and that the user interface occasionally obscured that a document had multiple accessibility issues by only showing one issue and requiring the user to click an easily missed link labelled All Issues.

Institutional Reporting

Only two of the five institutions tested the institutional reporting tool, primarily because this tool was only available to the testing institutions who installed and hosted Ally on premises. Testing revealed mixed results, mostly around the design of the user interface and the rigidity of reporting criteria.

While UBC noted that the institutional reporting tool was overall "clear and helpful", they also noted that there was "some room for improvement".

On the positive side, UBC noted a clean interface, sensible overview graphs and charts, good classification system (Sever, Major, Minor), and the ability to drill down into a report to a granular level.

Issues UBC had with the institutional reporting tool included the inability to filter out empty course shells, inability to group courses by academic year when using the "Courses" tab, and no explanation as to what constituted "Severe", "Major", or "Minor" issues. Additionally, UBC noted that the tool appeared to be somewhat inflexible to UBC-specific rules around some of their course code designations. Finally, UBC noted that the user interface did not have an adequate paging system to scroll through reports, commenting that their only navigation option was a "Next" or "Previous" button when some of their institutional reports covered close to 100 pages. UBC also noted that Ally listed encrypted items as having accessibility issues.

VCC also noted issues with the institutional reporting tool, noting that they felt it was of "limited use" for planning. Of concern for VCC was the inability to sort reports based on factors such as number of users, number of documents, and overall score. VCC felt this information was important for them to be able to determine where to strategically allocate resources across the institution.

General Information

Expected Support

Testing institutions were asked to speculate on the types and level of support they felt would be required at their institution should Ally be implemented.

Regarding student support, most institutions felt support would be minimal as the alternative formats are intuitive and self-explanatory.

Regarding faculty support, answers varied across institutions. All noted that course developers, faculty, and those using the institutional reports would require some training on the Ally tools as well as wider training on accessibility in general. A few remarked that Ally could play a role in opening the door to further conversations about accessibility in general, and that Ally was a good tool to begin raising

awareness among faculty and course developers about accessibility issues. Institutions were clear that Ally should be only one piece of a wider accessibility strategy.

Comparison to similar tools

Three institutions commented on Ally versus other accessibility tools. UBC noted that Ally "compares favourably" to similar tools and stands out with the feedback and guidance it provides to instructors, while VCC called Ally "excellent" when compared to similar tools, noting that it is "simple, intuitive, and provides multiple accessible formats". Langara noted that there were some inconsistencies between Ally and the Office 365 accessibility checker, but only reported there was a discrepancy and not which tool was correct.

Benefits of Ally

Institutions noted the following benefits of Ally:

- Availability of Ally raises awareness of accessibility in a positive and productive way
- Extensive reporting feature allows the University to better react to legislative expectations and monitor overall institutional progress
- Format shifting for students, without need to declare a disability
- Alternative formats for students. Currently we must have CAPER-BC do format shifts for us, which is limited to a one-off version for a single student. Ally allows us to provide multiple file formats to numerous students within our LMS without students having to ask us for them.
- Provides a wider institutional reach/increases scale of reach about accessibility beyond what limited staff can do
- Puts accessibility in front of all users
- Very good contextual feedback about accessibility issue
- ACCESS!

Drawbacks of Ally

Institutions noted the following drawbacks of Ally:

- At a large institution where faculty enjoy a large degree of instructional autonomy, the biggest challenge to adopting Ally is likely in ensuring clarity of intent and stakeholder education around why Ally might be deployed.
- Cost (x3)
- Culture/Institutional change (x2)
- Learning curve for faculty & content creators

- Inconsistent results between Ally and other accessibility checkers has potential to cause user frustration
- Ally as “ally” for faculty and not criticism that they are doing things wrong
- Possibly mitigating some fear for instructors that they are being judged for the accessibility of their content

Interestingly, three institutions specifically mentioned the delicate nature of deploying a tool such as Ally and the potential that its deployment be perceived by faculty and instructors as either an intrusion on their faculty autonomy, or a criticism of their work.

As three of the five institutions remarked that cost was a drawback, further exploration of how costs can be reduced for institutions wishing to make this tool available to their faculty and staff is warranted.

Advice for others piloting

When asked for advice for others piloting Ally, institutions noted the following:

- Identify partners at your institution early and start a consistent messaging plan which clearly outlines the benefits of Ally.
- Perform rigorous testing after your initial install and reach out quickly to the vendor if unexpected behaviour occurs.
- If possible, consult with institutions, especially comparable ones, which are running or have run Ally before you "flip the switch".
- Have explicit pilot plan and a longer planning period.
- Ensure a robust accessibility education program for faculty and staff.
- Involve senior leadership and admin in pilot initiatives.
- Involve those at your institution involved with print accommodations to incorporate their feedback in a pilot.