



LEARNING MANAGEMENT SYSTEM REVIEW

Learning Management System
Review Steering Committee

McMaster University



Table of Contents

EXECUTIVE SUMMARY	1
INTRODUCTION	2
LMS USAGE AT MCMASTER	2
REVIEW DETAILS	4
SURVEY DETAILS.....	5
FOCUS GROUPS.....	6
LIMITATIONS	6
FINDINGS	6
SURVEY.....	6
FOCUS GROUPS.....	7
AREAS OF IMPROVEMENT	7
STUDENT LEARNING.....	8
TOOL SATISFACTION	9
CONTENT.....	9
GRADES	9
QUIZZES.....	10
ASSIGNMENTS.....	10
DISCUSSIONS.....	10
AVENUE MAIL.....	11
IMPORT/EXPORT/COPY COMPONENTS.....	11
RUBRICS	12
ATTENDANCE	12
COMPETENCIES/LEARNING OUTCOMES.....	12
CHECKLISTS	12
SUPPORT AND TRAINING FOR AVENUE TO LEARN.....	13
RECOMMENDATIONS	13
APPENDIX A: GLOSSARY OF TERMS	17
APPENDIX B: LMS HISTORY AT MCMASTER	18
APPENDIX C: STEERING COMMITTEE	19
APPENDIX D: FULL SURVEY QUESTIONS AND RESPONSES	21
STUDENT SURVEY.....	21
INSTRUCTOR SURVEY.....	31

GENERAL SATISFACTION	34
CONTENT.....	35
GRADES	35
QUIZZES.....	36
ASSIGNMENTS.....	36
DISCUSSIONS.....	37
AVENUE MAIL.....	37
IMPORT/EXPORT/COPY COMPONENTS.....	38
RUBRICS	38
ATTENDANCE	39
COMPETENCIES/LEARNING OUTCOMES.....	39
CHECKLISTS	40
COURSE DEVELOPER SURVEY.....	45
GENERAL SATISFACTION	48
CONTENT.....	49
GRADES	49
QUIZZES.....	50
ASSIGNMENTS.....	50
DISCUSSIONS.....	51
AVENUE MAIL.....	51
IMPORT/EXPORT/COPY COMPONENTS.....	52
RUBRICS	52
ATTENDANCE	53
COMPETENCIES/LEARNING OUTCOMES.....	53
CHECKLISTS	54
APPENDIX E: ADDITIONAL COMMENTS	59
APPENDIX F: SYSTEM AVAILABILITY REPORT	62
APPENDIX G: GLOSSARY OF TOOLS WITHIN AVENUE TO LEARN.....	63

EXECUTIVE SUMMARY

Avenue to Learn (Avenue) has been the Learning Management System (LMS) in use at McMaster University (McMaster) since 2010. This comprehensive review was undertaken to solicit feedback from faculty, staff, and students and inform the ongoing use and support of an LMS at McMaster.

This LMS review sought to answer the following questions:

- Is Avenue meeting the needs of the McMaster community?
- What key feature(s) might be missing from the suite of tools within Avenue?
- How can the issues identified during the review be addressed, through the introduction of new features or technologies and/or through internal or external support?

Upon invitation from the then Provost, Dr. David Farrar, the LMS Review Steering Committee (SC) was formed with representation from all six Faculties, Libraries, and Continuing Education, including faculty, staff, students, and administration, as detailed in Appendix C. The SC provided guidance and feedback instrumental to the development and delivery of the survey. Details on the committee's responsibilities and approach can be found in their Terms of Reference (Appendix C).

Data was collected through a LimeSurvey survey, over two weeks in July 2019 and one week in late September/early October 2019.

The key results from the survey are as follows:

1. There is overall satisfaction with Avenue. 71.6% of respondents are satisfied or highly satisfied with Avenue.
2. Instructors and course developers have identified additional tools as being desirable (specifically, peer review and collaborative tools) to help them with their teaching.
3. The teaching and learning community have indicated a desire for better functionality with Avenue's built-in Mail tool and a better communication flow with the Discussions tool.
4. McMaster faculty, staff, and students want a wider variety of Avenue training options and more access to Avenue support.

As a result, the key recommendations are as follows:

1. Improve existing tools within Avenue and investigate tools and integration options to address expressed need for collaboration and peer review.
2. Expand service hours and capacity for supporting Avenue.
3. Review training offerings and re-design training to respond to user demands.
4. Enhance communication of service interruptions and conduct further investigations into reported Avenue outages or slowness of service.
5. Implement a continuous feedback process between LMS support and the campus communities.

INTRODUCTION

A Learning Management System (LMS) is a software application for the administration, documentation, tracking, reporting, and delivery of educational courses, training programs, or learning and development programs.

Avenue to Learn (Avenue), the LMS in use at McMaster University since 2010, is a key tool for delivering courses in higher education. LMS support is one of the core services of the Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (MacPherson Institute), dating back to the MacPherson Institute's predecessor, the Learning Technologies Resource Centre (LTRC). A timeline of LMS adoption and use at McMaster is provided in Appendix B.

LMS USAGE AT MCMASTER

Since Avenue's launch date, McMaster has recorded year-over-year growth in LMS usage across a variety of metrics, including raw usage of the system – number of logins, number of course shells offered, number of users – and increased use of the system's features, with more tool engagement, variety of assessments offered, and content uploaded.

Frequency of Access

In Fall 2018 and Winter 2019, the most recent terms for which data is available, on a two-week average, there were 85,000 logins per day on weekdays and 65,000 logins per day per weekend. At the start and the end of semesters, logins reached as high as 115,000 per day. While number of logins is not a consistent indicator of engagement it does demonstrate frequency of access and use of the system.

Proportion of Use by Faculty

In the following table¹, the first column, **In Avenue**, denotes the number of courses in the Faculty, or other university department for which an Avenue shell was requested. The second column, **Not In Avenue**, denotes the number of courses offered in the Faculty for which an Avenue shell was not requested and, therefore, not used. The third column, **Offerings**, is the total number of courses offered in the Faculty that term, informing the final column, **Proportion of Use**, representing the percentage of courses in the Faculty that used Avenue in the term.

Fall 2018

Faculty/Other	In Avenue	Not In Avenue	Offerings	Proportion of Use
Arts & Science	12	16	28	43%
Centre Continuing Education	120	52	172	70%
DeGroote School of Business	69	17	86	80%
Divinity College	27	82	109	25%

¹ These counts do not consider cross-listed courses, which accounts for a decrease from Fall 2018 to Winter 2019. If a Faculty has a significant portion of cross-listed courses, they will have a reduced Not-In-Avenue total. For instance, CLASSICS 1M03, History of Greece and Rome is cross listed with HISTORY 1M03, while this course counts as one course In Avenue, it also counts as two courses offered through Registrar's Office. If a Faculty has a cross-faculty program, like IBH Integrated Business and Humanities, the Faculty to which it is assigned by the Registrar is the one under which the course is counted. These Faculty assignments are determined by the structure that exists in Avenue, which is designed within Mosaic.

Faculty of Engineering	238	59	297	80%
Faculty of Health Sciences	72	107	179	40%
Faculty of Humanities	203	149	352	58%
Faculty of Science	257	145	402	64%
Faculty of Social Sciences	193	118	311	62%
Registrar's Office	0	11	11	0%
School of Graduate Studies	286	512	798	36%
Total Across Faculties/Other	1,477	1,268	2,745	54%

Winter 2019

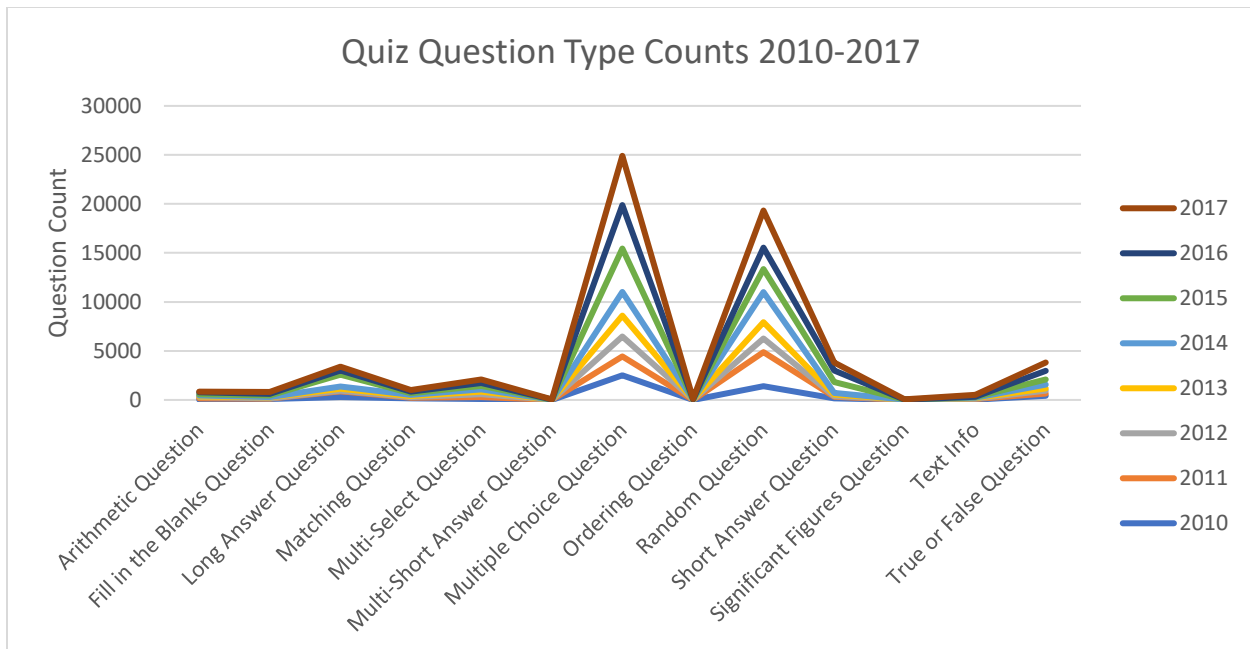
Faculty/ Other	In Avenue	Not In Avenue	Offerings	Proportion of Use
Arts & Science	12	16	28	43%
Centre Continuing Education	117	52	169	69%
DeGroote School of Business	75	17	92	82%
Divinity College	25	79	104	23%
Faculty of Engineering	200	78	278	72%
Faculty of Health Sciences	64	123	187	34%
Faculty of Humanities	190	189	379	50%
Faculty of Science	232	195	427	54%
Faculty of Social Sciences	181	122	303	60%
Registrar's Office	0	8	8	0%
School of Graduate Studies	270	562	832	32%
Total Across Faculties/Other	1,366	1,441	2,807	49%

Content Completion

Use of the Content, Quizzes and Assignments tools within Avenue have shown remarkable growth. **Content Completion**, a statistic which reflects whether content uploaded to an Avenue course shell has been viewed by enrolled users, was compared from Fall 2012 to 2017 (the latest data we have available), and it was found that the average activity in a course grew by 11% over this five-year period. This growth is partially attributable to a move in departments and Faculties to deliver courses online or in blended modes, supported by other factors like student requests for courses to use Avenue. Content Completion is a decent proxy for “activity,” as Content is the most widely used tool within Avenue. For a more detailed explanation of the tools available in Avenue to Learn, please see Appendix G.

Quiz Tool Usage: Question Type

Increases in user activity can be observed elsewhere in Avenue, as in the case of the Quizzes tool. The graph below indicates this increased usage through a comparison of how many questions of each type – long answer, multiple choice, short answer, true or false, etc. – have been asked each year from 2010 to 2017, the most recent year for which there is data is available.



Between 2014 and 2017, we see approximately 2.5 times more usage of multiple-choice questions, and increased usage across the tool overall. We can also see a greater variety of question types in use as time passes, indicating increased complexity of tool usage and potentially influencing the complexity of the support required for the LMS.

Volume and Complexity of Inquiries

From a support perspective, there has been a distinct increase in the complexity and volume of questions submitted to the two Learning Technology Analysts in the MacPherson Institute who support and administer the system. In the 2017 academic year, they answered just over 4,700 tickets, usually resolving them within 24 hours.

Over the last five years, the MacPherson Institute’s Avenue to Learn support (through the Learning Technologies Analysts) has extended the affordances of Avenue by integrating with third-party content providers such as Turnitin, McGraw-Hill, Pearson, iClicker, Echo360, Crowdmark, and Wiley. Turnitin, which is licensed by McMaster, is automatically available for use by all instructors; instructors must request that the other third-party products are connected to a course, limiting access to these third-party technologies.

REVIEW DETAILS

We knew little about how Avenue users, including instructors, course developers, and students², felt about its use and impact on the teaching community at McMaster over the last decade. The LMS Review was undertaken to address this gap, seeking feedback from stakeholders in the McMaster community to assess the use and value of Avenue, identify any issues or shortcomings with the current LMS, evaluate the potential value of migrating to a different LMS system, discover better ways to educate users of Avenue on its features and propose potential solutions to improve the LMS and its use and functionality.

² The roles of instructor, course developer, and student as they apply within Avenue are explained in Appendix A.

The LMS review was guided by a Project Manager (UTS), a Business Analyst (MacPherson Institute) and the LMS Review Steering Committee (SC). The full details of the committee's roles, responsibilities and terms of reference are provided in Appendix C. The committee was chaired by the Associate Director, Educational Technologies in the MacPherson Institute. It is important to note that primary oversight of this review was conducted by UTS and the MacPherson Institute and acknowledge this additional risk with respect to influence around interpretation of data considering there is close familiarity with the current LMS. We attempted to mitigate this risk through continual involvement of our cross-representational steering-committee members and having a PhD student from the Faculty of Humanities assist with integrating the feedback received by these members into the final report. The Steering Committee played a vital role in challenging assumptions and bringing more diverse perspectives to the discussion. The Steering Committee also contributed its perspectives on how the survey should be constructed and administered.

SURVEY DETAILS

The SC developed a survey aimed at instructor, student, and course developer roles within Avenue. The survey contained 18 questions in total, and is detailed in full in Appendix D, including responses. Instructor and course-developer surveys were mostly identical except for language appropriate to the role (instructors received surveys that asked about their teaching, course developers received surveys that asked about their assistance in developing courses or using Avenue). Students were asked questions about the role of the LMS in their learning. Users of the system who have dual roles (for example, those who are course developers may also be instructors or students) were asked to complete the survey from their primary perspective, although they were welcome to complete the survey multiple times, with various roles in mind, if they wanted to provide that feedback.

The link to a LimeSurvey was distributed by a variety of methods: in July, these methods included a post on the Avenue homepage, through the Avenue Announcements tool, an article on the Daily News website and via email by members of the SC; in October, the same methods were used, with the addition of digital signage posted around campus. The most effective method for generating survey responses was using both Avenue's homepage and Announcements tool to notify users that the survey was available for completion.

The surveys were conducted in July and September 2019. The SC felt that the initial results from July 2019 were sufficient; but to be fully confident of the results a second data-collection opportunity was conducted from September 29 to October 7. The second data-collection opportunity addressed any barriers to participation from those who might not have been on campus during the summer survey timeframe.

In the July set of results, 622 responses were submitted in the survey tool, with 481 responses answering at least one question beyond identifying their role. The second set of data drew an additional 859 responses, with 594 responses answering at least one question. Eliminating responses that did not answer at least one question, there were 866 student responses, 108 instructor responses and 41 course developer responses (totalling 1015 responses). While this did not reach the target of 1,750 students and 200 instructors, the SC believe that it is representative as the distribution of responses was relatively proportional to enrollments in Faculties. We thank everyone who provided answers to these questions.

FOCUS GROUPS

Two focus groups were conducted during the course of the review. The first occurred in June 2019, when the Equity and Inclusion Office held a student focus group on Accessibility and Avenue to Learn. Six students were in attendance and provided feedback in guided sessions. The second, conducted by the project manager for the LMS review in October 2019, had eight participants who went through an exercise to expand on issues they felt important to improving Avenue to Learn.

LIMITATIONS

While the MacPherson Institute provides a central LMS solution, there are departments and Faculties on campus that choose to run their own Learning Management Systems for a variety of reasons. While this review originally considered investigating the reasons departments and Faculties at McMaster may choose to run their own instances of systems, under the guidance of the SC the survey developed was focused only on Avenue and it was decided that investigations into the reasons departments and Faculties choose to operate different systems is out of scope and would be conducted in other ways – e.g., by having conversations directly with those users. In addition, groups using another LMS rarely cross over to using Avenue, though there has been some migration of courses from LearnLink to Avenue in the last year. Further understanding of why these other systems are in use in specific Faculties and departments, and what teaching and learning problems they solve or approaches they enable, will help McMaster better understand teaching and learning technology needs across the Faculties.

FINDINGS

The data collected through the two surveys and the focus groups, combined with statistics gathered from Avenue, provide insight into the sentiments of Avenue users and the usage of Avenue at McMaster.

SURVEY

Of the 866 students that were asked to rank their satisfaction on a Likert scale from 1 to 5, with 1 representing very unsatisfied through 5 representing very satisfied, 624 respondents were satisfied or very satisfied (4 or 5), 150 were neutral (3), and 86 were unsatisfied (1 or 2). The instructors and course developers who completed the survey were also predominantly satisfied: 65 of the 104 instructors reported that they were satisfied or very satisfied, while 30 of the 40 course developers reported that they were satisfied or very satisfied. **Overall, 71.6% of all respondents were satisfied with Avenue.** This sense of general satisfaction was reflected throughout the questions asking about the specific tools of the system and was typically consistent across Faculties.

Answers about what respondents most liked about Avenue were consistent across all three groups, and primarily indicated that: Avenue is easy to use; provides access to learning materials; and provides a central place in a course to access content, assessments, evaluations, and information. It is encouraging that people generally find Avenue easy to use; however, with a large, complex tool like an LMS, “easy to use” may not apply to all aspects of the system. Looking at individual tool satisfaction shows that only the tools most commonly used – Content, Quizzes, Assignments, Grades, and Discussions – are widely considered easy to use, and some respondents reported that Grades and Discussions are harder to understand or employ.

Most instructors appreciated the Content tool and the ability to share resources, Avenue's ease of use, and the Grades tool. Several instructors mentioned flexibility, stability, and having all of the components of a course together in a single location as being key positive features. These satisfaction scores align with usage, where Content, Grades, Quizzes, Assignments, and Discussions were the most used tools over the last three academic semesters. In short, the tools that people are the most satisfied with are the ones that they use most frequently.

When asked what they disliked about Avenue, instructors most frequently mentioned the system's general "clunkiness," the Discussion and Mail tools, and the rigidity of the Grades tool – with two respondents specifically mentioning the Grades tool does not allow the application of a McMaster Student Absence Form (MSAF).

FOCUS GROUPS

In June 2019, the Equity and Inclusion Office held a student focus group on Accessibility and Avenue to Learn. Six students were in attendance and they provided valuable feedback from the accessibility perspective. Common suggestions for improvement include:

- Better navigation using keyboard, specifically related to Content
- Screen-reader technology improvement (browse mode over focus mode)
- Colour-contrast improvements overall, and specifically in the dropdown menu
- Increased control over navigation and size/contrast
- Improvements to admin-level style editing process

Focus group attendees also mentioned that there was a need for improvement and communication about the Avenue to Learn support and training that is available, specifically, training instructors on accessible practices using Avenue including the possible creation and sharing of Avenue templates for programs/instructors to use. The group also stressed that it is critical to consider how any changes and/or new tools for Avenue to Learn might impact accessibility.

Another focus group was conducted in October with 8 participants, who went through an exercise to expand on issues they felt important with Avenue's functions. Some of the feedback from this group echoed what we have heard in the survey results; with three issues in particular being identified as key:

- Expansion of support services needed to be broadened for staff, faculty and students
- Workflow issues in Avenue
- Insufficiency of collaborative and peer review tools

AREAS OF IMPROVEMENT

When asked what they disliked about the system, respondents' answers were far less uniform and much wider ranging. Dissatisfaction with Avenue Mail ranked among the top responses for instructors, course developers, and students. Both instructors and course developers also expressed a desire for more flexibility of use of the Grades tool, which they found non-intuitive.

Students reported dissatisfaction with navigation in Avenue, noting there are 'too many clicks' required, and were also critical of the way in which Avenue is used within their courses. As one student reported (verbatim transcript):

“It’s not Avenue I dislike. It is when profs don’t see it the way they are supposed to that I don’t like. i.e.: they don’t create a submission portal. I used Avenue at another college prior to coming to McMaster, and I have to be honest, I could not believe how poorly some McMaster profs prepared their course on Avenue compared to the absolutely standard, easy use of the same platform elsewhere. Maybe the Mac profs need more training on how to prep Avenue for student use (?) Seriously, as students we shouldn’t have to worry about the platform we use to access courses. We have enough work to learn, apply, and be tested for surety that the learning sticks; that is a student’s job. If profs want us to be successful in the endeavour, then please, PLEASE learn how to make Avenue a learning tool for BOTH our successes.”

Students that they disliked the way their instructors used Avenue (n=59) and students who made suggestions on how their learning could be improved in Avenue (n=72) were looking for instructors to:

- Streamline where things are in the shell, and/or reduce the ‘number of clicks’ required to access resources and tools (n=8 disliked; n=8 improve learning)
- Add dates to Assignments and Discussions (n=7 disliked; n=2 improve learning)

While instructor use of the LMS was the focus of most students’ reported dissatisfaction, some of what students flagged as negatives in instructor usage could also be attributed to Avenue itself. Navigation in the system came up frequently as a complaint about ‘too many clicks,’ and while instructor design may have some impact on this, this issue may also be inherent in the design of the system. As one student explained:

“it is a bit hectic to navigate between different options. For example when I am in the course, I can only review the description of the assignment. If I need to submit it, I need to come out of the course and go into Evaluations.”

System design and instructor use are both factors in this complaint. It is possible to link from Content (what the student refers to as “the course”) to the Assignment Folder directly, reducing the number of clicks required to navigate between them, but an instructor or course developer needs to know this and have time to implement this feature.

Respondents also expressed dissatisfaction about the system being down or slow (in the open-ended question “What do you dislike about Avenue to Learn”, 15 students, 9 faculty responded with “slow”; 2 students mentioned that “Avenue was down”).

STUDENT LEARNING

Overall, students felt that use of Avenue was helpful in their learning. Most important to students’ learning, as reported by students, were:

- Instructors uploading content and activities to the system (n=202)
- Everything being kept in one place, helping to keep students’ academic lives organized (n=71)

Specifically, some students indicated that instructors uploading lecture content in advance of a class allowed them to pay closer attention to the lectures:

“Makes it easy to find all the course content in one site. Specifically having the lecture content available on avenue makes it easier to go to class and focus more on listening than having to scramble and take notes”

With respect to timely access to course materials, another student wrote:

"I hope professors can update more frequently. Don't like when they post the ppt or other recourse after a week they talked about them"

Students reported benefitting from being able to access materials whenever and wherever it works best for them as individual learners. As one respondent noted, *"When time management is crucial, A2L makes it that much better."* This sentiment was expressed by many respondents and was not limited only to faculties with course offerings delivered solely online.

TOOL SATISFACTION

In general, instructors and course developers tended to be satisfied with Content, Quizzes, Grades, Import/Export/Copy Components, and Assignments. They were less satisfied with Discussions and Rubrics, but responses were still positive overall. In the case of Discussions, satisfaction rates differed across faculties, with Continuing Education finding it unsatisfying, while respondents from the Faculty of Science were most satisfied. Most respondents were dissatisfied with Mail. In general, the satisfaction rates of instructors and course developers were similar, suggesting that, at least within departments, instructors and course developers are having similar experiences.

The number of responses about the other tools which instructors and course developers were asked to comment on – Attendance, Competencies/Learning Outcomes, and Checklists – was insufficient to permit the drawing of conclusions, with less than 30% of instructor and course-developer respondents, or approximately 30 people, commenting on these tools. As the most frequently selected satisfaction rating for these tools from those who did respond was 4 or 5, it may be that these tools' low usage is owing to lack of awareness of the full suite of tools available in Avenue.

CONTENT

Of the 99 instructors (91.7% of respondents) who completed the satisfaction ranking for Content, the majority selected 4, satisfied (55/99, 55.6%). Likewise, of the 40 course developers (97.6% of respondents) who ranked their satisfaction with Content, the majority selected 4, satisfied (21/40, 52.5%). Overall, of the 139 instructors and course developers who responded, 106 were satisfied (76.3%), 20 were neutral (14.4%), and 13 were dissatisfied (9.3%). There was little variance across Faculties, with the exception of Humanities, where respondents tended to be less satisfied with Content than the overall responses.

Open-ended responses referenced the Content tool in the following ways:

- Students felt access to course materials through Content helped them learn (202 out of 438 respondents)
- Students liked access to course materials through Content (111 out of 526 respondents)
- Instructors liked Content (11 out of 78 respondents)
- Course developers liked Content (3 out of 27 respondents)

GRADES

Of the 102 instructors (94.4% of respondents) who completed the satisfaction ranking for Grades, the most frequent answer was 4, satisfied (44/102, 43.1%). Course developer responses were similar: of the 34 course developers (82.9% of respondents) who ranked their satisfaction with Grades, the majority

selected 4, satisfied (22/34, 64.7%). Overall, of the 136 instructors and course developers who responded, 87 were satisfied (64%), 26 were neutral (19.1%), and 23 were dissatisfied (16.9%). This response is representative of the responses across Faculties.

Open-ended responses referenced the Grades tool in the following ways:

- Students reported liking Grades (19 out of 526 respondents)
- Instructors reported liking Grades (8 out of 78 respondents), though more reported a dislike (21 out of 84 respondents)
- Course developers reported liking (2 out of 27 respondents) or disliking (3 out of 31 respondents) Grades
- Course developers indicated that the Grades tool stands to be improved (3 out of 11 respondents)

While the overall ranking for Grades was 'satisfied', respondents were not as consistently satisfied with this tool as they were with Content, as can be seen in the responses to the open-ended questions and the higher number of dissatisfied rankings.

QUIZZES

Among the 71 instructors (65.7% of respondents) who completed the satisfaction ranking for Quizzes, the most frequent ranking was 4, 'satisfied' (28/71, 39.4%). Course developer responses were far more positive: of the 33 course developers (80.5% of respondents) who ranked their satisfaction with Quizzes, the majority selected 4, satisfied (21/34, 61.8%). Overall, of the 104 instructors and course developers who responded, 62 were satisfied (59.6%), 24 were neutral (23.1%), and 18 were dissatisfied (17.3%). This is representative of responses across Faculties, except in the case of Continuing Education or other smaller independent departments.

ASSIGNMENTS

Among the 88 instructors (81.4% of respondents) who completed the satisfaction ranking for Assignments, the most frequent ranking was 4, 'satisfied' (34/88, 38.6%). Course developer responses were slightly more positive: of the 34 course developers (82.9% of respondents) who ranked their satisfaction with Assignments, 16 (47%) indicated that they were satisfied. Overall, of the 122 instructors and course developers who responded, 77 were satisfied (63.1%), 26 were neutral (21.3%), and 19 were dissatisfied (15.6%). This is representative of response across Faculties, with the exception of respondents from Continuing Education, who tended to be more satisfied with Assignments than the average.

DISCUSSIONS

Among the 81 instructors (75% of respondents) who completed the satisfaction ranking for Discussions, rankings of 4, 'satisfied', and 3, 'neutral', were equally frequent (22/81 each, 27.1%). Course developer responses were more positive: of the 34 course developers (82.9% of respondents) who ranked their satisfaction with Discussions, 16 (47%) indicated that they were satisfied. Overall, of the 115 instructors and course developers who responded, 56 were satisfied (48.7%), 30 were neutral (26.1%), and 29 were dissatisfied (25.2%). This is representative of responses by Faculties, with the exception of the Faculty of Science, who tended to be more satisfied with Discussions, and Continuing Education, who tended to be less satisfied with Discussions.

Open-ended responses referenced the Discussions tool in the following ways:

- Students reported feeling like Discussions helped their learning through communications with their peers and professors (71 out of 438 respondents)
- Students liked the ability to communicate with peers (20/526)
- Students disliked Discussions (41/535)
- Instructors disliked Discussions (10/84)

One student said of Discussions, *“It’s terrible. It needs to be like youtube comments where the initial post stays on top with sub-comments below in order. But in avenue, replying to a thread re-writes the initial post too. It make[sic] a very scattered and disorganized look.”* With this response, in particular, it is important to recognize that there are two viewing options for Discussions in Avenue, Grid view and Reading view, which change how posts and responses are displayed. Users can control the view of the Discussions tool, as well as whether the original text is copied into a new posting. While some of the issues raised can be addressed with better and more frequent communication about how to configure Discussions, there are few items to follow up on with D2L to improve the Discussions tool.

AVENUE MAIL

Of the 83 instructors (76.9% of respondents) who completed the satisfaction ranking for Avenue Mail, **the majority of respondents were dissatisfied, selecting 2, unsatisfied, or 1, very unsatisfied** (21/83, 25.3% each, for a total of 42/83, 50.6% combined). Course developer responses differed significantly: of the 32 course developers (78% of respondents) who ranked their satisfaction with Avenue Mail, 13 (40.6%) indicated that they were satisfied.

Overall, of the 115 instructors and course developers who responded, 43 were satisfied (37.4%), 21 were neutral (18.3%), and 51 were dissatisfied (44.3%). This response is representative of responses across Faculties, with the exception of Continuing Education, who appear to be significantly more satisfied with Avenue Mail. For the rest of McMaster, however, it is clear Avenue Mail does not satisfy the needs of the community.

Avenue Mail was prominent in many of the open-ended questions in the survey:

- Students disliked the various aspects of the tool (51 out of 535 respondents)
- Instructors disliked Avenue Mail (8 out of 84 respondents)
- Course developers disliked Avenue Mail (4 out of 31 respondents)

One instructor wrote, *“there is not a good interface between Outlook email and Avenue to Learn mail so I do not use Avenue to Learn email features except for announcements to the entire class.”*

Similarly, a student responded: *“It would be more ideal to link Avenue with McMaster email so you don’t have 2 separate ones (most instructors only want to be contacted on McMaster email and not many people use the Avenue email).”*

IMPORT/EXPORT/COPY COMPONENTS

Among the 77 instructors (71.3% of respondents) who completed the satisfaction ranking for Import/Export/Copy Components, the most frequent ranking was 4, ‘satisfied’ (26/77, 33.8%). Course developer responses demonstrated greater satisfaction: of the 32 course developers (78% of

respondents) who ranked their satisfaction with Import/Export/Copy Components, the majority selected 4, satisfied (20/32, 62.5%).

Overall, of the 111 instructors and course developers who responded, 69 were satisfied (62.2%), 19 were neutral (17.1%), and 23 were dissatisfied (20.7%). This is representative of responses across Faculties.

RUBRICS

Among the 52 instructors (48.1% of respondents) who completed the satisfaction ranking for Rubrics, the most frequent ranking was 4, 'satisfied' (16/52, 30.8%). Course developer responses demonstrated greater satisfaction: of the 29 course developers (70.7% of respondents) who ranked their satisfaction with Rubrics, the majority selected 4, satisfied (16/29, 55.2%).

Overall, of the 81 instructors and course developers who responded, 36 were satisfied (44.4%), 20 were neutral (24.7%), and 25 were dissatisfied (30.9%). This is representative of responses across Faculties.

It will be important to see if recent improvements to the tool by D2L make a difference to users' satisfaction.

ATTENDANCE

Among the 33 instructors (30.6% of respondents) who completed the satisfaction ranking for Attendance, the most frequent ranking was 4, 'satisfied' (10/33, 30.3%). Course developer responses demonstrated greater satisfaction: of the 14 course developers (34.1% of respondents) who ranked their satisfaction with Attendance, the majority selected 4, 'satisfied' (7/14, 50%).

Overall, of the 47 instructors and course developers who responded, 24 were satisfied (51%), 6 were neutral (12.8%), and 17 were dissatisfied (36.2%). **The low completion rate for this question means there is not sufficient data available to evaluate satisfaction by Faculty.**

COMPETENCIES/LEARNING OUTCOMES

Among the 26 instructors (24.1% of respondents) who completed the satisfaction ranking for Competencies/Learning Outcomes, the most frequent ranking was 4, satisfied (8/26, 30.8%). Course developer responses were similar: among the 14 course developers (34.1% of respondents) who ranked their satisfaction with Competencies/Learning Outcomes, the most frequent ranking was 4, 'satisfied' (6/14, 42.9%).

Overall, of the 40 instructors and course developers who responded, 18 were satisfied (45%), 11 were neutral (27.5%), and 11 were dissatisfied (27.5%). **The low completion rate for this question means there is not sufficient data available to evaluate satisfaction by Faculty.**

D2L has been working on redesigning this tool, and the release of the redesigned tool to users is expected soon.

CHECKLISTS

Among the 29 instructors (26.9% of respondents) who completed the satisfaction ranking for Checklists, the most frequent ranking was 4, 'satisfied' (10/29, 34.5%). Course developer responses were similar:

among the 22 course developers (53.7% of respondents) who ranked their satisfaction with Checklists, the most frequent ranking was 4, satisfied (9/22, 40.9%).

Overall, of the 51 instructors and course developers who responded, 28 were satisfied (54.9%), 12 were neutral (23.5%), and 11 were dissatisfied (21.6%). **The low completion rate for this question means there is not sufficient data available to evaluate satisfaction by Faculty.**

SUPPORT AND TRAINING FOR AVENUE TO LEARN

At McMaster, there are two Learning Technologies Analysts who support Avenue, as well as an additional Senior Systems Administrator who dedicates the majority of his work to managing enrollments and overseeing data processes. In some cases, there are additional people within departments and Faculties who support Avenue in addition to or as part of their job duties.

Respondents to the survey were asked to describe the ideal Avenue support system; 71 instructors, 27 course developers, and 309 students responded. While there was no overwhelming consensus for how individuals in the different roles wished to be supported, common themes arose.

Instructors suggested an online manual or tutorial (n=13), which could include a course on Avenue itself, as well as phone support (n=8) and in-person support available as a drop-in service (n=6). Course developers suggested support through a training manual (n=4), a manual or tipsheet (n=4), extended support hours (n=3), chat (n=3) and more Avenue-specific explanatory and tutorial videos (n=3). The top support priorities for students included chat support (n=71), videos demonstrating key tasks (n=28), email availability (n=21), quick response times, (n=19), and extended support hours (n=19). As illustrated by the following response from a course developer, respondents usually provided multiple suggestions for improving Avenue support:

- *More support personnel, 2 people for the entire university is not enough*
- *Quicker Response*
- *Better and more support resources (McMaster specific, not just links to D2L videos/support resources)*
- *Better and more training opportunities*

While many of the respondents indicated that support was fine as is (students 26/309, instructors 15/71, course developer 6/27), **the wide range of suggestions for furthering or improving Avenue support indicates a need for greater and more varied support and training opportunities.**

RECOMMENDATIONS

Based on this survey we now have a better sense of the McMaster teaching and learning community needs from an LMS and specifically from Avenue. Most survey respondents are satisfied with Avenue, rating their satisfaction at 4, 'satisfied', on the 5-point Likert scale. Based on this data, we recommend McMaster continue with Avenue. There are opportunities to enhance the LMS for instructors, course developers, and students through the implementation of additional features and services, but the data does not indicate that we should move to another LMS. The fact that the author(s) of this report are employed at the MacPherson Institute may represent a perceived or real conflict of interest. However,

the analysis of the data has been conducted as objectively as possible, with guidance from the steering committee members.

Despite the overall satisfaction with Avenue, there is room for improvement. The following outlines our recommendations:

1. Improve existing tools within Avenue, and investigate tools and integration options to better allow for collaboration and peer review.

- a. Communicate desired improvements to LMS vendor D2L:
 - i. Communicate issues regarding Avenue Mail, including the lack of updates, the non-intuitive nature of the tool, and the lack of certain functionalities (such as the ability to collect mail through a third-party program).
 - ii. Communicate issues with the Discussions tool, primarily the issues with workflow for reading, marking, and tracking Discussions.
- b. Investigate tools and integration options to facilitate collaboration and peer review.
 - i. Include analysis of additional D2L features or modules, as well as third-party tools which could be integrated.
 - ii. Consider Office 365, and an integration between Office 365 and Avenue to Learn, as an existing option for collaborative work on documents.
 - iii. Survey available tools for peer review, which are not included in any of D2L's Brightspace's packages, to explore what capacity is available to meet this need.
 - iv. Consider PebblePad as an existing option for peer review.
- c. Investigate the possibility of integrating McMaster email into Avenue.

Investigation of a single, streamlined email option must take into account the potential impact on individual units on campus, particularly Continuing Education students, who do not typically have McMaster emails, and so rely more heavily on – and express greater satisfaction with – Avenue Mail. Integrated email would also require that all student and staff email be housed on the same server; currently, undergraduate email is hosted with Google, while graduate student, staff and faculty email is hosted on a Microsoft server. Working with UTS, the MacPherson Institute staff can assist in making progress on this issue once there is a single email solution (a current UTS project expected to be completed at some point in 2020). It is critical to ensure that accessibility be considered in any evaluation.

2. Expand service hours and/or capacity for supporting Avenue.

- a. Investigate options to provide a variety of support options, in response to expressed desires from all groups for different support formats, and particularly in response to the strong desire expressed by students for chat support.
- b. Investigate options to provide after-hours and weekend support, to reflect the patterns of usage outside business hours.
- c. Create Avenue-specific support documentation, rather than vendor-provided documentation, in multiple formats (video, text).
- d. Develop and deliver additional and more frequent training.

While instructors are primarily responsible for how they use Avenue in their teaching, the MacPherson Institute can help address the issues raised by students and support student

learning by providing better resources and training to instructors. This support could be provided in the form of bite-size tips published at relevant times, such as the weeks leading up to start of semester, through better onboarding resources for new instructors, and through more diverse training opportunities and delivery methods. Additionally, guides for best practices for both the pedagogical use and the configuration of tools and manuals with step-by-step guides should be developed and made easily accessible for anyone who uses Avenue to Learn.

These Avenue-specific resources and additional, more-frequent training can both be supplied from within the MacPherson Institute; however, additional staff time would be required. Currently, two central full-time staff providing support for the entire McMaster community.

3. Review training offerings and re-design training to respond to user demands.

- a. Develop a variety of methods to provide just-in-time training online and in-person.

Over the last three years, the MacPherson Institute in-person offerings for Avenue training, typically offered throughout the summer and during the February break, have seen declining registrations and attendance year over year. While respondents wanted more training opportunities, they also indicated wanting them in a variety of formats, both online and in-person. This may mean offering more discrete, shorter training sessions more often and/or delivery of training in a more flexible format. Whether the training is delivered centrally by the MacPherson Institute or by individuals within departments, training resources need to be developed and delivered online and in-person to facilitate the just-in-time training that will better support instructor and course developer use of Avenue.

4. Enhance communication of service interruptions and conduct further investigations into reported Avenue outages or slowness of service.

- a. Utilize the Service Disruption Notices system to communicate issues with MacAuth, the authentication system that is used to log in to Avenue, or the portal page that may temporarily impact access to Avenue and direct help requests to the appropriate source.
- b. Solicit support from the McMaster community through a request that individuals report issues with slowness so cases can be logged and investigated.

While system outages do occur, the system availability report provided by D2L (included as Appendix F) indicates that there were no unexpected system outages. The one outage in July was scheduled and communicated to the McMaster community in February 2019, April 2019, June 2019, and twice in July 2019. Reasons Avenue could be perceived as being unexpectedly offline include interruptions to MacAuth, which makes Avenue inaccessible, and issues with the portal page (<https://avenue.mcmaster.ca>), hosted on-premises with UTS, caused by network or server disruptions. Further investigation into the cause of the perceived Avenue outages is required.

Additionally, there are no indications of any recent system slowness that might impact users. The perceived slowness could be caused by a number of factors, including an individual's

wireless connection and/or computer configurations or excessive traffic to Avenue or MacAuth. Further investigation into the complaints about system slowness are also merited.

5. Implement a continuous feedback process.

- a. The MacPherson Institute should develop a detailed plan, in consultation with campus stakeholders, for addressing the findings of this feedback.
- b. The MacPherson Institute, in partnership with campus stakeholders, should solicit feedback on other educational technologies in use at McMaster.
- c. The MacPherson Institute will conduct future surveys to solicit ongoing input and feedback.
 - i. A shorter, more-targeted follow-up survey to investigate ancillary tools and improvements to the system.
 - ii. An annual call for feedback on Avenue (or the current LMS) beginning in 2021.

It is important to acknowledge that conducting feedback cycles takes time, effort and resources, but these efforts are important for understanding how the teaching and learning community feels about institutional tools, enabling ongoing consultation and informing future modifications and improvements to meet the changing and emerging needs of the McMaster community.

APPENDIX A: GLOSSARY OF TERMS

Avenue to Learn (Avenue)

Avenue to Learn is the LMS software system currently in use at McMaster and is the rebranded name of the D2L Brightspace product provided by D2L. Some survey responses refer to Avenue as A2L, which has been maintained in quoted comments.

Course Developer

Course Developer is a role within Avenue, intended for use by those who might develop courses but not deliver them. This role can be held by faculty or staff at McMaster.

D2L

Previously called Desire2Learn, D2L is the company which makes the Avenue LMS.

D2L Brightspace

The product provided by D2L, rebranded at McMaster as Avenue to Learn.

Instructor

Instructor is a role within Avenue, intended for use by those who are delivering a course. They may or may not have also developed the course they are delivering. This role can be held by faculty or staff at McMaster.

Learning Management System (LMS)

An LMS is a software application for the administration, documentation, tracking, reporting, and delivery of educational courses, training programs, or learning and development programs, and is a key tool for delivering courses in higher education and at McMaster.

Student

Student refers to a role within Avenue, and is held by those who are enrolled in a course. This role can be held by faculty, staff, or students at McMaster who are enrolled in a course or training.

APPENDIX B: LMS HISTORY AT MCMASTER

The first introduction of an LMS was in the late 1990s, emerging directly from eLearning. The functionality of LMS software has expanded from its original mandate for teaching and learning on campus to include fully-online training for staff and to enable small cohort models using blended or hybrid delivery modes. Although the first LMS appeared in the higher education sector, the majority of LMSs today focus on the corporate market.

The following is a timeline of LMS use and adoption at McMaster:

- **1998** – Del Harnish, Brad White, and Laila Bastedo begin using First Class software locally known as both LearnLink and The Little Red School House.
- **2000** – The Faculty of Science passes administration of LearnLink to the Faculty of Humanities, where it is administered by John Bell.
- **2001** – The Biology Department begins hosting WebCT.
- **2002** – The Learning Technologies Resource Centre (LTRC) – a predecessor to the Centre for Leadership in Learning (CLL) – adopts administration of LearnLink. A parallel First Class server is also administered in the Faculty of Humanities by Rocco Pirro.
- **2006** – Blackboard purchases WebCT, announcing support for WebCT will cease by 2009.
- **2008** – CLL completes a study and full Request for Proposal (RFP) process to replace WebCT with Blackboard Vista 8, known locally as e-Learning Management (ELM). ELM is hosted on campus, but there are several issues throughout the implementation of the system.
- **2009** – LearnLink administration is transferred from CLL to the Computer Services Unit (CSU) for continued use in Health Sciences.
- **Fall 2009** – The issues with ELM are aggravated with larger numbers of users on the system, including performance instability, unreliable availability, and a lack of online support.
- **Winter 2010** – CLL, University Technology Services (UTS), and Blackboard work to provide a stable system through the remainder of the 2009-2010 academic year, but are ultimately unable to deliver a solution. The decision is made to mutually terminate the contract and award the contract to D2L (then Desire2Learn), identified as the second-place vendor in the previous RFP process. This includes a decision to host Avenue with D2L, marking a significant change in direction about hosting data off-campus.
- **Summer 2010** – Avenue to Learn, through D2L Brightspace, enters a pilot phase.
- **Fall 2010** – Avenue is brought out of the pilot phase and into production. ELM is officially decommissioned, and courses are no longer available on ELM.
- **April 2019** – At the invitation of the Provost, David Farrar, the LMS Review Steering Committee is struck and the review process begins.
- **February 2020** – The LMS Review Report is delivered to the Acting Provost, Susan Searls Giroux

APPENDIX C: STEERING COMMITTEE

At Provost David Farrar's request, a short-term LMS Review Steering Committee was struck. The Committee sought to help answer the following questions:

- Is McMaster ready to move to a new Learning Management System?
- What key feature(s) is/are missing from the suite of tools within Avenue to Learn?
- Which issues that have been raised in the feedback process can be dealt with internally by improving processes, and which are solved by a different solution?

Broad representation from all six major Faculties and differing roles (staff, faculty, students, and administration), as well as a broad understanding of teaching and learning needs and technological capability, was prioritized in forming the Committee.

The committee consisted of (in alphabetical order):

- Kyle Ansilio, Graduate Student
- Greg Atkinson, Manager of Information Technology, Faculty of Science
- Sean Corner, Acting Associate Dean, Faculty of Humanities
- Rita Cossa, Assistant Professor, DeGroote School of Business
- Katrina Espanol-Miller, Educational Technologist, Humanities and Media Computing (now Educational Developer, MacPherson Institute)
- Jeff Fortuna, Assistant Professor in Software Engineering Technology in the School of Engineering Practice and Technology (SEPT)
- Aleksandra Gajic, Instructional Assistant and Lecturer, Department of Economics
- Ricky Haror, Learning Systems Technologist, Centre for Continuing Education
- Anthony Levinson, Associate Professor and Director, Division of e-Learning Innovation for the Michael G. DeGroote School of Medicine
- Elvis Podvorac, Service Desk Analyst, University Technology Services
- Anne Pottier, Associate University Librarian
- Emma Schoenholz, Student
- Sarah Symons, Associate Professor, School of Interdisciplinary Science

Additionally, the following people were tasked with managing the review process and were involved with Committee details (in alphabetical order):

- Lori Goff, Director, MacPherson Institute
- Gayleen Gray, Chief Technology Officer
- Joanne Kehoe, Associate Director, Educational Technologies, MacPherson Institute
- Jon Kruithof, Learning Technologies Analyst, MacPherson Institute (serving as Business Analyst)
- Sandra McWilliams, Project Manager, University Technology Services

The steering committee met May 23, June 13, September 12, and November 13. The Committee conducted the needs assessment, assisted MacPherson in the construction of the survey, completed data analysis of the feedback, and participated in writing the report. The Committee proposed the following timeline for the review:

- a. February/March 2019: Determine feedback mechanism

- b. April 2019: Collect feedback and conduct Needs Assessment
- c. June/July 2019: Analyse feedback
- d. September 2019: Focus Groups
- e. Early October 2019: Write Internal Report (Provost); External Report
- f. November 2019: Publish External Report

LMS Review Steering Committee: Terms of Reference

Mandate

1. Ensures project is aligned with organizational strategy and policies
2. Ensures project makes good use of assets
3. Provides advice, guidance and assistance with resolving strategic level issues and risks
4. Approve or reject changes to the project with a high impact on timelines and budget

Responsibilities

1. Understand the goals, objectives and desired outcomes of the project
2. Understand and represent the interest of your respective project stakeholders
3. Take a genuine interest in the project's outcomes and overall success
4. Act on opportunities to communicate positively about the project, including encouraging peers to complete survey
5. Review monthly Steering Committee update materials provided by the facilitator to monitor the progress of the project to check that the project remains aligned with organizational strategy and policies as well as making sensible financial decisions
6. Attend or identify a delegate/proxy to participate in monthly meetings May – November 2019 hosted by the Chairperson. An alternative will be to offer input and approval/endorsement through MS Teams in advance of the meeting.
7. A minimum of 75% response to requests to provide approval/endorsement is required for decision-making purposes.
8. Support open discussion and debate, and encourage fellow members to voice their insights

Agenda & Record of Decisions

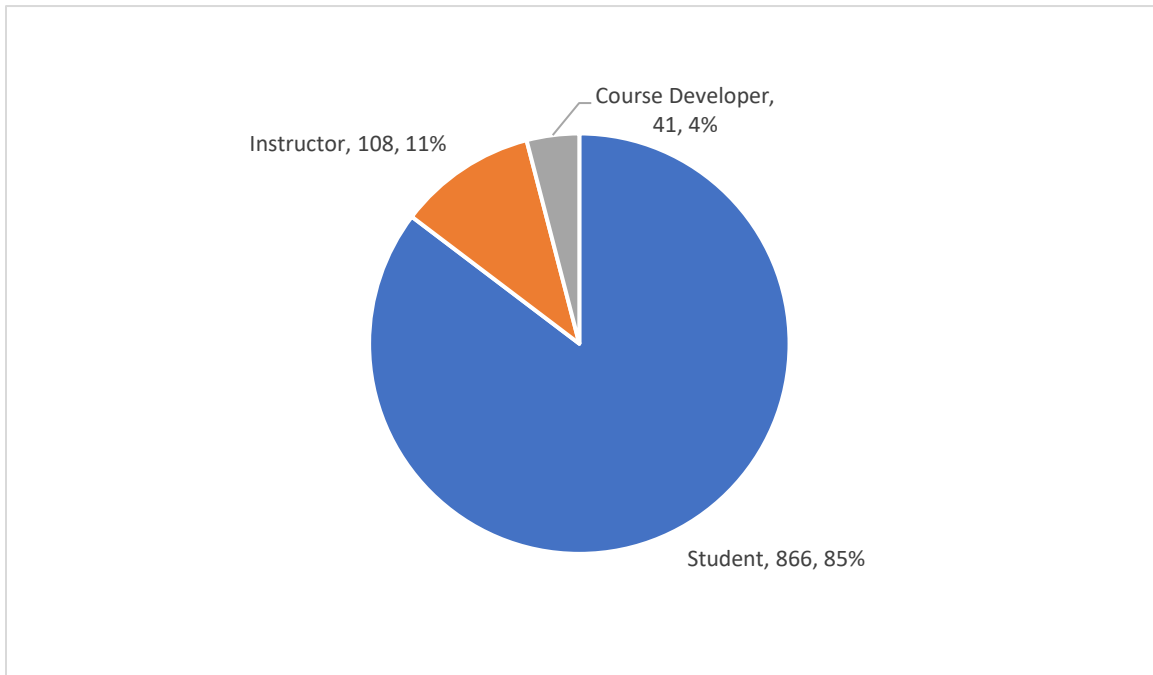
- MS Teams will be our collaborative space to share materials and interact online
- [Confluence](#) hosts all weekly status reports for the [Teaching and Learning Technology](#) standing committee and monthly these are collected for [IT Executive](#)

Deliverables

- Approvals/Endorsements of specified project artifacts
- Recommendations for Teaching and Learning Technology standing committee as well as IT Executive (if required)

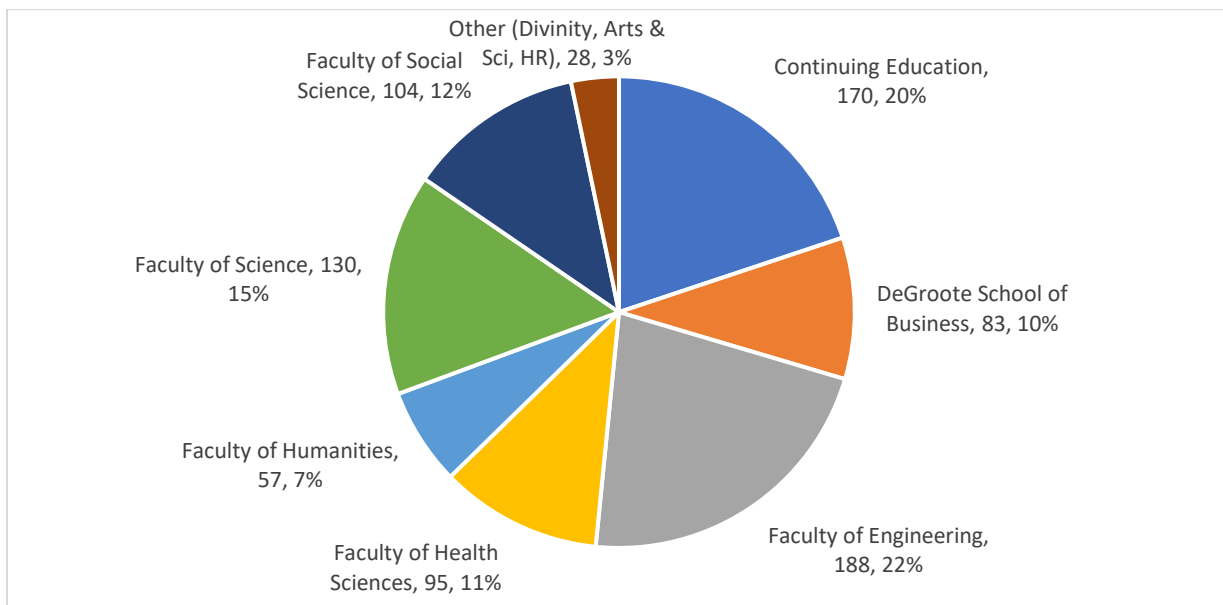
APPENDIX D: FULL SURVEY QUESTIONS AND RESPONSES

1. What is your primary role in Avenue to Learn? For instance, if you are a graduate student, and only use Avenue as a TA, select Instructor. If you are a staff member who helps develop courses, select Course Developer. If you are a staff member who only uses Avenue for Health and Safety courses, please select Student. (n=1015)

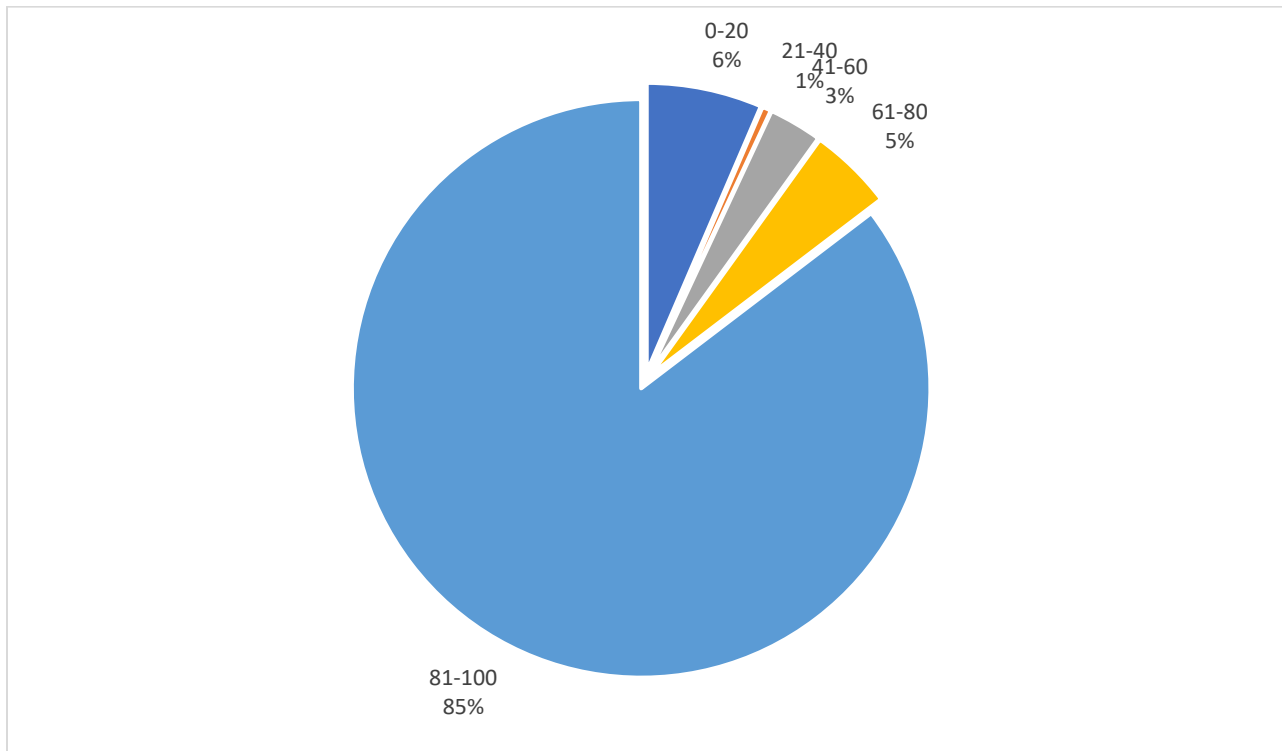


STUDENT SURVEY

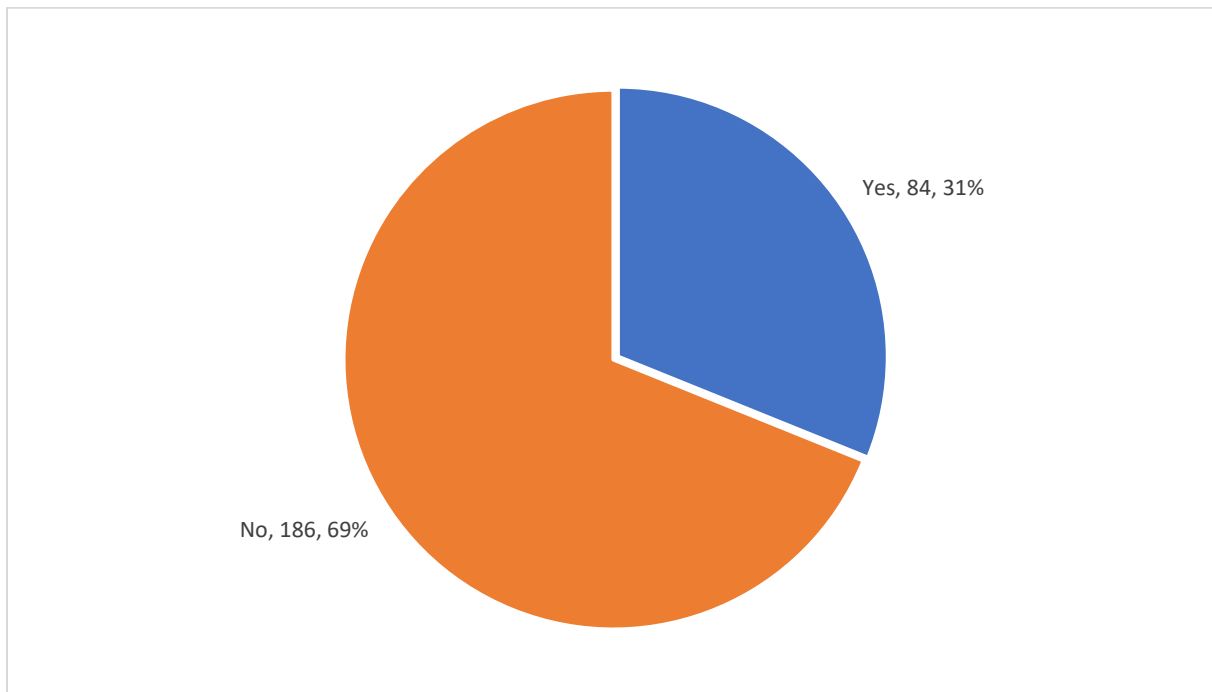
2. Which of the following faculties/programs do you study with primarily? (n=866)



3. Thinking about the most recent completed academic semesters (Fall 2018, Winter 2019 and Spring/Summer 2019) what percentage of your courses were on Avenue to Learn? (n=809)



4. For the other courses, did you use another LMS (Learning Management System)? (n=270)



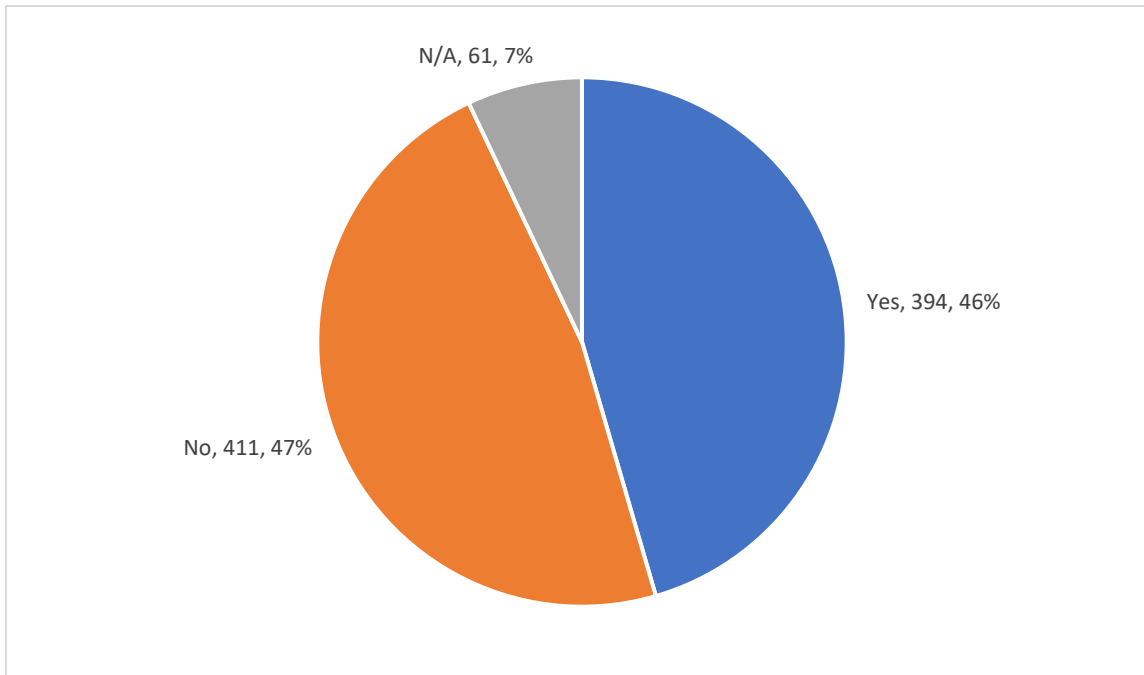
5. If yes, please list the names of the other system(s) used, in order of use.

Additional Resource	Count
Professor's own website	60
LON-CAPA	15
D2L/eConestoga	7
LearnLink	5
Pearson MyLabs	3
Echo360	2
Moodle	2
Various Web Conferencing (Zoom, Webex, etc)	2
Canvas	1
Enterprise Learning Manager	1
In class	1
Riipen	1
TopHat	1
Dual Code	1
Wiley	1
YouTube	1
Blackboard	1
Launchpad	1
SuperSaas	1

6. How long have you used Avenue to Learn? (n=848)

Faculty	<1 year	1-3 years	4-5 years	5+ years	Total
Continuing Education	96	61	6	4	167
DeGroote School of Business	26	48	2	6	82
Faculty of Engineering	77	79	20	8	184
Faculty of Health Sciences	41	41	9	2	93
Faculty of Humanities	11	33	9	3	56
Faculty of Science	20	90	17	2	129
Faculty of Social Science	20	63	11	9	103
Other	8	18	2	6	34
Total	299	433	76	40	848

7. Have you used other systems like Avenue to Learn prior to McMaster University? (n=866)



8. On a scale of 1 to 5, where 1 is unfamiliar and 5 is very familiar, rate your familiarity in using Avenue to Learn? (n=859)

Faculty	1	2	3	4	5	Total
Continuing Education	15	6	30	66	51	168
DeGroote School of Business	4	2	14	36	26	82
Faculty of Engineering	1	2	25	89	70	187
Faculty of Health Sciences	4	1	14	40	35	94
Faculty of Humanities	1	2	5	22	27	57
Faculty of Science	3	0	13	52	62	130
Faculty of Social Science	2	3	15	44	39	103
Other	2	3	5	11	17	38
Total	32	19	121	360	327	859

9. On a scale of 1 to 5, where 1 is difficult and 5 is easy, rank how easy it is to use Avenue to Learn. (n=860)

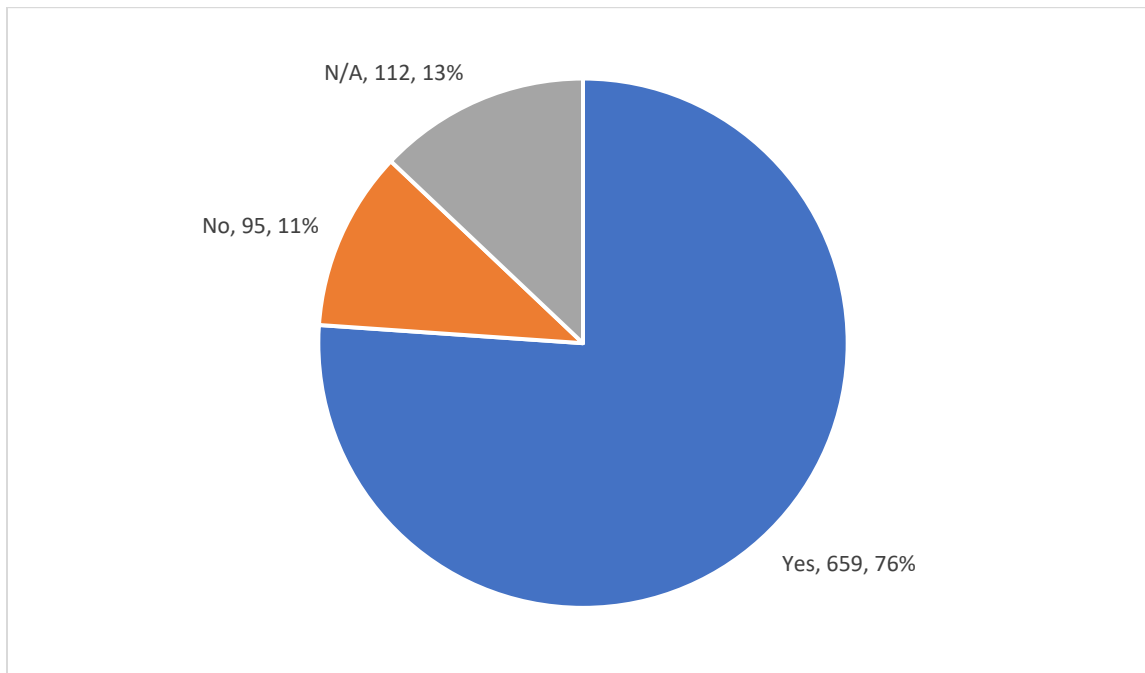
Faculty	1	2	3	4	5	Total
Continuing Education	8	10	27	64	59	168
DeGroote School of Business	1	10	19	32	20	82
Faculty of Engineering	1	7	41	87	52	188
Faculty of Health Sciences	5	6	23	37	23	94
Faculty of Humanities	3	1	7	25	21	57
Faculty of Science	3	9	18	53	47	130
Faculty of Social Science	0	8	17	48	30	103

Other	1	3	12	10	12	38
Total	22	54	164	356	264	860

10. On a scale of 1 to 5, where 1 is not at all satisfied and 5 is completely satisfied, rank your satisfaction with Avenue to Learn. (n=860)

Faculty	1	2	3	4	5	Total
Continuing Education	8	11	17	72	60	168
DeGroote School of Business	2	8	19	42	11	82
Faculty of Engineering	5	13	28	91	51	188
Faculty of Health Sciences	5	8	22	40	19	94
Faculty of Humanities	1	0	11	29	16	57
Faculty of Science	3	7	24	68	28	130
Faculty of Social Science	2	8	17	54	22	103
Other	1	4	12	13	8	38
Total	27	59	150	409	215	860

11. Do you feel use of Avenue to Learn helps your learning? (n=866)



12. Why do you feel that Avenue to Learn has helped your learning? (n=438)

Response	Count
Gives me access to course materials/activities	202
Keeps me organized	71
Flexible, anytime/any place learning	53
All in one place/convenience	61

Communication with peers/professor	40
Easy to use/doesn't get in the way	37
Quizzes	10
Content posted allows for better notes	9
Grades	6
Keeps me up to date with technology	3
Feedback	3
Accessibility	2
Variety of modes keeps it engaging	1

13. How can Avenue to Learn be improved to support your learning? (n=72)

Response	Count
More user friendly	14
Mobile app	8
Streamline content	8
Better discussions	6
Text notifications	6
Standardization between courses	5
Remove unused tools	3
Customization	3
Post due dates	2
Replace it	2
Better communication	2
Google calendar integration	1
Desktop notifications	1
Disable auto logout	1
Improve grades tool	1
Post exam dates	1
Access to generic self-study resources (e.g. basic research, basic math, stats)	1
Ease the learning curve to use Avenue	1
More reliable	1
Courses should stay	1
Better organization	1
Semester codes sortable by chronological order	1
Better homepage layout	1
Avenue makes learning always on, need breaks	1
Better integration with Mosaic	1
Improve calendar functions	1
Better instructor notifications	1
Improve Mail	1
Better integration with other tools	1
Make it faster	1

14. What do you like about Avenue to Learn? (n=526)

Response	Count
Easy to use/simple	165
Access to course materials	111
One place/central location	71
Organization/keeps me organized	55
Looks good/Good UI	34
Ubiquitous/can use any device/access anytime/online	34
Notifications	25
General positive	21
Communicate with professors	21
Communicate with peers	20
Grades	19
Assignments	17
Quizzes	12
Nothing	12
N/A	11
Convenient	11
General negative	11
Courses don't go away/Can look back on previous courses	10
Accessible	8
Reliable	6
Familiar	6
Flexible	6
Mobile app (D2L Pulse)	6
Calendar	4
Course photos	2
Less books to purchase	1
Quick	1
Updates don't break the system	1
Search	1

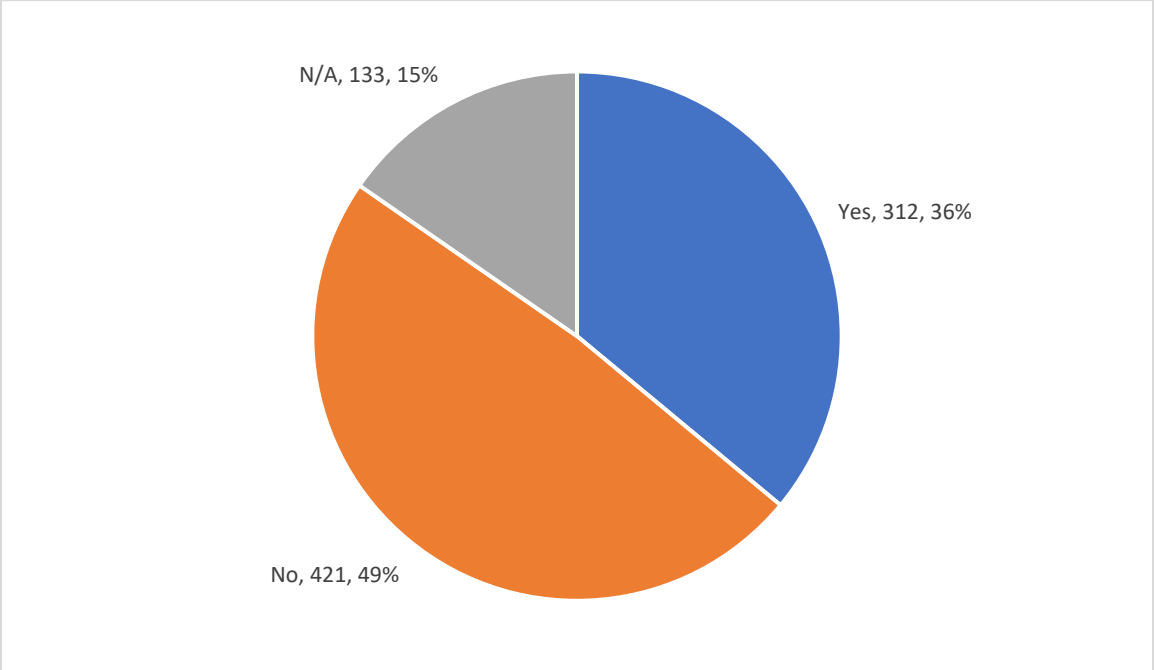
15. What do you dislike about Avenue to Learn? (n=535)

Response	Count
Too many clicks	68
Ways the professors use it	59
Email	51
Nothing	50
Discussions	41
Inconsistency in how professors use it	40
Notifications	37
Tools not used/not turned off	32
No answer	28
No mobile app/D2L Pulse features not enough	19
Automatic logging out	18
No customization/personalization	16

Learning curve was/is too steep	16
Not intuitive	15
Slow	15
Mobile view issues	15
Clunky	12
Layout	10
Everything	9
Assignments	7
Courses don't go away	6
Downloading slow/downloading is time consuming	6
Enrollment delays/issues	6
Grades	6
Quizzes	5
Calendar	5
Courses go away	5
Printing	5
Integration with Mosaic	4
Hard to find feedback	4
Flash modules	4
Archaic looking	4
Lack of support	3
No collaborative tools	3
Annoying	3
Lack of centralization	3
Document viewer	3
Reliability	3
Back button	3
Lack of search	3
General negative	3
Turnitin	2
Library widget transfer links broken	2
Locker size inadequate	2
Stops working	2
Authentication issues	2
Confusing	2
Announcements	2
No dark mode	2
Calendar events incomplete	2
Color scheme	2
Groups	1
Too simple	1
Not accessible	1
Too complex/confusing	1
Passwords	1
No information about peers	1
Login screen	1

Content	1
Course file browser	1
Perpetual classroom	1
No French accents	1
Too simple	1
Video Note restrictions	1

16. If training were offered to students, would you participate? (n=866)

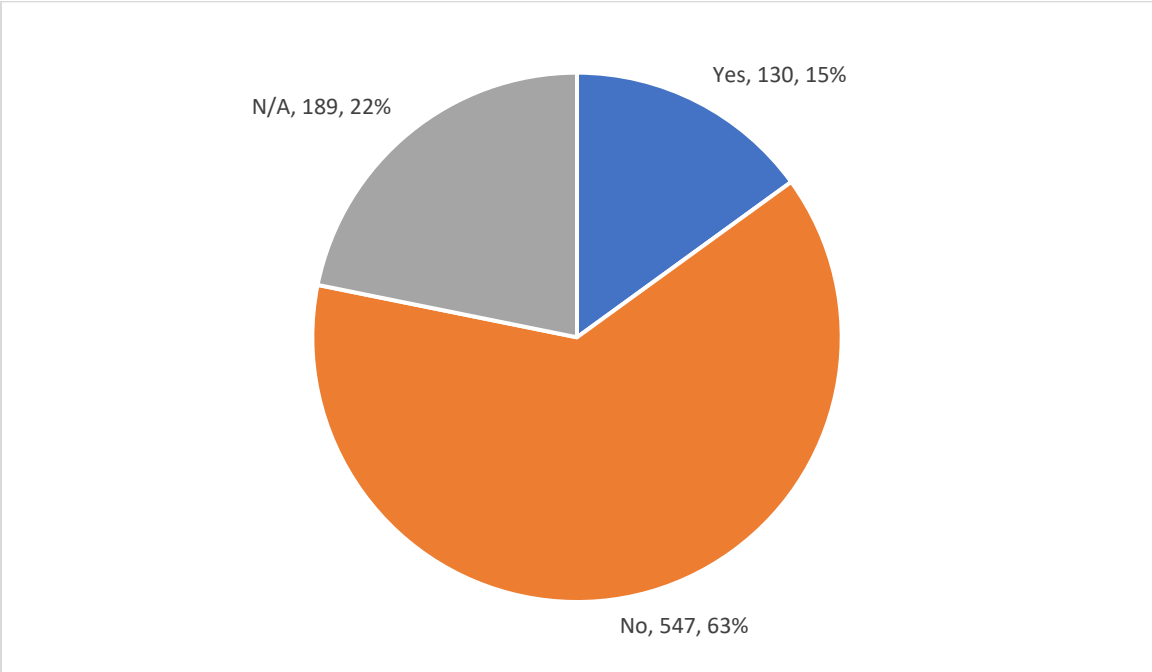


17. What would your ideal Avenue to Learn support look like? (n=309)

Response	Count
Not support related response	88
Chat	71
Unsure	56
Video	28
As is	26
Email	21
Quick	19
Extended hours	19
Not needed	19
Phone	18
Tutorial/Course	17
FAQ	17
Online resources	15
In person drop-in	14
Onboarding for first years	14

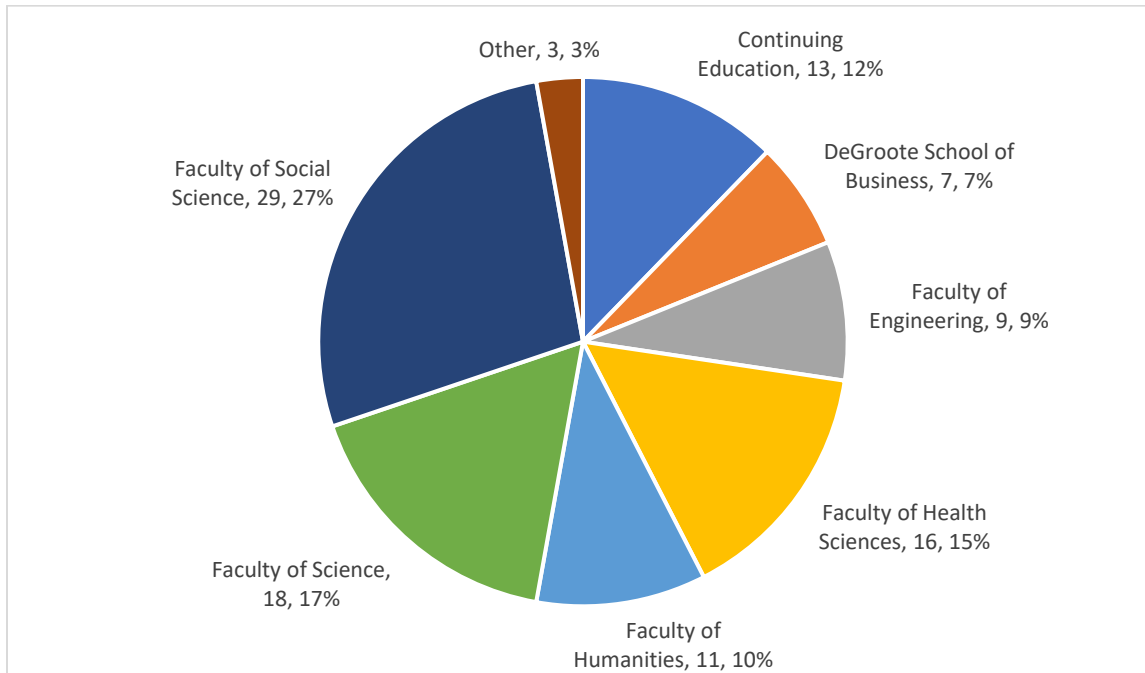
Easy	13
Help Professors use it better	10
Web conference/broadcast	6
In person presentation	5
Mobile app	4
Accessible	3
Tip sheet	3
Roommate agreement	1
LinkedIn Learning course	1
All encompassing (one stop shop for support)	1

18. Would you be willing to participate in a focus group to discuss your experiences with Avenue to Learn? (n=866)

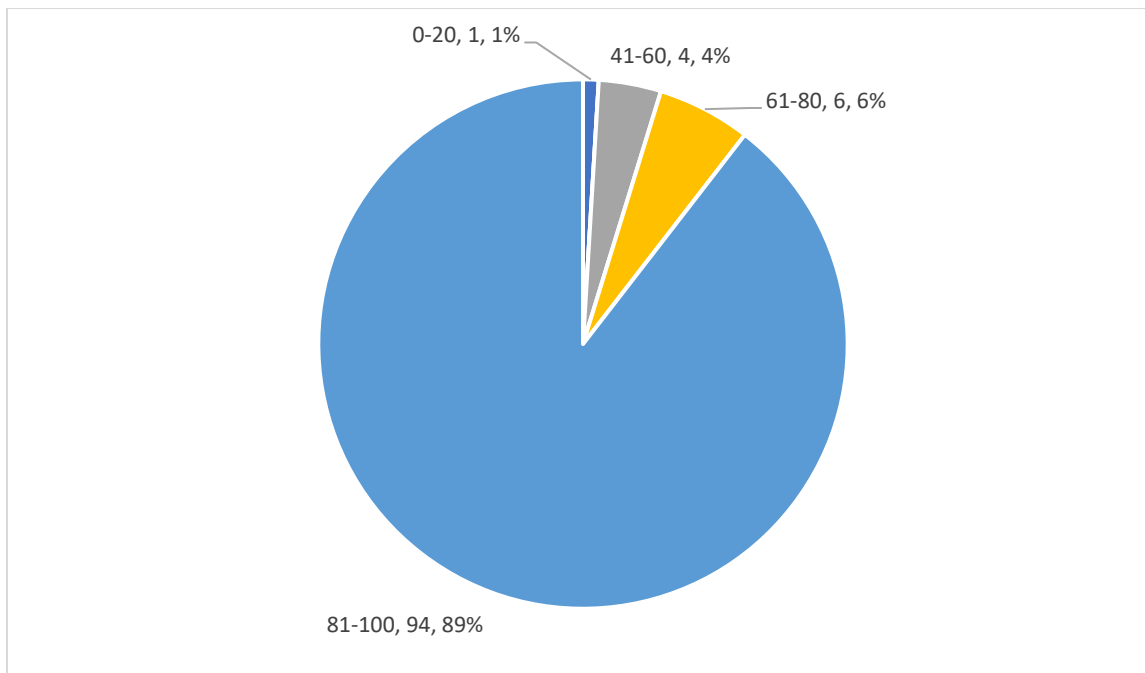


INSTRUCTOR SURVEY

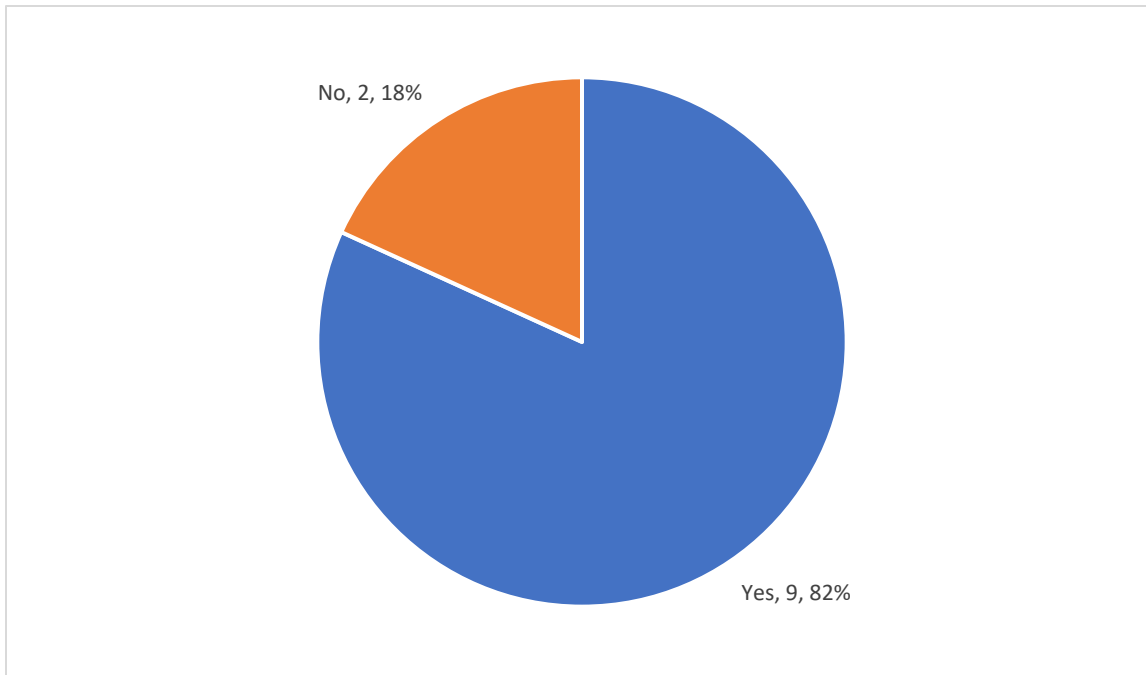
2. In which faculty or program do you primarily teach? (n=106)



3. Thinking about the most recent completed academic semesters (Fall 2018, Winter 2019 and Spring/Summer 2019) what percentage of your courses were on Avenue to Learn?



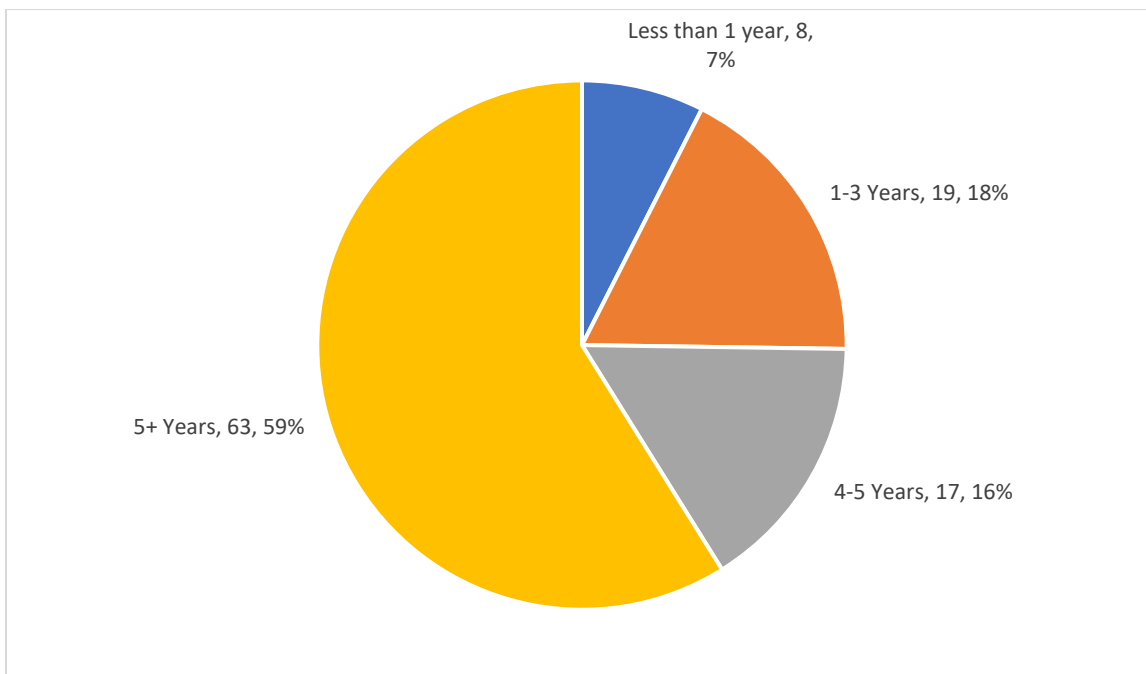
4. For the other courses, did you use another LMS (Learning Management System)? (n=11)



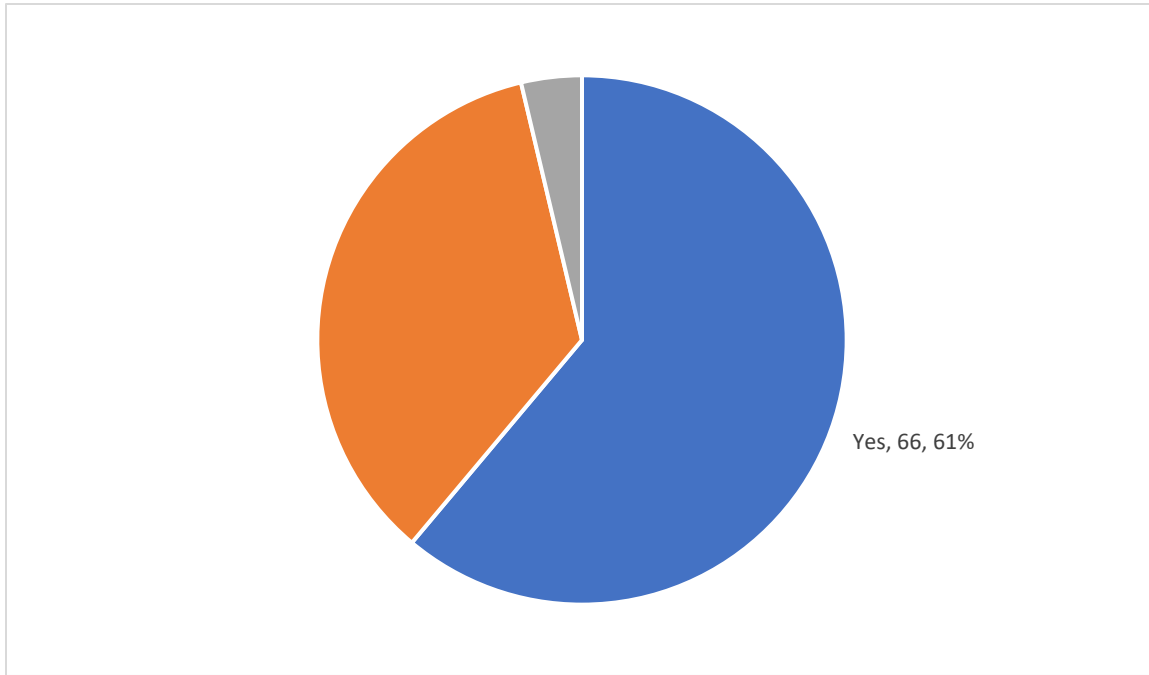
5. If yes, please list the names of the other system(s) used, in order of use.

Additional Resource	Count
Piazza	1

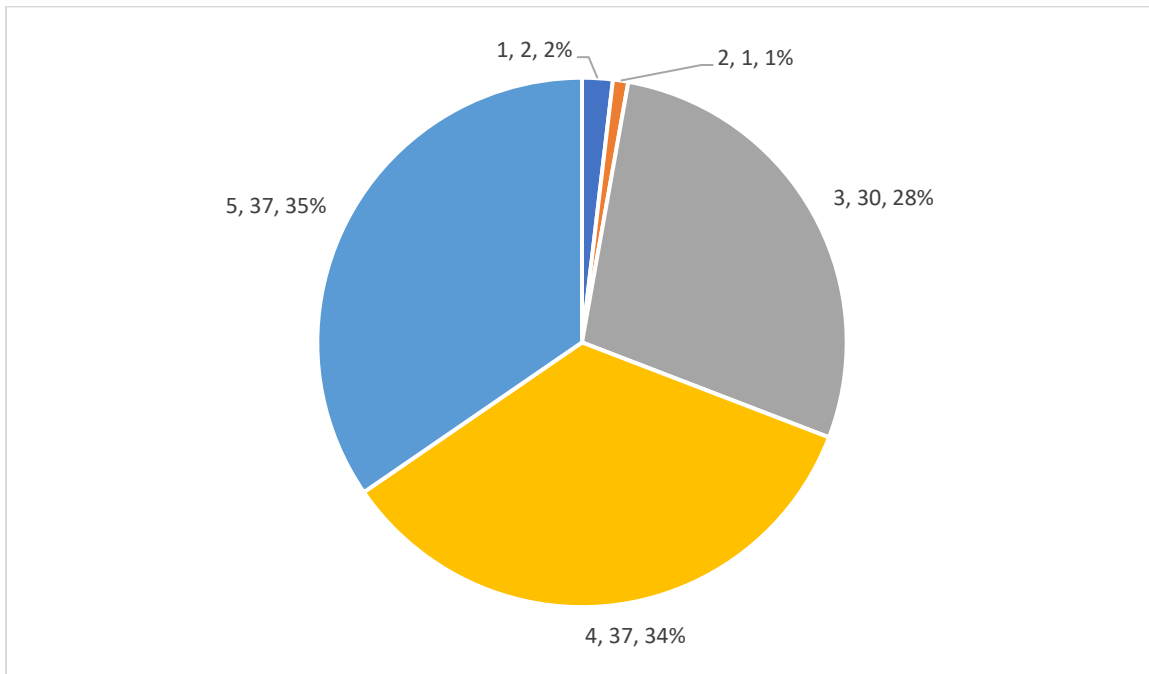
6. How long have you used Avenue to Learn? (n=107)



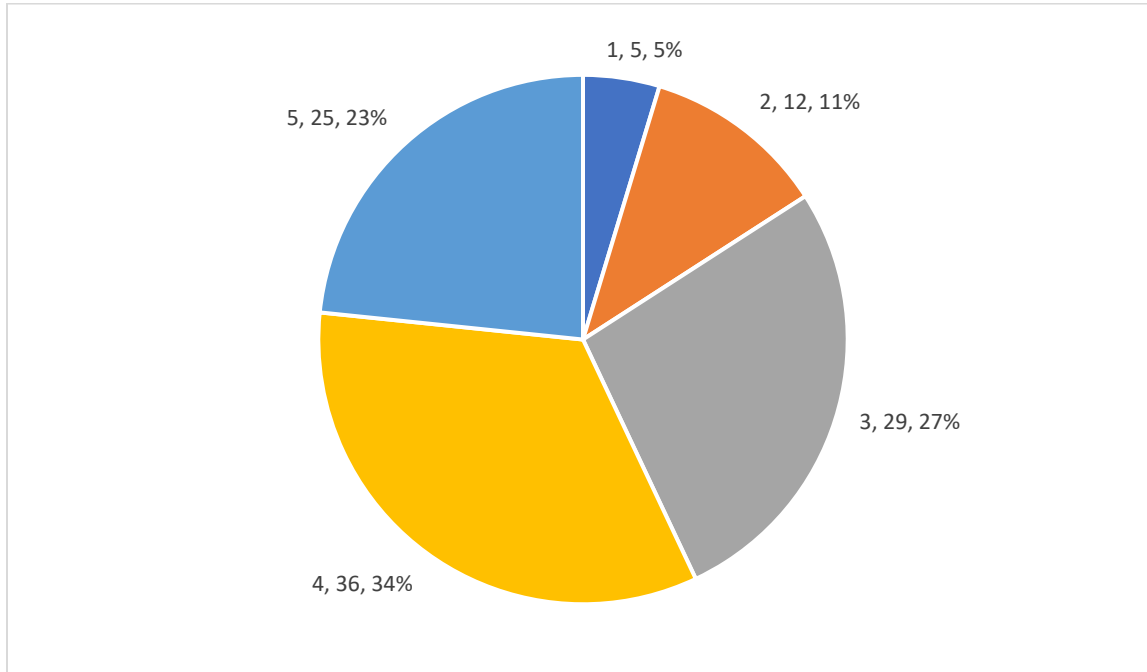
7. Have you used other systems like Avenue to Learn prior to McMaster University? (n=108)



8. On a scale of 1 to 5, where 1 is unfamiliar and 5 is very familiar, rate your familiarity in using Avenue to Learn?



9. On a scale of 1 to 5, where 1 is novice and 5 is expert, rank your expertise in using Avenue to Learn. For 1, we would expect you to be able to login and upload content, for 3 we would expect that you would be able to configure and use up to four additional tools without requiring assistance, and for 5 we would expect that you were able to use most of the tools in Avenue to Learn without requiring assistance.



10. On a scale of 1 to 5, where 1 is not at all satisfied and 5 is completely satisfied, rank your satisfaction with the following tools in Avenue to Learn (select N/A for tools you do not use)

GENERAL SATISFACTION

Faculty Responses – Overall	
Rank	Count
5	10
4	45
3	33
2	13
1	3

Faculty	5	4	3	2	1	Total
Continuing Education	3	6	1	3	0	13
DeGroote School of Business	1	0	5	1	0	7
Faculty of Engineering	0	4	4	1	0	9
Faculty of Health Sciences	2	8	5	1	0	16
Faculty of Humanities	0	4	3	1	2	11

Faculty of Science	2	7	5	2	0	18
Faculty of Social Science	1	15	10	2	1	29
Other	1	1	0	2	0	4
Grand Total	10	45	33	13	3	107

CONTENT

Faculty Responses – Content	
Rank	Count
5	20
4	55
3	16
2	6
1	2

Faculty	5	4	3	2	1	Total
Continuing Education	3	8	0	2	0	13
DeGroote School of Business	2	3	0	1	0	6
Faculty of Engineering	2	5	1	1	0	9
Faculty of Health Sciences	0	3	7	3	0	13
Faculty of Humanities	0	6	2	1	2	11
Faculty of Science	5	11	0	0	0	16
Faculty of Social Science	3	14	9	1	0	27
Other	2	1	0	1	0	4
Total	20	55	26	6	2	99

GRADES

Faculty Responses - Grades	
Rank	Count
5	15
4	44
3	23
2	16
1	4

Faculty	5	4	3	2	1	Total
Continuing Education	2	6	3	2	0	13
DeGroote School of Business	1	2	2	2	0	7
Faculty of Engineering	2	3	3	1	0	9
Faculty of Health Sciences	3	8	2	1	1	15
Faculty of Humanities	1	5	2	1	2	11

Faculty of Science	0	8	4	4	0	16
Faculty of Social Science	5	11	7	4	1	28
Other	1	1	0	1	0	3
Total	15	44	23	16	4	102

QUIZZES

Faculty Responses – Quizzes	
Rank	Count
5	9
4	28
3	18
2	12
1	4

Faculty	5	4	3	2	1	Total
Continuing Education	2	4	2	3	1	12
DeGroote School of Business	1	1	2	1	0	5
Faculty of Engineering	2	1	2	1	0	6
Faculty of Health Sciences	1	4	1	0	1	7
Faculty of Humanities	1	1	3	0	2	7
Faculty of Science	1	8	4	3	0	16
Faculty of Social Science	0	8	3	4	0	15
Other	1	1	1	0	0	3
Total	9	28	18	12	4	71

ASSIGNMENTS

Faculty Responses - Assignments	
Rank	Count
5	15
4	37
3	21
2	12
1	3

Faculty	5	4	3	2	1	Total
Continuing Education	4	3	2	3	0	12
DeGroote School of Business	1	3	2	1	0	7
Faculty of Engineering	2	2	0	1	1	6

Faculty of Health Sciences	2	8	3	1	0	14
Faculty of Humanities	0	4	4	1	2	11
Faculty of Science	1	7	1	2	0	11
Faculty of Social Science	3	9	9	3	0	24
Other	2	1	0	0	0	3
Total	15	37	21	12	3	88

DISCUSSIONS

Faculty Responses - Discussions	
Rank	Count
5	14
4	22
3	22
2	14
1	9

Faculty	5	4	3	2	1	Total
Continuing Education	2	3	4	2	0	11
DeGroote School of Business	1	1	2	2	0	16
Faculty of Engineering	1	1	1	3	1	7
Faculty of Health Sciences	1	4	4	2	3	14
Faculty of Humanities	1	3	2	2	2	10
Faculty of Science	5	3	2	3	2	15
Faculty of Social Science	2	6	5	0	1	14
Other	0	1	2	0	0	3
Total	14	22	22	14	9	81

AVENUE MAIL

Faculty Responses – Avenue Mail	
Rank	Count
5	8
4	18
3	15
2	21
1	21

Faculty	5	4	3	2	1	Total
Continuing Education	4	3	2	2	2	13

DeGroote School of Business	0	0	1	2	3	6
Faculty of Engineering	0	0	2	3	1	6
Faculty of Health Sciences	2	4	4	2	2	14
Faculty of Humanities	0	1	2	3	3	9
Faculty of Science	1	5	0	2	3	11
Faculty of Social Science	1	5	3	6	5	20
Other	0	0	1	1	1	3
Total	8	18	15	21	21	83

IMPORT/EXPORT/COPY COMPONENTS

Faculty Responses – Import/Export/Copy Components	
Rank	Count
5	14
4	26
3	14
2	16
1	7

Faculty	5	4	3	2	1	Total
Continuing Education	2	4	2	1	0	9
DeGroote School of Business	0	2	1	2	2	7
Faculty of Engineering	2	1	0	2	0	5
Faculty of Health Sciences	2	4	3	0	1	10
Faculty of Humanities	0	2	2	3	2	9
Faculty of Science	2	5	2	5	0	14
Faculty of Social Science	4	8	3	3	2	20
Other	2	0	1	0	0	3
Total	14	26	14	16	7	77

RUBRICS

Faculty Responses - Rubrics	
Rank	Count
5	3
4	16
3	12
2	12
1	9

Faculty	5	4	3	2	1	Total
Continuing Education	1	3	2	2	1	9
DeGroote School of Business	0	0	2	2	2	6
Faculty of Engineering	0	1	2	1	0	4
Faculty of Health Sciences	1	3	2	1	2	9
Faculty of Humanities	0	2	1	0	2	5
Faculty of Science	0	2	1	3	1	7
Faculty of Social Science	1	4	2	2	1	10
Other	1	0	0	1	0	2
Total	3	16	12	12	9	52

ATTENDANCE

Faculty Responses – Attendance	
Rank	Count
5	4
4	10
3	5
2	6
1	8

Faculty	5	4	3	2	1	Total
Continuing Education	1	2	0	1	1	5
DeGroote School of Business	0	2	0	2	1	5
Faculty of Engineering	1	0	0	1	0	2
Faculty of Health Sciences	0	2	2	0	2	6
Faculty of Humanities	0	0	1	0	2	3
Faculty of Science	0	0	0	1	0	1
Faculty of Social Science	2	4	2	1	2	11
Other	0	0	0	0	0	0
Total	4	10	5	6	8	33

COMPETENCIES/LEARNING OUTCOMES

Faculty Responses – Competencies/Learning Outcomes	
Rank	Count
5	2
4	8
3	7
2	4

1	5
---	---

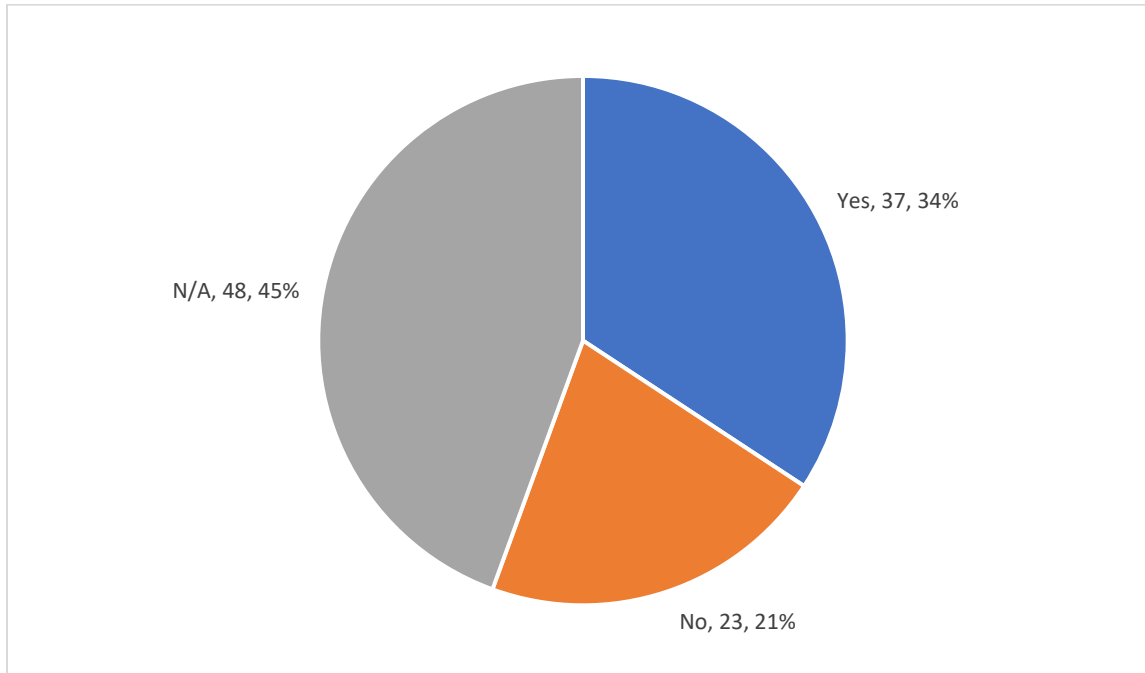
Faculty	5	4	3	2	1	Total
Continuing Education	1	1	1	1	0	4
DeGroote School of Business	0	0	2	2	0	4
Faculty of Engineering	1	0	0	0	0	1
Faculty of Health Sciences	0	2	3	1	0	6
Faculty of Humanities	0	1	0	2	0	3
Faculty of Science	0	1	0	0	0	1
Faculty of Social Science	0	2	1	1	2	6
Other	0	1	0	0	0	1
Total	2	8	7	4	5	26

CHECKLISTS

Faculty Responses - Checklist	
Rank	Count
5	4
4	10
3	7
2	3
1	5

Faculty	5	4	3	2	1	Total
Continuing Education	0	0	1	1	1	3
DeGroote School of Business	0	2	2	1	0	5
Faculty of Engineering	1	1	0	0	0	2
Faculty of Health Sciences	0	1	2	1	0	4
Faculty of Humanities	1	1	0	3	0	5
Faculty of Science	0	1	0	0	0	1
Faculty of Social Science	1	4	2	1	0	8
Other	1	0	0	0	0	1
Total	4	10	7	3	5	29

11. Is there a tool or ability that is not within Avenue to Learn that you would use if it were available? (n=108)



12. If yes, please describe the tool(s) and/or feature(s) that are missing from Avenue to Learn. (n=34)

Response	Count
Improve Quiz	8
Integration	8
Released Features	5
Improve Groups	3
Polling	3
Peer Review/Assessment	3
Improve Grades	2
Improve Discussions	2
Improve Accommodation Process	2
Complex Release Conditions	2
Bulk Editing	1
Lockdown Browser/Exam Software	1
Gamification	1
Improve Mobile Experience	1
Improve Assignments	1

13. What do you like about Avenue to Learn? (n=78)

Response	Count
Content	12
Easy to use	11

Grades	8
One place	8
Accessible	8
Functional	8
Flexibility	7
Announcements	7
General negative	5
Stability	5
Quizzes	5
Assignments	4
Support	3
Release conditions	3
User interface	3
Turnitin	2
General positive	1
Environmentally friendly	1
Communication tools	1
Import/Export/Copy components	1
Email	1
Rubrics	1
Familiar	1
Manages enrollments	1
Discussions	1
Courses stay	1
Hosted in Canada	1
Groups	1

14. What do you dislike about Avenue to Learn? (n=84)

Response	Count
Clunky/cumbersome	29
Grades	21
Discussions	10
Slow	9
Email	8
Quizzes	8
Assignments	8
Support (timeliness, phone)	7
Lack of functionality	4
Content	3
Integration	3
Accommodations method too limited	2
Sections	2
Content	3
Mobile app	2
Groups	2

No real time collaboration tools	1
Too many clicks	1
Import/Export	1
Scientific Notation	1
Overwhelming	1
Lack of customization in roles	1
Ugly	1
Rubrics	1
Semester codes don't sort correctly	1
Courses don't go away	1
Students have difficulty using the system	1
Statistics	1

15. How do you get support with Avenue to Learn? (n=108)

Response	Yes	No
Ask a colleague in your department	59	49
Ask a colleague outside your department	15	93
Attend training sessions	27	81
Put in a support ticket	48	60
Call or email Avenue support	41	67
Look at the support wiki	37	71
YouTube	23	85
Look on the D2L Brightspace community	10	98
Look elsewhere on the Internet	12	96
Ask social Media	1	107
Other	8	100

16. What would your ideal Avenue to Learn support look like? (n=71)

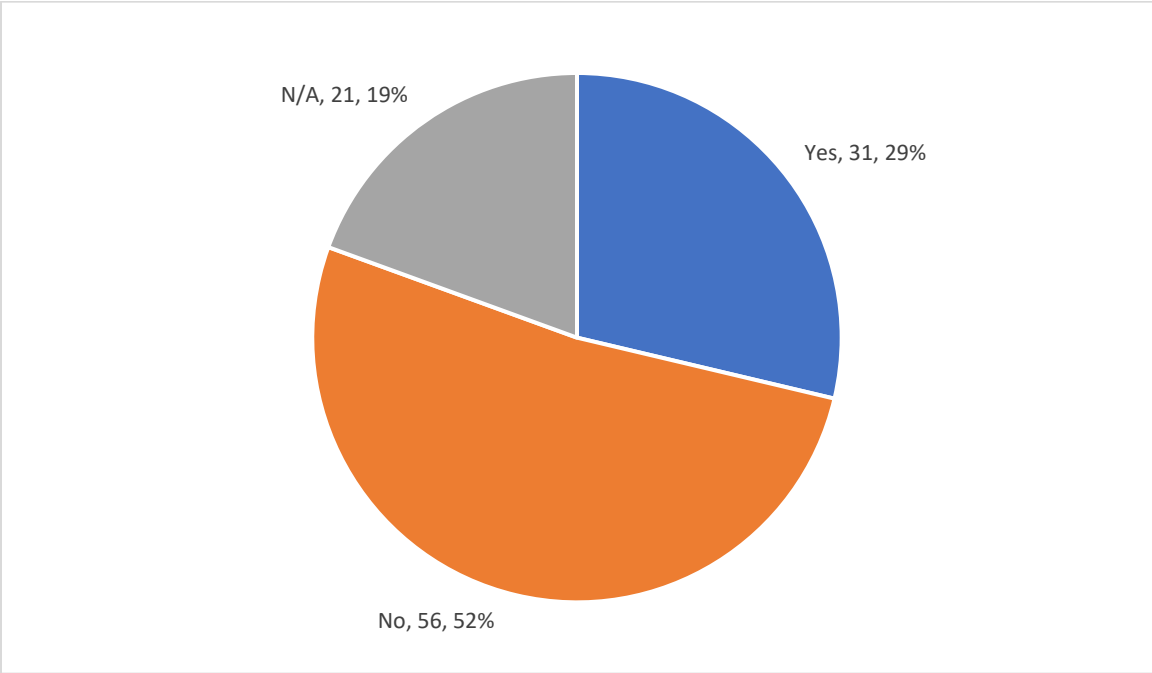
Response	Count
As is	15
Online manuals/tutorials	13
Phone	8
In person drop in	6
In person training session	6
No support should be needed	5
Extended hours	5
Email	4
Unsure	4
Chat	4
Quick	3
Within departments	3
Videos	3
More staff	3

Clearer support process	2
Start of term/semester checklist	2
Improved onboarding	2
Exemplar courses	1
Move support to UTS	1
Online web conference session	1
Outsource	1
Develop resources within Avenue	1

17. Additional comments?

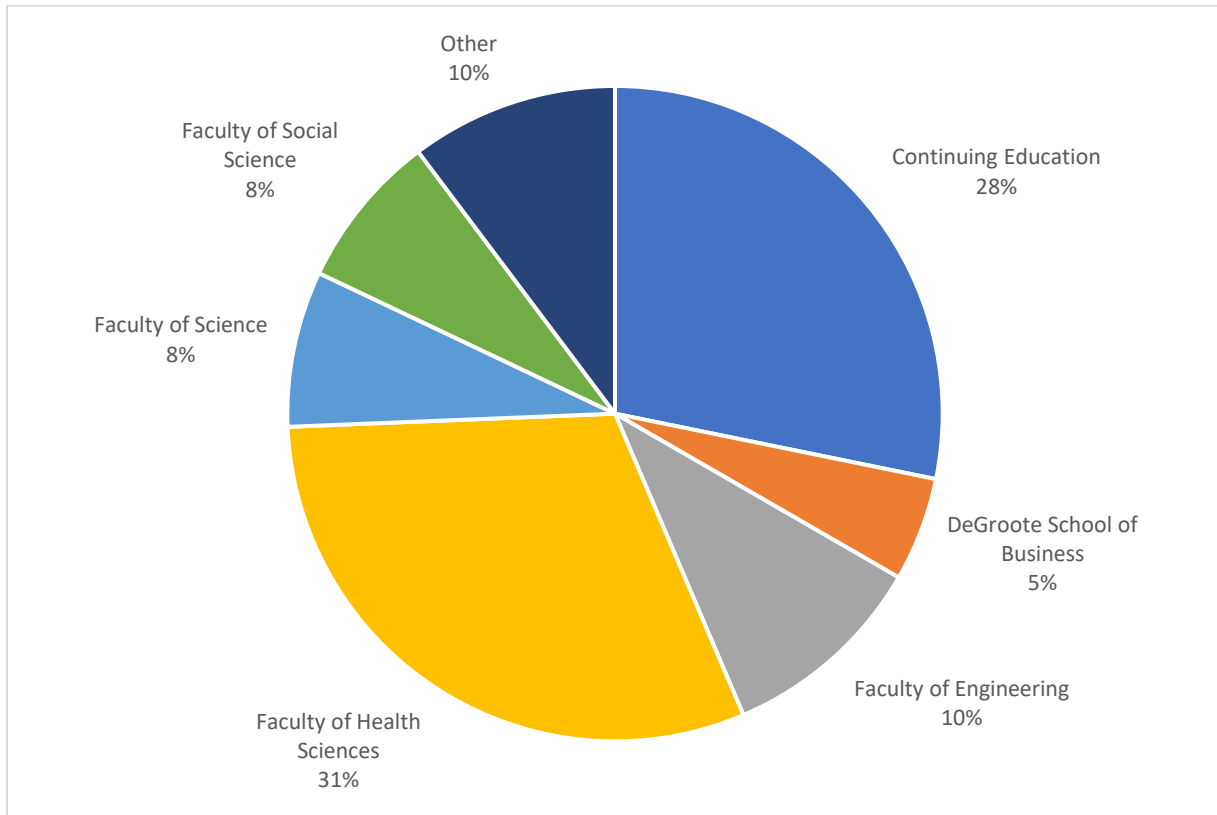
To preserve anonymity, additional comments were separated from the survey results; they appear in Appendix E.

18. Would you be willing to participate in a focus group to discuss your experiences with Avenue to Learn?

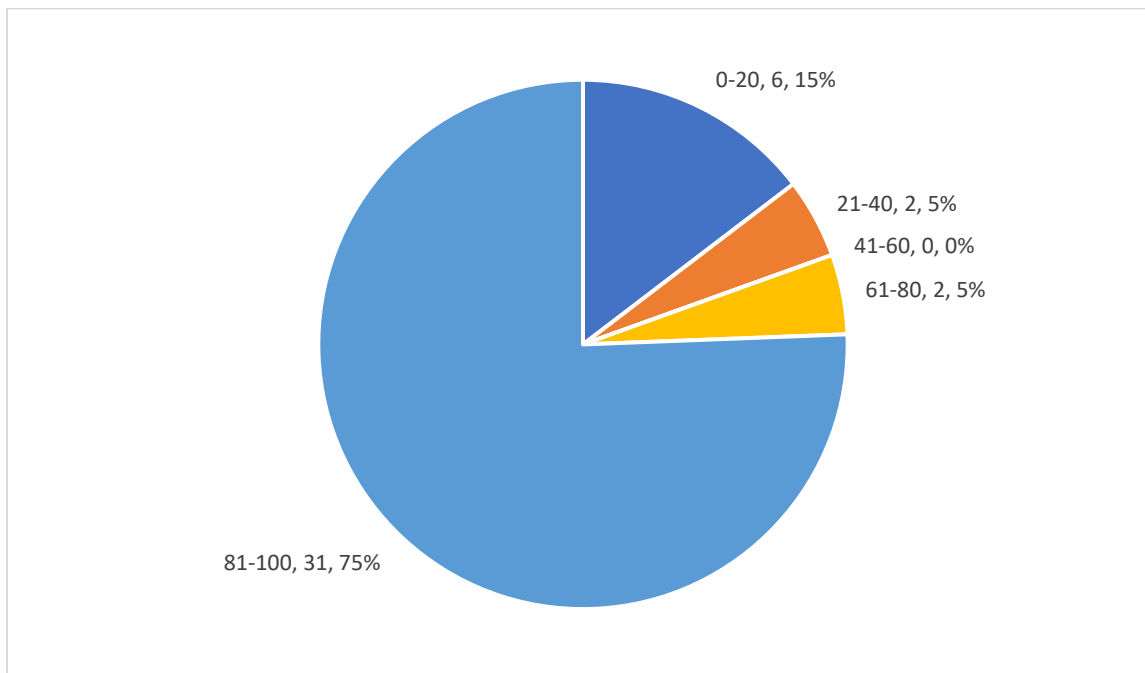


COURSE DEVELOPER SURVEY

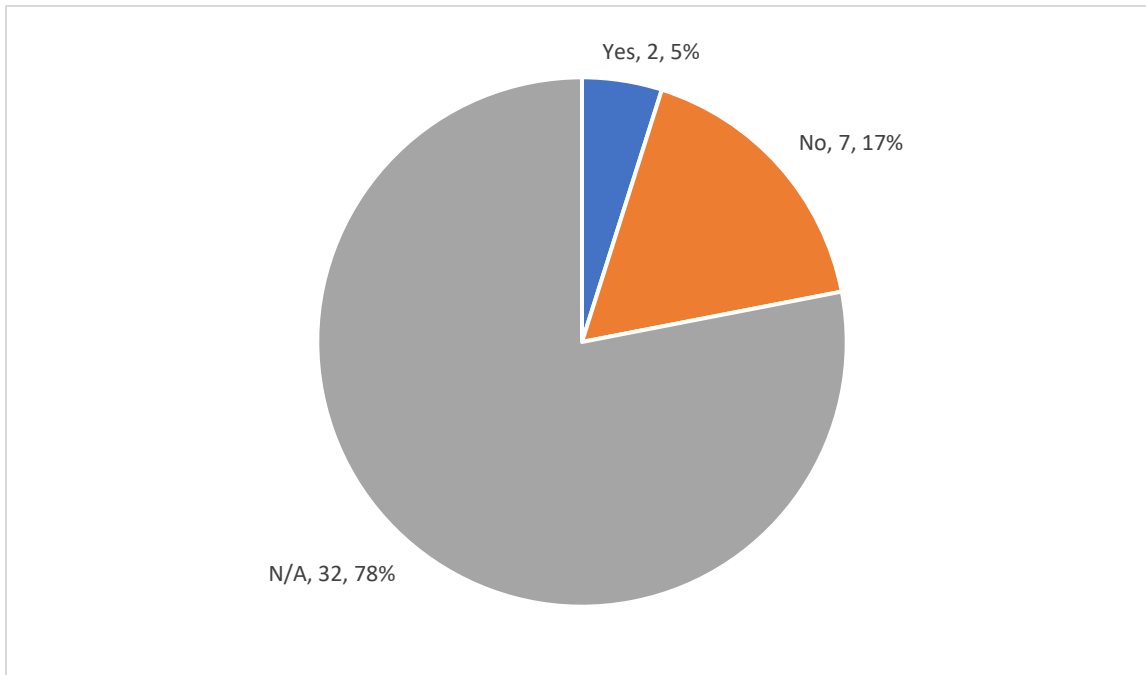
2. In which faculty or program do you primarily support educators? (n=39)



3. Thinking about the most recent completed academic semesters (Fall 2018, Winter 2019 and Spring/Summer 2019) what percentage of your courses were on Avenue to Learn? (n=41)



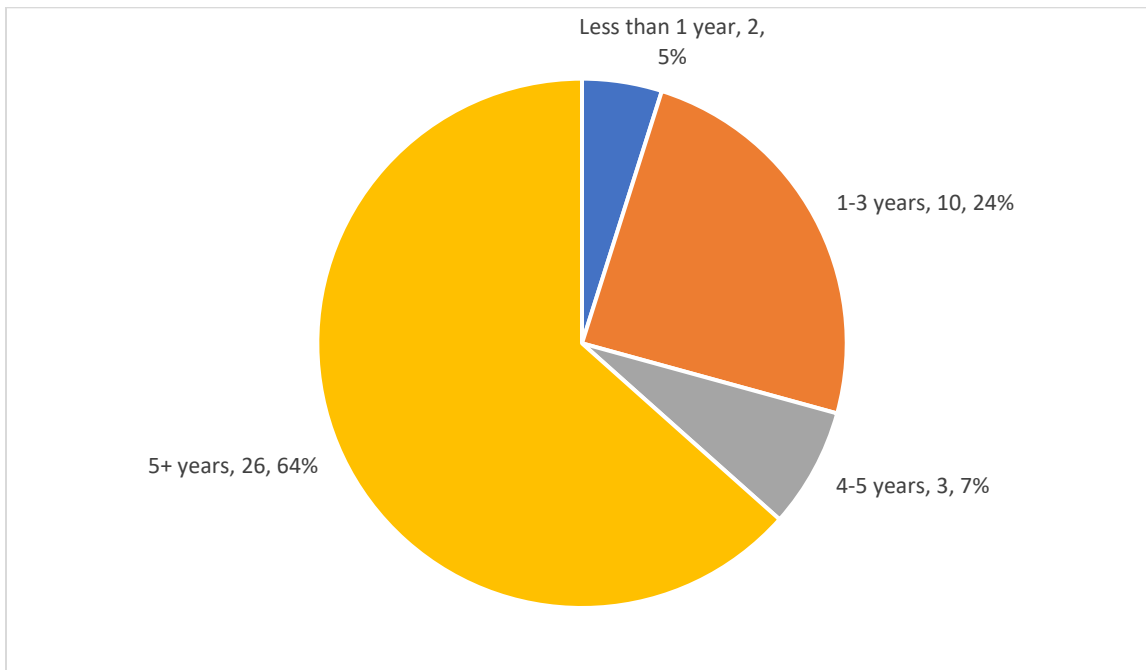
4. For the other courses, did you use another LMS (Learning Management System)? (n=41)



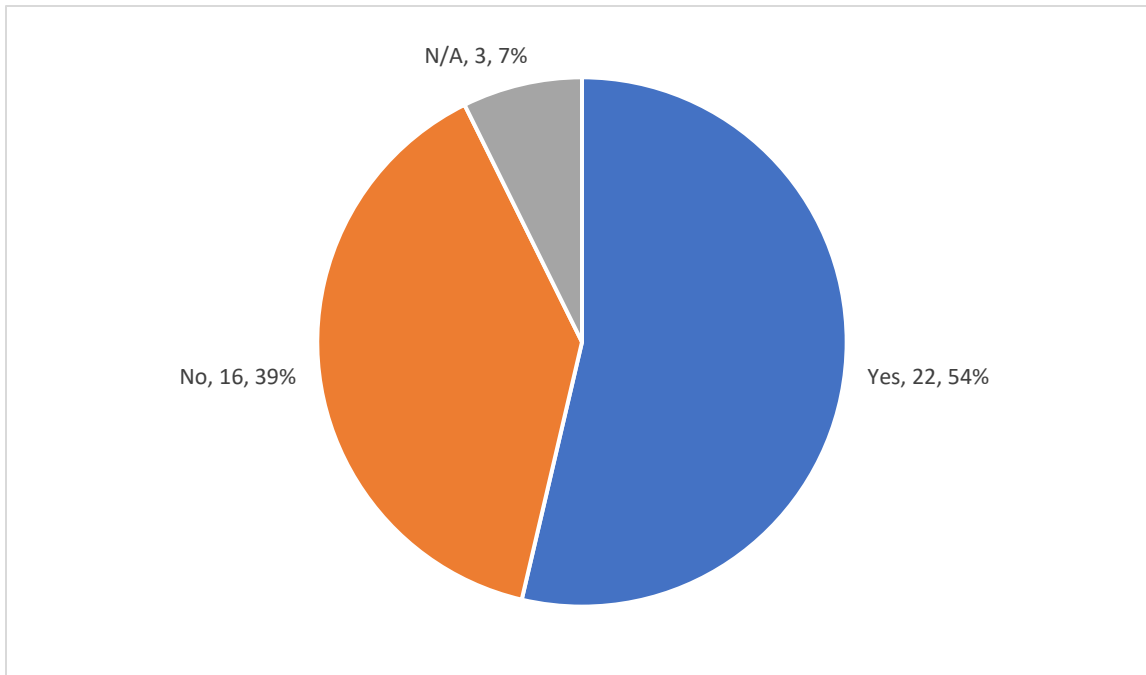
5. If yes, please list the names of the other system(s) used, in order of use. (n=2)

Response	Count
Moodle	2

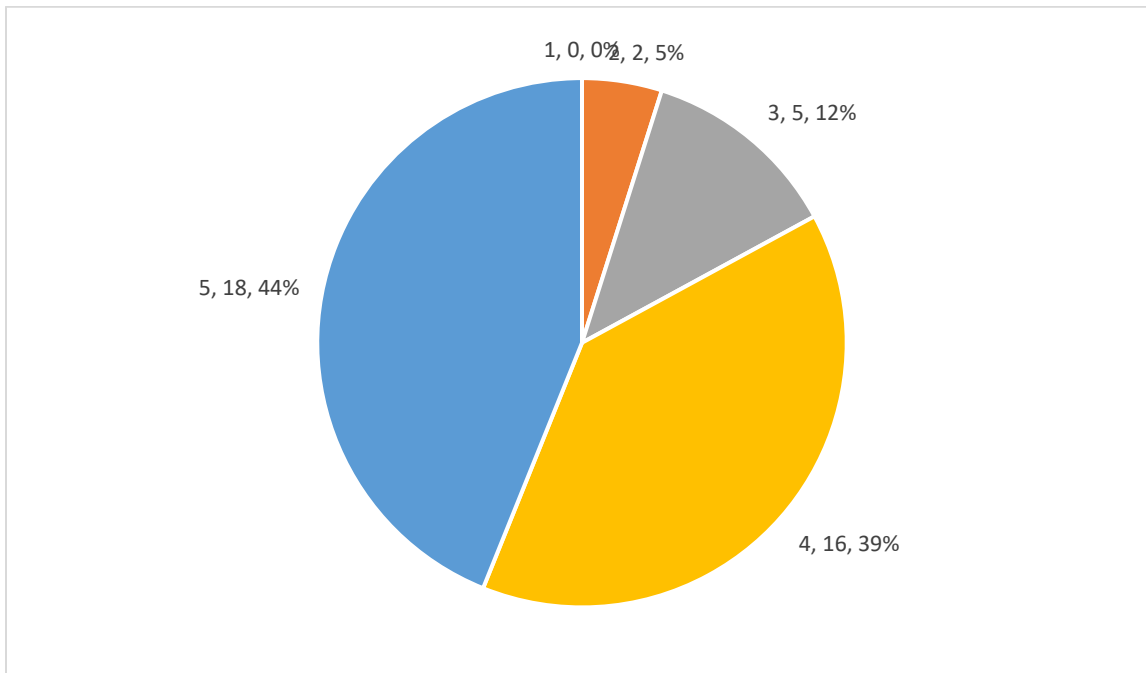
6. How long have you used Avenue to Learn? (n=41)



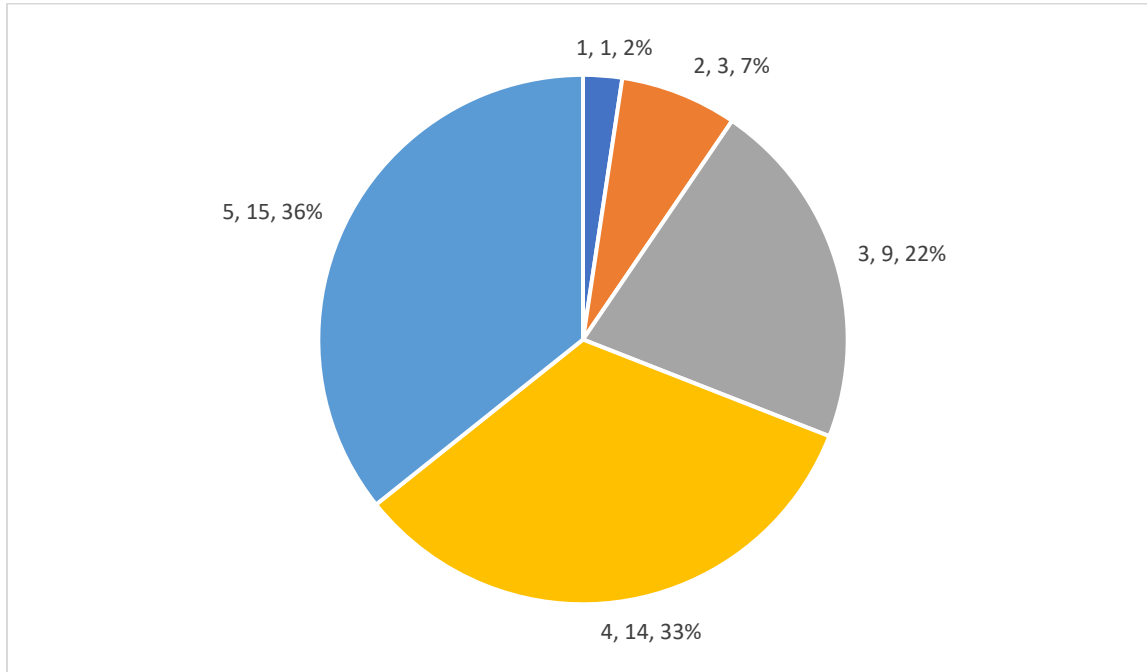
7. Have you used other systems like Avenue to Learn prior to McMaster University? (n=41)



8. On a scale of 1 to 5, where 1 is unfamiliar and 5 is very familiar, rate your familiarity in using Avenue to Learn?



9. On a scale of 1 to 5, where 1 is novice and 5 is expert, rank your expertise in using Avenue to Learn. For 1, we would expect you to be able to login and upload content, for 3 we would expect that you would be able to configure and use up to four additional tools without requiring assistance, and for 5 we would expect that you were able to use most of the tools in Avenue to Learn without requiring assistance.



10. On a scale of 1 to 5, where 1 is not at all satisfied and 5 is completely satisfied, rank your satisfaction with the following tools in Avenue to Learn (select N/A for tools you do not use)

GENERAL SATISFACTION

40 responses were logged for this question.

Course Developer Responses – Overall	
Rank	Count
5	6
4	24
3	6
2	3
1	1

Course developer	5	4	3	2	1	Total
Continuing Education	1	9	1	0	0	11
DeGroote School of Business	0	2	0	0	0	2
Faculty of Engineering	0	2	1	1	0	3
Faculty of Health Sciences	1	7	1	2	0	11
Faculty of Humanities	0	0	0	0	0	0

Faculty of Science	2	1	0	0	0	3
Faculty of Social Science	0	1	0	1	0	2
Other	1	1	1	0	1	4
Grand Total	6	24	6	3	1	40

CONTENT

Course Developer Responses – Content	
Rank	Count
5	10
4	21
3	4
2	4
1	1

Faculty	5	4	3	2	1	Total
Continuing Education	3	7	1	0	0	11
DeGroote School of Business	0	1	1	0	0	2
Faculty of Engineering	1	2	0	1	0	4
Faculty of Health Sciences	1	7	1	2	0	11
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	2	0	1	0	0	3
Faculty of Social Science	1	2	0	0	0	3
Other	2	2	0	1	1	6
Total	10	21	4	4	1	40

GRADES

Course developer Responses - Grades	
Rank	Count
5	6
4	22
3	3
2	1
1	2

Faculty	5	4	3	2	1	Total
Continuing Education	0	9	2	0	0	11
DeGroote School of Business	1	0	0	0	0	1

Faculty of Engineering	0	3	0	0	0	3
Faculty of Health Sciences	1	6	1	1	1	10
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	1	0	0	0	2
Faculty of Social Science	1	1	0	0	0	2
Other	2	1	0	1	0	4
Total	6	22	3	1	2	34

QUIZZES

Course developer Responses – Quizzes	
Rank	Count
5	4
4	21
3	6
2	0
1	2

Faculty	5	4	3	2	1	Total
Continuing Education	2	7	2	0	0	11
DeGroote School of Business	0	1	1	0	0	2
Faculty of Engineering	0	3	0	0	0	3
Faculty of Health Sciences	1	3	2	0	0	6
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	1	0	0	0	2
Faculty of Social Science	0	3	0	0	0	3
Other	0	3	1	0	2	6
Total	4	21	6	0	2	33

ASSIGNMENTS

Course developer Responses - Assignments	
Rank	Count
5	8
4	17
3	5
2	2
1	2

Faculty	5	4	3	2	1	Total
Continuing Education	4	7	0	0	0	11
DeGroote School of Business	0	1	0	0	0	1
Faculty of Engineering	0	2	1	0	0	3
Faculty of Health Sciences	1	4	3	2	1	11
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	2	0	0	0	0	2
Faculty of Social Science	0	2	0	0	0	2
Other	1	1	1	0	1	4
Total	8	17	5	2	2	34

DISCUSSIONS

Course developer Responses – Discussions	
Rank	Count
5	4
4	16
3	8
2	3
1	3

Faculty	5	4	3	2	1	Total
Continuing Education	2	7	2	0	0	11
DeGroote School of Business	0	0	0	1	0	1
Faculty of Engineering	0	3	0	1	0	4
Faculty of Health Sciences	1	4	2	1	1	9
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	0	2	0	0	3
Faculty of Social Science	0	1	1	0	0	2
Other	0	1	1	0	2	4
Total	4	16	8	3	3	34

AVENUE MAIL

Course developer Responses – Avenue Mail	
Rank	Count
5	4
4	13
3	6
2	4
1	5

Faculty	5	4	3	2	1	Total
Continuing Education	1	6	2	1	1	11
DeGroote School of Business	0	1	0	0	0	1
Faculty of Engineering	0	1	1	0	1	3
Faculty of Health Sciences	2	4	0	1	1	8
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	0	2	0	0	3
Faculty of Social Science	0	0	0	1	1	2
Other	0	2	1	0	1	4
Total	4	13	6	4	5	32

IMPORT/EXPORT/COPY COMPONENTS

Course developer Responses – Import/Export/Copy Components	
Rank	Count
5	9
4	20
3	5
2	0
1	0

Faculty	5	4	3	2	1	Total
Continuing Education	2	8	0	0	0	10
DeGroote School of Business	0	1	0	0	0	1
Faculty of Engineering	0	2	1	0	0	3
Faculty of Health Sciences	3	5	2	0	0	10
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	0	2	0	0	3
Faculty of Social Science	1	2	0	0	0	3
Other	2	2	0	0	0	4
Total	9	20	5	0	0	34

RUBRICS

Course developer Responses - Rubrics	
Rank	Count
5	5
4	12
3	8

2	2
1	2

Faculty	5	4	3	2	1	Total
Continuing Education	2	7	1	0	0	10
DeGroote School of Business	0	0	0	0	0	0
Faculty of Engineering	0	1	1	1	0	3
Faculty of Health Sciences	1	1	5	0	2	9
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	2	0	0	0	0	2
Faculty of Social Science	0	0	1	1	0	2
Other	0	3	0	0	0	3
Total	5	12	8	2	2	29

ATTENDANCE

Course developer Responses – Attendance	
Rank	Count
5	3
4	7
3	1
2	3
1	0

Faculty	5	4	3	2	1	Total
Continuing Education	0	1	0	0	0	1
DeGroote School of Business	0	0	0	0	0	0
Faculty of Engineering	0	1	0	1	0	2
Faculty of Health Sciences	1	3	0	1	0	5
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	0	1	0	0	2
Faculty of Social Science	0	0	0	0	0	0
Other	1	2	0	1	0	4
Total	3	7	1	3	0	14

COMPETENCIES/LEARNING OUTCOMES

Course developer Responses – Competencies/Learning Outcomes
--

Rank	Count
5	2
4	6
3	4
2	2
1	0

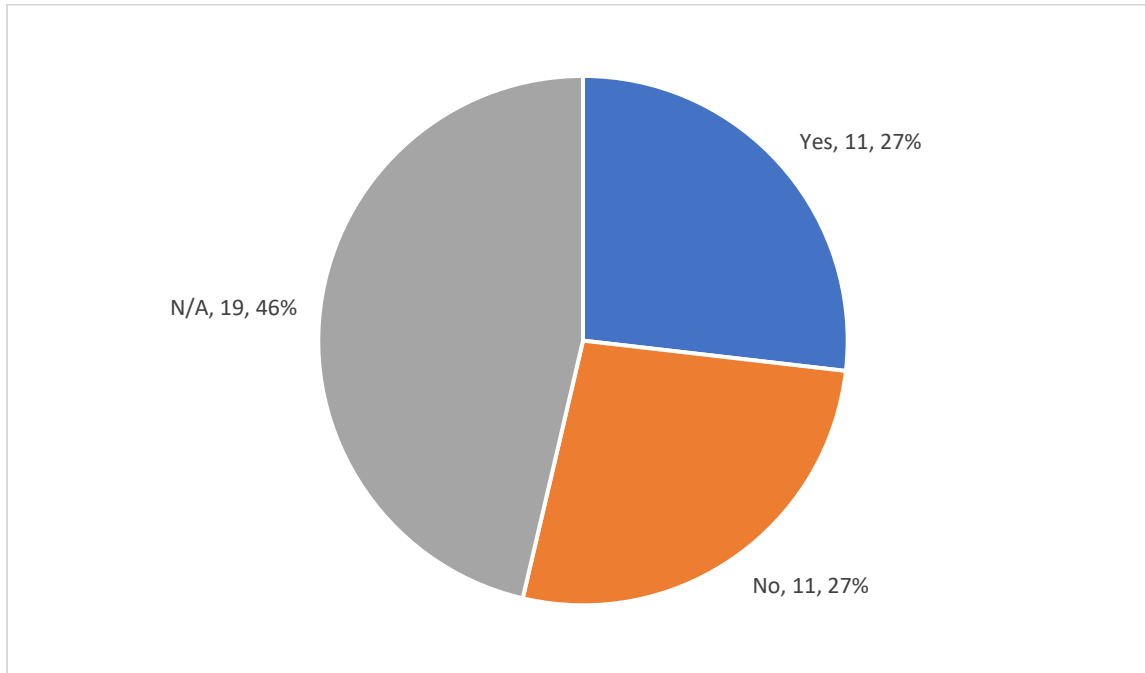
Faculty	5	4	3	2	1	Total
Continuing Education	0	1	0	0	0	1
DeGroote School of Business	0	0	0	0	0	0
Faculty of Engineering	0	1	1	1	0	3
Faculty of Health Sciences	1	2	1	1	0	5
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	0	1	0	0	2
Faculty of Social Science	0	0	0	0	0	0
Other	0	2	1	0	0	3
Total	2	6	4	2	0	14

CHECKLISTS

Course developer Responses - Checklist	
Rank	Count
5	5
4	9
3	5
2	1
1	2

Faculty	5	4	3	2	1	Total
Continuing Education	3	4	1	0	0	8
DeGroote School of Business	0	1	0	0	0	1
Faculty of Engineering	0	1	0	1	0	2
Faculty of Health Sciences	1	1	1	0	1	4
Faculty of Humanities	0	0	0	0	0	0
Faculty of Science	1	0	1	0	0	2
Faculty of Social Science	0	1	0	0	0	1
Other	0	1	2	0	1	4
Total	5	9	5	1	2	22

11. Is there a tool or ability that is not within Avenue to Learn that you would use if it were available? (n=41)



12. If yes, please describe the tool(s) and/or feature(s) that are missing from Avenue to Learn. (n=11)

Response	Count
Improve grades	3
Improve enrollment process	2
Add non-McMaster people	2
Adaptive learning	1
Statistics/analytics	1
Integrate with existing tools (Office 365, Webex)	1
Collaborative tools	1
Improve discussions	1
Improve rubrics	1
More customization of the system	1
Roles (staff roles, hidden)	1
Web conferencing	1
Bootstrap built-in to content	1

13. What do you like about Avenue to Learn? (n=27)

Response	Count
Easy to use	8
Intuitive	4
Content	3
Support	2

Grades	2
Ability to upload HTML	2
All in one place	2
Looks clean, streamlined	1
Ubiquitous availability	1
Improvements to the system	1
Statistics	1
Groups	1
It works	1
Comprehensive	1
Quizzes	1
Mosaic integration	1
Notifications	1
Mobile friendly	1
Assignments	1
Security	1

14. What do you dislike about Avenue to Learn? (n=31)

Response	Count
Unintuitive	4
Mail	4
Authentication	3
Grades	3
Groups	3
Enrollment issues/delays	3
Turnitin	3
Too many features not used	2
Support slow to respond	2
Assignments	2
Workflow inconsistency	2
Quizzes	2
Clunky	1
Mobile app	1
Lack of customization	1
Surveys	1
Discussions	1
Reusing HR linked shells	1
Classlist	1
Too limiting	1
Printing	1
Manage files	1
Submission views	1
Not accessible enough	1
Rubrics	1
Blogs	1

Updates not communicated	1
Learning curve too steep	1
Lack of resources at onboarding	1

15. How do you get support with Avenue to Learn?

Response	Yes	No
Ask a colleague in your department	29	12
Ask a colleague outside your department	9	32
Attend training sessions	5	36
Put in a support ticket	27	14
Call or email Avenue support	24	17
Look at the support wiki	22	19
YouTube	8	33
Look on the D2L Brightspace community	10	31
Look elsewhere on the Internet	8	33
Ask social Media	1	40
Other	2	39

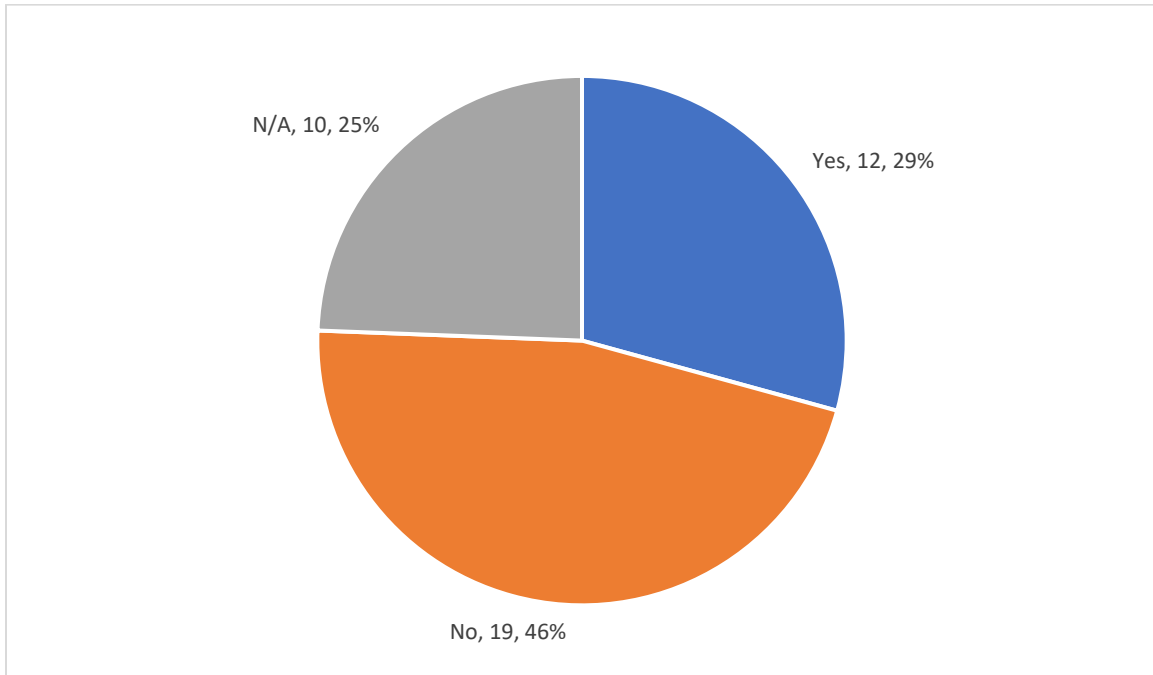
16. What would your ideal Avenue to Learn support look like? (n=27)

Response	Count
As is	6
Training manual	4
Phone	4
Extended hours	3
Chat	3
Video	3
More staff	2
Quick	2
Online resources	2
Training	1
Web conferencing	1
Onboarding	1
In-person presentation	1
Clear troubleshooting paths	1

17. Additional comments?

To preserve anonymity, additional comments were separated from the survey results; they appear in Appendix E.

18. Would you be willing to participate in a focus group to discuss your experiences with Avenue to Learn?



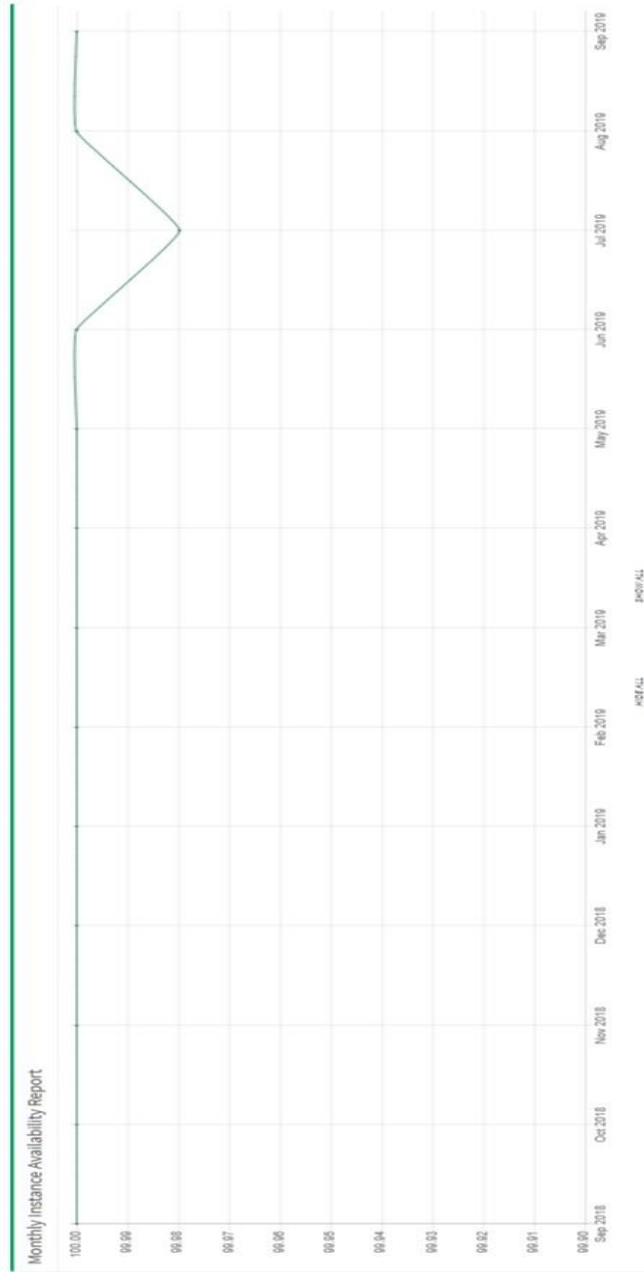
APPENDIX E: ADDITIONAL COMMENTS

Avenue sucks
Due to my outside commitments and responsibilities, participation in a focus group does not seem feasible at this time.
Great work! D2L has a lot to be proud of
I like the idea below of getting feedback & designing for the user community. Of course, the users you most want are least likely to volunteer.
I miss WebCT.
I've heard rumours that Mac is thinking of switch LMS providers. I think this would be a big mistake because they are all basically the same but for heavy users like myself a switch would be very frustrating. I've already had to learn several different systems in my time at McMaster.
If you are going to purchase a new system or revise the existing one it would be advantageous asking the people who use it (i.e. Instructors) for their input on the product before acquiring or redesigning it. A complicated system does not contribute to ease of use or understanding. An overly complex system may be advantageous for designers but it doesn't necessarily work for Instructors or students.
It could be a lot better—for 2019 it's not much better than Blackboard 1.0 that I used 20 years ago.
Jon and Daryl are excellent at their jobs!
Overall is a good tool for instructors/TA's Maybe online training courses should be promoted once we get access to the tool to get familiarized with it.
Overall it's pretty good, a few things could be a little user friendly, otherwise I like using it.
Simply some of the general functions.
Thanks for asking. Your work is vital and much appreciated.
The support I have received for Avenue really has been great. Daryl and Jon are amazing!
There's not enough support people - often have to wait for an answer;
Overall a great tool! I appreciate all the support the Learning Tech teach provides. Daryl and Jon are especially fantastic.

<p>Whatever you do, do not move this to something like Mosaic!!! I would sooner have my fingernails plucked out than to have to put up with anything as insanely slow and unintuitive as everything on Mosaic.</p>
<p>There used to be more training available to Faculty and TA's. It would be nice to have refresher sessions for faculty, and different sessions for TA's and new Faculty. Right now, training falls mostly to those in our Department who have the most familiarity.</p>
<p>Whatever you do, do not move this to something like Mosaic!!! I would sooner have my fingernails plucked out than to have to put up with anything as insanely slow and unintuitive as everything on Mosaic.</p>
<p>There used to be more training available to Faculty and TA's. It would be nice to have refresher sessions for faculty, and different sessions for TA's and new Faculty. Right now, training falls mostly to those in our Department who have the most familiarity.</p>
<p>i have used moodle and sakai for years---this one really stumps me</p>
<p>When you import grades from an excel file, it would be nice if the row highlighted to indicate if it will result in a change to the existing grade (e.g. if the import results in a grade change from blank > grade, it stays white. If it will result in an existing grade changing (e.g. from 5 > 4), it will highlight in green so you can double check.</p>
<p>I was not aware of the support available for Avenue that was listed above. It would be much more helpful if I could access these supports directly from Avenue.</p>
<p>Thank you, A2L has significantly improved in the past few years, but there are always things that can be improved.</p>
<p>surveys are bad</p>
<p>When we started the tech system was supposed to meet my needs, now more and more I meet the needs of the tech system. More than 50% of my work time is spent in front of a screen.</p>
<p>Overall, I think Avenue is pretty good. But uploading grades (especially from scantrons) is the most cumbersome task I do.</p>
<p>i have used moodle and sakai for years---this one really stumps me</p>
<p>When you import grades from an excel file, it would be nice if the row highlighted to indicate if it will result in a change to the existing grade (e.g. if the import results in a grade change from blank > grade, it stays white. If it will result in an existing grade changing (e.g. from 5 > 4), it will highlight in green so you can double check.</p>
<p>I was not aware of the support available for Avenue that was listed above. It would be much more helpful if I could access these supports directly from Avenue.</p>
<p>Thank you, A2L has significantly improved in the past few years, but there are always things that can be improved.</p>

surveys are bad
When we started the tech system was supposed to meet my needs, now more and more I meet the needs of the tech system. More than 50% of my work time is spent in front of a screen.
Overall, I think Avenue is pretty good. But uploading grades (especially from scantrons) is the most cumbersome task I do.
MacPherson should have an advisory Working Group who oversee the LMS that includes (mostly) people from the userbase: instructors, TA's, MacPherson support staff, technologists, students, and staff. This advisory unit should meet bi-annually to review the LMS solution, discuss issues and upgrade pathways for the product, the design of the LMS service, programming and training, and the design of the technical support model. this group would also be responsible for reviewing and the RFP / RFI of any central LMS solution. Probably terms of 3 years for membership.
Thanks for accepting feedback from the local community of users.
The system is fine. We'd be silly to change it.
Would like if training's can be taped and/or accessible online.
It would be really helpful for us to have a system within McMaster where we can offer courses to those outside McMaster. We have resorted to outside webhosting and installation of a moodle to get what we need. It would be helpful if we could offer our course in house rather than having to do go outside.
The terminology is confusing. The way that files are organized is not intuitive. The interface for rubrics is clumsy and I wasn't able to make a PDF hard copy for reference.
A2L has gotten much better over the past couple of years - and honestly, despite its shortcomings, no other LMS is likely to be anything more than a marginal improvement in some areas; plus, the fact that so many people (like me!) have invested so much time into learning the ins and outs of it over the years, I would strongly advise AGAINST switching to another LMS anytime soon.
Thank you!
A2L staff very helpful. Overall user friendly.

APPENDIX F: SYSTEM AVAILABILITY REPORT



Learning management system. (n.d.). Retrieved 11 9, 2019, from Wikipedia: The Free Encyclopedia: http://en.wikipedia.org/wiki/Learning_management_system

APPENDIX G: GLOSSARY OF TOOLS WITHIN AVENUE TO LEARN

Activity Feed

An informal, interactive, social-media like way to share information in a course (faculty and students can author activity feed posts and write comments on posts).

Announcements

A formal way to make course-wide official announcements (no interactive elements).

Awards / Badges

Provide merit-based awards to motivate and engage students as they progress through your course. There are two types of awards: Badges, and Certificates. Badges and Certificates can be automatically awarded based on release condition criteria or can be manually awarded.

Calendar

Add the calendar widget to your course homepage so students can see what's coming up in the course. The calendar will display anything that you have assigned availability dates to when you added it in content.

Class Progress

View, compare and track learner performance at a glance.

Content

Use the content tool to build the framework for your course site. Set up folders and sub-folders (modules) to organize your learning materials. You can import/export course components from previous versions of a course, drag and drop content from 3rd party tools like Google Docs, create new content with the HTML editor, and create learning activities like assignments, discussions, or quizzes etc.

Discussions

A place for students to discuss course materials in an organized way, moderated by an instructor (faculty or student creates a discussion post with instructions, and other students reply). It is possible to assign a grade and a rubric to discussion posts so that students receive credit and feedback for their participation in discussions.

Grades

Set up a grading system for your course and connect it to your course assignments, discussions, tests etc. It takes a bit of effort to set up the grade book for your course, but once you've done so, the grades tool looks after recording the grades you assign students for any of the associated learning activities in your course site and calculating how they contribute toward the student's final grade. The grades tool can even record the grades you've assigned to students through Rubrics (as long as those rubrics have been set up in the grade book).

Intelligent Agents

Gain insight into student's involvement in your course so you can automate and personalize how you interact with them. The intelligent agents tool finds an activity that matches predetermined criteria, and then automatically (and proactively) triggers an action – ex/ emailing users that have not accessed your course in a week or have missed an assignment submission due date.

Quick Eval

View all ungraded student submissions in one place. In Quick Eval, you can see a summary of what grading work is waiting for you to complete. You can sort submissions by course, student, assignment etc. so that you can grade student work in whatever way suits you. You can evaluate submissions and publish feedback and grades right from within the quick eval tool so you don't need to navigate all over the place to get your grading done.

Quizzes

Build quizzes from a question library or from scratch. The quiz tool allows for many question types including equations, multiple choice, short answer etc.

Release Conditions

Use release conditions to create a custom learning path through the materials in your course. When you attach a release condition to an item, users cannot see that item until they meet the associated condition, ex/ attach a release condition to the second topic in your course's content area that would hide that topic until users viewed the topic before it.

Rubrics

Create or use existing rubrics to evaluate an activity or item based on a predefined set of criteria. Rubrics help ensure that activities and items are evaluated fairly and consistently and deliver effective feedback for students. Using rubrics as part of your course assessment options streamlines the grading workflow for faculty/instructors.

Special Access

Add special access for learners who require different access to content and/or quizzes in your course, i.e. use special access to allow a student to submit an assignment after the due date, or take more time to complete a quiz.

All tool descriptions provided by D2L: <https://community.brightspace.com/s/article/Mapping-Brightspace-Functionality-Higher-Education>