



Inclusive Learning Series

Research Insights from the Ally Community



Accessibility Trends and Ally Usage: Associate's and Technical Colleges

Abstract

Associate's and technical colleges [serve a higher percentage](#) of adult learners, first generation college students, minority students, low-income students, and students with disclosed disabilities than most four-year institutions. Because accessibility issues can affect the readability of content and limit their use on mobile devices and study tools, inaccessible content can impact opportunities for academic success for all students. In this paper, we explore accessibility and usage data collected through the Blackboard Ally software from 150 associate's and technical colleges during the Fall 2019 term. Analysis includes:

- Prevalence of critical accessibility issues with file content in Fall 2019 courses and progress on issues
- Student engagement and downloads of Alternative Formats of learning content in Fall 2019 courses
- Instructor engagement with Instructor Feedback in addressing accessibility issues with their course content

Key Findings

- The percentage of files with critical accessibility issues appears consistent across different size institutions, and an **average overall Files Score between 52.4% and 55.4%** suggests there are significant accessibility barriers in content across courses. Using the reporting to guide their strategy and policy, several colleges showed significant two-year improvements on critical issues.
- The median download rate of Alternative Formats per Full Time Enrollment (FTE) was **.99 for small colleges, .94 for medium colleges, and .85 for large colleges**. While unique student downloaders decreased 44% from start of term to end (likely due in part to an overall decrease in student engagement as a term progresses), the conversion rate between launching the Alternative Formats and downloading a file **increased 11 percentage points** while the number of downloads per student increased slightly from **2.72 to 2.80**. Of the **813,413**, 93% of the formats downloaded were Tagged PDFs and HTML files.
- The overall conversion rate between clicking a course accessibility indicator and attempting to fix a file through the Instructor Feedback was **41%, and 87% of the files altered resulted in an improved accessibility score**, with images being the most frequently fixed file type. The median number of files improved was **1,031 for large colleges, 298 for medium colleges, and 215 for small colleges**, though there was considerable range in the number of files improved within those categories.

Implications

Colleges that made the most progress addressing critical accessibility issues leveraged insights from the Institution Report to inform and guide their strategy, policy, and faculty support. While faculty can use the guidance in the Instructor Feedback to fix issues on their own, the wide range in files improved across colleges confirms the importance of adopting a plan with clear expectations and goals. Consistent with previous findings, Alternative Formats appear to have immediate uptake by students, indicating that flexible options for learning content has broad appeal to students.



Inclusive Learning Series

Research Insights from the Ally Community



Accessibility Trends and Ally Usage: Associate’s and Technical Colleges

Study Context

Associate’s and Technical Colleges are crucial access points to educational and career advancement for diverse learners, [serving a higher percentage](#) of adult learners, first generation college students, minority students, low-income students, and students with disclosed disabilities than most four-year institutions. Among the many challenges faced by these students throughout their journey in higher education, inaccessible, inflexible digital course content can be an imposing barrier to student achievement. Access to more usable content that works with assistive technologies, literacy tools, and mobile devices can help build student confidence and set them on a pathway for future success. In this paper, we analyze how administrators, faculty, and students at associate’s and technical colleges in the US are using the Blackboard Ally toolset in the Learning Management System (LMS)

Avg. Overall Accessibility File Score and Critical Issues

File Score and Issues	Small	Medium	Large
Overall Files Score	55.0%	55.4%	52.4%
Scanned PDFs (% of Total PDFs)	981 (16%)	2,236 (15%)	4,917 (15%)
Untagged PDFs (% of Total PDFs)	1,831 (31%)	5,501 (34%)	11,789 (37%)
Docs Missing Headings (% of Total Docs)	4,623 (28%)	11,584 (29%)	22,119 (27%)
Docs with Contrast Issues (% of Total Docs)	5,286 (32%)	12,518 (31%)	27,456 (33%)
Images Missing Description (% of Total Images)	6,646 (77%)	11,287 (76%)	32,656 (76%)

Data Set and Research Questions

The data set includes 150 Associate’s and Technical Colleges with Ally enabled in their LMS courses during the Fall 2019 term. Colleges were organized into three primary categories based on Full Time Enrollment (FTE): Small Colleges (299-4,999 FTE), Medium Colleges (5,000-9,999 FTE); Large Colleges (10,000-19,999 FTE). Several larger colleges (20,000+ FTE) were excluded from the accessibility issues table but included in the Large category in the overall analysis. Data includes accessibility scores mined from the Ally Institutional Report, engagement with the Alternative Formats, and engagement with the Instructor Feedback.

? *How can an understanding of accessibility barriers and critical issues with digital course content inform institutional strategy?*

? *How do students make use of course content available in different modalities and formats?*

? *How do instructors use feedback in their courses to address accessibility issues with their course materials?*

Barriers to Inclusion: Critical Issues

The table to the left includes the average accessibility score for Fall 2019 courses for a subset of 99 small, medium, and large colleges. The “Files Score” represents the average accessibility scores of files (PDFs, Word, PowerPoint, Images) uploaded to the LMS. The score approximates how closely the file meets WCAG 2.1 AA standards that can be checked using automated tools. For the five accessibility issues listed, the table includes the average number of files affected by the issue, and the percentage of files with the issue out of the total number of files that could be affected by the issue in Fall 2019 courses.

Comparing Critical Issues between 2017-18 and 2019-20: Four Colleges

College (size)	% Scanned PDFs 2017-18 % 2019-20 (change)	% Untagged PDFs % 19-20 (change)	% Missing Headings % 19-20 (change)	% Missing Descriptions % 19-20 (change)
College 1 (small)	11% 4% (-7)	25% 13% (-12)	22% 10% (-12)	78% 58% (-20)
College 2 (small)	4% .7% (-3.3)	26% 3% (-23)	14% 3% (-11)	70% 57% (-13)
College 3 (medium)	15% 15% (0)	38% 36% (-2)	36% 29% (-7)	94% 68% (-26)
College 4 (large)	12% 11% (-1)	35% 29% (-6)	32% 20% (-12)	86% 68% (-18)

The table to the left compares the percentage of files with accessibility issues uploaded to the LMS during the 2017-18 and 2019-20 academic years for four colleges. These four colleges made above-average progress on critical issues using strategies described in the “Implications” section below.



Implications for Using Data to Drive Decision-Making

During their early efforts to improve the accessibility of their courses, Michelle Perkins, Director of Academic Technology at Atlantic Cape Community College, faced a data challenge: **“Using the Microsoft Office checkers, there wasn’t enough analytics behind that in order to see what was really happening at the school.”** Because instructors are continuously updating their course content, campuses need real-time insights into course accessibility across the LMS. Colleges that have made the most progress during their time with Ally have leveraged data available in their Institutional Report to inform campus-wide accessibility campaigns, target faculty training and support, identify high-impact courses, and generate buy-in from academic leadership.

Alternative Formats Usage

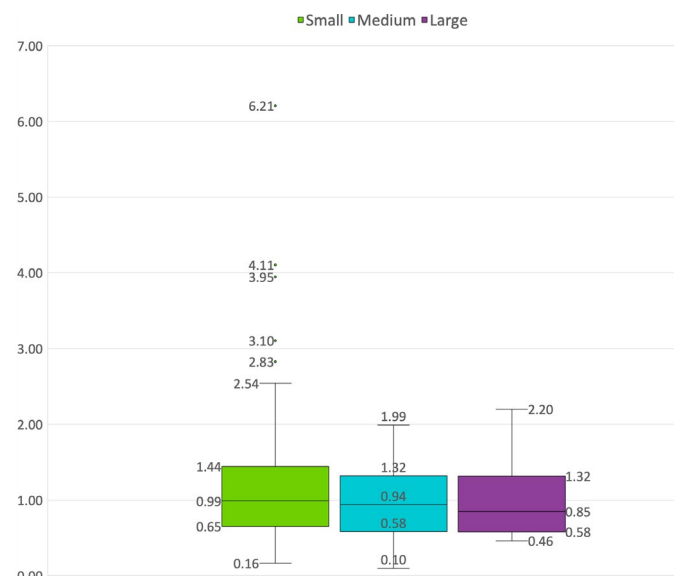
During Fall 2019, **28 of the 150 colleges exceeded 1.5 AF downloads per FTE and 10 exceeded 2 AF downloads per FTE.** Small colleges

had the highest median download rate of the three size categories, .14 downloads higher than the large colleges. While it is difficult to infer the significance of that disparity, it is worth noting that when comparing downloads of different sized institutions across all Carnegie categories, the largest disparity between any two categories was also .14. The median total AF downloads for each category were:

- Small Colleges:** 2,188 with a high of 15,115 total downloads
- Medium Colleges:** 6,310 for with a high of 13,269 total downloads
- Large Colleges:** 14,163 with a high of 56,591 total downloads

Weekly engagement with the Alternative Formats over the Fall 2019 term appears consistent with previous findings, where activity reflects broader LMS engagement with a peak at the start of term, slow decline during the term, and uptick at end of term. Comparing the start peak and end peak, the number of unique student downloaders decreased by 44%, compared to a 32% decrease among all Carnegie categories. During the term, the conversion rate between clicking the AF icon and downloading a format **increased from 65% to 76%**, though the number of downloads per student **increased only slightly from 2.72 to 2.80** (2.8 was also the end peak downloads for Doctoral Universities).

AF Downloads per FTE during Fall 2019 Term



“We have students with emotional disorders, and any level of frustration as far as being able to access something, they just quit. When they use Ally and see that it is easier, it’s more accessible, they don’t feel so defeated.”

– Sarah Bryan,
College of DuPage, Case Manager

Although PDFs were the most prevalent file type in Fall 2019 LMS courses across all Carnegie Categories, Word Docs were most common for Associate's Colleges, perhaps contributing to a slightly higher percentage of Tagged PDF downloads compared to other institution types. Consistent with previous findings, **Tagged PDF and HTML downloads represent around 93% of all AF downloads.** For a subset of colleges with a Fall term in their LMS:

- **11K OCRed PDFs** were downloaded from 175K Scanned PDFs
- **270K Tagged PDFs** were downloaded from 2M Docs and Presentations
- **122K HTML files** were downloaded from 3M Docs, Pres., and PDFs

Instructor Feedback Usage

Ally's Instructor Feedback (IF) and [Course Accessibility Report](#) provide actionable insights and guidance about the accessibility of course files in the LMS. The **average conversion rate between clicking the accessibility icon and altering a file through the IF during the Fall 2019 term was 41%**. The bar graphs to the right files altered and improved by file type during the Fall 19 term. Note: Files altered data is limited to actions within the IF and do not include files altered directly through the LMS.

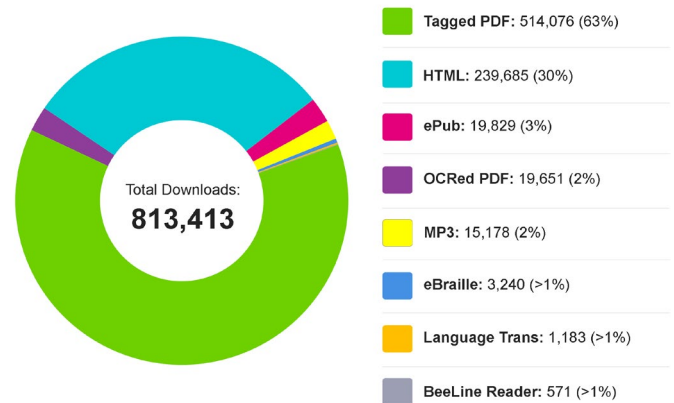
The median number of files altered per 2019 course was **.40 and 17/111 colleges exceeded 1 file altered per course** (compared to 4 AF downloads per course). The median number of files improved and range per size category were:

- Small: **215** (range of 13 to 4,227 files improved)
- Medium: **298** (range of 116 to 4,495 files improved)
- Large: **1,031** (range of 138 to 25,094 files improved)

Instructors can address accessibility issues within the course at the file level, or they can access their Course Accessibility Report (CAR; introduced August 10th, 2019) for an overview of issues. The CAR was launched **18,357 times across 89 colleges, and 21% of total files altered were through the CAR dashboard** (one large college represented 66% of those launches and 54% of those files altered).

Total Formats Downloaded by Type: Fall 2019

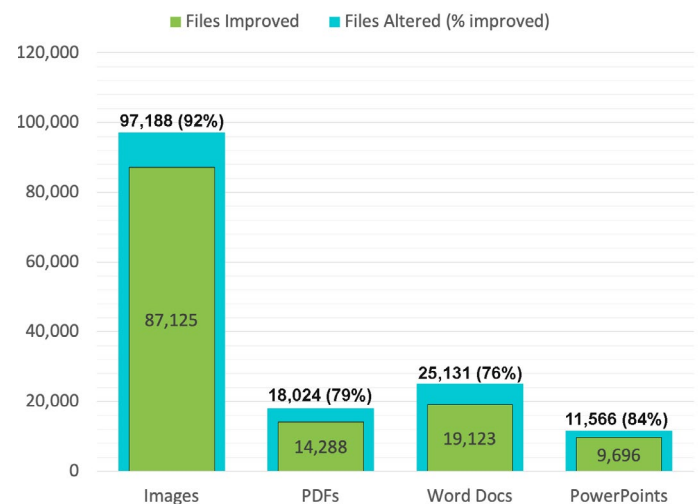
Note: BeeLine Reader and Language Translation were available in a limited number of courses



I have discovered that once you change your mindset to an all-inclusive learning environment, it is exponentially easier to create instructional materials than doing things the old way.

– Instructor, Technical College System of Georgia

Total Files Altered by File Type and Total Files Improved



Building a more Inclusive Campus Culture from the Ground-up

Although the integration of the Instructor Feedback within course workflows provides instructors with tools to develop accessible authoring skills on their own, the disparity across colleges in the number of files improved suggests institutional culture and accessibility policy influence its overall usage. By using the Institutional Report to proactively address areas of need and allowing students to take immediate advantage of the Alternative Formats, college leaders can begin the journey to a more inclusive campus while they develop a clearer understanding of policy and resource needs. With analytics to track progress, such a ground-up approach can allow faculty and student champions to emerge as voices of influence, and help generate collective buy-in around a strategy and policy that fits the culture and goals of the college.