An Exploration of Faculty and Students' Self-Reported Awareness and Use of Blackboard Ally for Online Course Accessibility

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Abstract

Online course accessibility is an essential aspect of inclusive education that can help ensure that all students, regardless of their abilities, can access and participate in digital learning environments. Blackboard Ally is a tool that provides accessibility guidance and alternative formats for course materials, helping to make online courses more inclusive. This study explored faculty and students' self-reported awareness and use of Blackboard Ally for online course accessibility. The researcher collected the data for this study through surveys administered to online faculty and students. This study used a descriptive quantitative method research design to analyze data from 12 online faculty members and 39 online students for the Spring 2023 semester.

The Blackboard Ally report data provided valuable insights into how the tool improves course accessibility. The data indicated that both faculty and students actively used the tool. Faculty members demonstrated interest and engagement with Ally, particularly by clicking on indicators to learn more about accessibility issues in their courses. This indicated that faculty were aware of the tool's presence and were willing to explore its features. However, the data also revealed that not all faculty members immediately took action to fix accessibility issues once they were identified. This suggested that while there was interest and awareness, there may be barriers or challenges preventing some faculty from addressing these issues promptly. On the student side, the data showed there was limited awareness or need for downloading alternative formats of course files. This finding highlighted the importance of further promoting awareness among students and providing them with training on the benefits of alternative formats for their learning experiences.

Overall, the Blackboard Ally report data offered a comprehensive view of how the tool was utilized, indicating areas where further support and training could enhance its effectiveness in improving course accessibility.

Dedication

I dedicate this dissertation to four beloved people who have meant and continue to mean so much to me. Although they are no longer of this world, their memories regulate my life, first to my parents and parents-in-law whose love for me knew no bounds and who taught me the value of hard work. Second, I dedicate this dissertation to my husband and children, who have been a source of strength, support, patience, and motivation for me throughout this entire experience. I am truly blessed to have all of you in my life.

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This dissertation is the culmination of my Ed.D. IDPT journey, which was just like climbing a high peak step by step, accompanied by encouragement, hardship, and trust. When I found myself at the top experiencing the feeling of fulfillment, I realized though only my name appears on the cover of this dissertation, a great many people, including my family members, well-wishers, friends, colleagues, and various institutions, have contributed to accomplishing this colossal task. At this moment of accomplishment, I am greatly indebted to my mentor Dr. Clint McDuffie; research guides Dr. Regena Aye, Dr. Anna Catterson, and Dr. Kyunghwa Cho; Blackboard senior product management director Dan Loury; and senior accessibility strategist Krista Wright. I am grateful for my friend Julie Kratt, who accepted me as an Ed.D. student and offered me mentorship, love, and care. This work was only possible with daily guidance, involvement, support, and encouragement from the start of the project until the end. Under their guidance, I successfully overcame many difficulties and learned a lot. The zeal for perfection, passion, unflinching courage, and conviction have always inspired me to do more. I sincerely thank you from the bottom of my heart and will be indebted throughout my lifetime. I earnestly thank Dr. Scott Layton, Dr. Michelle Schoon, and Shelby Huddleston for supporting and sponsoring this project. I am grateful for the valuable advice, constructive criticism, positive appreciation, and counsel throughout the investigations, which led to the successful completion of the research work. Research is only possible with infrastructure and requisite materials and resources. I want to thank the online department at the college in the Midwestern United States where the study was conducted that provided me with the requisite institutional Blackboard Ally report. I am grateful for

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Chapter 1

Introduction

In education, accessibility refers to the ability of students to access the learning materials in the respective learning management system (Carl, Zabala & Karger, 2018). As the education system and learning environments in the United States continue to evolve, it has become increasingly essential for learning materials to be electronically accessible for many students. According to Cooper in 2003, several well-established design principles exist for promoting the accessibility of electronic content using computer software. These design principles can guide instructors to ensure the content or learning materials created for their courses meet the diverse accessibility needs of an inclusive learning environment. This approach to instructional design that promotes accessibility is referred to as the Universal Design for Learning (UDL) model (Cooper, 2003).

UDL emphasizes the need for adaptable content, assignments, and activities (Izzo et al., 2008; Rose & Meyer, 2006). The inherent flexibility of UDL reduces barriers in the curriculum and provides multiple methods to access the content (e.g., video, websites, text). As a result, UDL can help substantially reduce the need for instructors to provide adaptations or modifications for students after the initial instruction. Providing multiple methods to access the content can also help instructors maximize the equality of instruction for students by addressing diverse learning needs (Hitchcock et al., 2002). Ultimately, UDL is better for student learning and instructor time management. It frees them from making ad hoc accommodations or modifications, thus generating increased

time for observing the conditions and meaningfully interacting with their students (CAST, 2018).

The Center for Applied Special Technology (CAST), a non-profit organization, advocates for Universal Design for Learning (UDL) as a practical framework for developing dynamic goals, methodologies, resources, and evaluation procedures that address the diverse needs of learners (CAST, 2019). CAST's focus is motivated by the growing student population in the United States that requires alternative formats for learning materials. Moreover, the United States Department of Education has recognized over seven million students with learning disabilities (National Center for Education Statistics, 2020). Alternative formats assist students who face barriers or need help accessing physical content. Technology can aid universities in providing access to content for all learners. Emerging technologies such as Blackboard Ally seamlessly integrate with learning management systems and make digital course content accessible to students.

As teaching and learning rooted in a learning management system have continued to grow, the demand for and necessity of students to access a variety of formats of course materials to meet their learning needs has increased. With the increase in distance learning and the diversity of the population enrolled in distance education, regulatory agencies have continued to revise requirements for online course accessibility at institutions of higher learning. In part, the increased use of learning management systems coincides with the increase of students participating in distance learning. The National Center for Education Statistics (NCES) reported that out of approximately 19.9 million individuals enrolled at American universities, almost 6.9 million, or close to 35%, of

these post-secondary students were enrolled in some form of distance education during the fall semester of 2019 (NCES, 2019). This has led to the development and use of technological tools to meet regulatory demands within higher education, such as Blackboard Ally.

Background

Despite being legally entitled to accommodations, many students with disabilities in higher education choose not to disclose their disabilities. Various studies have found that students with disabilities would rather pass as non-disabled than disclose their condition, even if it means facing needless academic disadvantages. Their reluctance is attributed to identity issues, fear of adverse social reactions from peers and faculty, inadequate knowledge of services or procedures for attaining accommodations, and negative experiences with faculty. Students fear that disclosing their disability status may result in lowered expectations from faculty and being judged or looked down upon. The thought of having to prove the legitimacy of their disability can also cause anxiety, making the accommodations process an additional barrier to student success. Therefore, it is crucial to encourage students with disabilities to disclose their disabilities and provide them with universally designed accommodations that do not require disclosure (Barnard-Brak et al., 2010; Hong, 2015; Thompson-Ebanks & Jarman, 2018).

The case prompted a lawsuit against the University of Cincinnati by the Office of Civil Rights (OCR), a division within the Department of Justice (DOJ). In its 2014 investigation, the Office for Civil Rights (OCR) reviewed documentation provided by the university, including its policies related to creating websites (Case No. 15-13-6001). In 2014, the University of Cincinnati had no policies or procedures for creating, modifying,

and editing content within course management systems to ensure all materials were accessible to persons with disabilities. Faculty were not expected to know how to update content to be accessible to everyone but were encouraged to upload files in .docx format, not PDF format. The university indicated that distance learning faculty and staff would receive training on web accessibility; however, the university did not provide a schedule or copies of the materials to be used. The OCR could not view pages that faculty and students used for coursework, course management, or online testing. The university indicated that its disability services office worked with professors if they were concerned about a student with a disability (U.S. Department of Education, 2014).

Before completing the OCR's investigation, the University of Cincinnati expressed interest in resolving these violations and other possible compliance concerns without further research. On December 8, 2014, the university agreed to implement a resolution agreement to resolve the compliance review. The resolution agreement stated that the University of Cincinnati was committed to developing and publishing an appropriate notice of nondiscrimination, would designate one or more persons to coordinate its efforts to comply with Section 504 and Title II, and agreed to identify that person(s) in its notice of the University of Cincinnati agreed to these in 2014. The university would review its website and e-Learning platform(s) to identify and alleviate any accessibility problems and implement mechanisms to ensure the sites remain accessible. The university also provided information on their web accessibility policy and an implementation and remediation plan. This policy of no delays stemmed from a court case ruling in 2016 (DOJ, 2016).

Emily Schlenker, a Wichita State University (WSU) student, filed a disability discrimination complaint against WSU with the United States Department of Education's Office for Civil Rights on March 14, 2016. The complaint alleged that WSU discriminated against her as a blind student, violating Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act. Schlenker contended that electronic technology made the course content and other information inaccessible. The inaccessible materials included assignments and tests. WSU failed to promptly provide alternative accessible formats of printed material, class assignments, and exams that allowed equally effective communication with blind students (Resolution Agreement, n.d.). Settlements in the Schlenker case set the precedent that the DOJ interpreted any unnecessary delays in accessing material as discrimination. The result of the Schlenker vs. WSU lawsuit narrowed the window of time for course material remediation and increased expectations, stipulating that all accommodations are in place before the start of a course (DOJ, 2016).

The settlement with WSU compelled student services administrators to meet with instructors no later than two weeks before classes began and identify inaccessible course materials (Resolution Agreement, n.d.). Materials at WSU had to be made accessible each week of the semester to the extent the information is outlined in the course syllabus. The settlement also required WSU to set up a website where students could inform the university of inaccessible course material and directed student services to provide accessible materials within three business days unless specific factors required additional time (Resolution Agreement, n.d.).

On January 18, 2017, the United States government published the revised Information and Communication Technology (ICT) standards and guidelines. The revised ICT standards and guidelines are referred to as Section 508 Refresh or Refresh. The updated Section 508 standards apply to information and communication technology developed, used, procured, or maintained by federal and state agencies that accept federal funding, including public universities. The Refresh also updated the rules and standards governing accessible digital content under the Americans with Disabilities Act (ADA, 1990). The new standards specify that all types of public-facing content and specific categories of non-public-facing content created and used must be accessible to all individuals, including those with disabilities.

These changes and updates directly impacted how instructors and course designers interact with students and content. Before the Refresh, instructors received notices of accommodations for enrollment of students with disabilities, possibly even after a course had begun. Instructors then remediated course content with assistance from a student disability center. Under the Refresh, the DOJ considers any delay in providing accessible digital content to students with disabilities as discrimination. Therefore, instructors must take the initiative to eliminate or reduce any delays. Given these legal rulings, changes in the DOJ's views, and continued legal pressure by the OCR, it was vital for universities and colleges to be proactive and ensure from the onset of class that content was accessible to all learners.

Statement of the Problem

Faculty's decision to participate in accessibility-related initiatives may depend on many motivators and barriers (Khalil, 2013; Maguire, 2005). Professional development

may address those issues directly related to awareness, attitudes, technology training, and teaching effectiveness (Gladhart, 2009; Ortiz et al., 2009; Walters et al., 2017; Wynants & Dennis, 2017). However, other factors may include compensation, prestige, promotion and tenure, interest in innovation and technology, time commitment, and administrative and technical support, among others (Maguire, 2005; Walters et al., 2017) – and these may vary depending on organizational structure and culture (Bergquist & Pawlak, 2008).

When student needs are combined with the lack of guidance for instructors to improve digital content or the usability and readability of learning materials best suited for students' learning preferences, there is an opportunity to increase awareness of Blackboard Ally's benefits. Perhaps the most significant barrier to learning online is inaccessible content (Coombs, 2010). Inaccessible content can include multimedia that lacks accurate captions and transcripts, learning management systems or documents that are not designed for usability and compatibility with assistive technologies (e.g., screen readers), visual representations that lack alternative formats, content with poor color contrast, and systems or materials that prevent personalization. Issues such as these can significantly halt a disabled student's progress (Bartz, 2020; Fichten et al., 2009).

A college in the Midwestern United States sought to heighten awareness and encourage faculty members to consider how their online programs and courses are consistent with accessible design, thereby providing an opportunity for continuous improvement in course design and implementation. When considering the critical role that practitioner-initiated research can play in bringing about accessibility in online courses, Seale (2016) argued that instructors know that they should make distance learning accessible to all students. The existing literature tends to argue why online

learning should be made accessible. Yet, it has failed to provide detailed descriptions of how instructors might interpret and implement guidelines, accessibility legislation, standards, and tools to develop an accessible online practice (Seale, 2016).

Purpose of the Study

This study aimed to investigate the awareness and use of Blackboard Ally for online course accessibility by faculty and students in a college in the Midwestern United States. It sought to evaluate the effectiveness of Blackboard Ally, which was implemented in 2018 at the college in the Midwestern United States where the study was conducted. The study also aimed to identify which demographic groups among online instructors and students are aware of and utilizing Blackboard Ally. To achieve these objectives, quantitative and descriptive analysis methods were employed to summarize and describe the perceived importance of accessibility and self-reported awareness of Blackboard Ally.

Data collection for the study relied on self-reported surveys and usage of Blackboard Ally from online instructors and students. Demographic subgroups disaggregated the collected data to identify any differential trends within and between online instructors and online students at the college in the Midwestern United States where the study was conducted. Additionally, the study explored students' knowledge of accessibility in online courses and assessed the ability of college programs to deliver online courses in a manner accessible to all individuals.

Significance of the Study

The significance of this study lies in several aspects. Firstly, the study addresses an issue in higher education -- the importance of accessibility for student learning in

online courses. By examining the awareness and confidence in using Blackboard Ally, this study provides valuable insights into how online instructors and students perceived accessibility and whether Blackboard Ally effectively enhanced accessibility for all learners.

Secondly, the study extended the current knowledge of accessibility in online learning and contributed to creating new knowledge by exploring differential trends within and between disaggregated demographic subgroups of online instructors and students. By analyzing the data collected from the online surveys and the Blackboard Ally Usage Report, the study revealed potential disparities in accessibility awareness and usage across different demographic groups, which can inform policies and practices to ensure equitable access to online learning.

Lastly, the study could change or improve policy by providing evidence-based recommendations for enhancing accessibility in online courses. Based on the findings, the college in the Midwestern United States, where the study was conducted, can develop targeted interventions and support programs to improve awareness and usage of Blackboard Ally and promote accessibility for all learners.

Delimitations

Delimitations are boundaries set by the researcher to narrow the scope of the study (Lunenburg & Irby, 2008). The current study was delimited to one two-year public higher education institution in the Midwestern United States. Data collection was delimited to the Blackboard Ally report data from the college in the Midwestern United States where the study was conducted, and the perception of online instructors and online students as gathered by the appropriate Blackboard Ally feedback surveys administered

to each target population. Both full-time and part-time faculty members participating in the study taught online courses during the 2023 Spring semester using the Blackboard Learning Management System. Only students enrolled in online classes during the 2023 Spring semester were surveyed, and students completed only one survey for all online course experiences.

Assumptions

Assumptions are postulates, premises, and propositions accepted as operational for research purposes (Lunenburg & Irby, 2008, p. 135). The current study assumed that all participants understood the survey items and associated response options and that participants responded to those survey questions honestly and openly. It was also assumed that the enrollment records and institutional email addresses were accurate, as the appropriate survey links were distributed to the intended populations via institutional email. The research assumptions for the current study were that the Blackboard Ally report data from the college in the Midwestern United States, where the study was conducted, was accurate and provided valid data to quantify the importance of accessibility, awareness of Blackboard Ally, and use of the various Blackboard Ally functions for online students and online instructors.

Research Questions

Roberts (2004) stated research questions guide the study and usually provide the structure for presenting the research results, and Creswell (2009) stated research questions "shape and specifically focus on the purpose of the study" (p. 132). Four research questions guided the current study. Descriptive questions quantified and summarized the overall and disaggregated perceived levels of faculty and students'

awareness, the importance of accessibility, and levels of use of Blackboard Ally. Descriptive questions examined differential trends for demographic subgroups and informally compared perceptions with the relevant Blackboard Ally report data.

RQ1: To what extent do the Blackboard Ally Feedback Survey for Faculty responses and the Blackboard Ally Feedback Survey for Students responses indicate the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States?

RQ2: To what extent are there differential trends within disaggregated demographic subgroups of the Blackboard Ally Feedback Survey for Faculty and the Blackboard Ally Feedback Survey for Students regarding the perceived importance of accessibility at a college in the Midwestern United States?

RQ3: To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the Blackboard Ally report data for online courses indicate an awareness of Blackboard Ally at a college in the Midwestern United States?

RQ4: To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the Blackboard Ally report data indicate the use of Blackboard Ally at a college in the Midwestern United States?

Definition of Terms

This section provides a glossary of terms and alphabetically organizes the operational definitions used throughout the current study to aid comprehension. Some of

the terms used in this study may have different meanings in other contexts. The following terms are defined to ensure that the terminology used in this study is clear and consistent.

Differentiated instruction

Differentiated instruction refers to instructors' curricular instructional strategies to address learners' diverse needs (Pourdana & Shahpouri Rad, 2017). The different approaches used to reach out to individual learners who exhibit challenges that may hinder their full inclusion into the online learning environment make up differentiated instructions.

Diversity

Diversity is the variance in learner participation, engagement, and retention capacity that make up diverse learning environments (Miller, Dyce, & Owusu-Ansah, 2016).

Accessibility Template

The accessibility template is the best way to begin making web content and applications accessible to users with disabilities (Deque, 2018).

Accessible learning

Accessible learning is an approach that provides academic accommodations to all students, ensuring that barriers to proper access to education are eliminated (Seale, 2016).

***Learning Tools Interoperability (LTI*)**

The Learning Tools Interoperability standardizes protocols between a Learning Management System (LMS) and external tools (Severance, 2008).

Learning Management System (LMS)

A learning management system is a software-based or Software as a Service (SaaS) platform that facilitates managing, delivering, and measuring an organization's corporate e-Learning program (Mardinger, 2021).

Quality Matters

Quality Matters is an accessibility guideline for online courses (Moorefield-Lang, Copeland, & Haynes, 2016).

Organization of the Study

This dissertation is organized into five chapters. Chapter 1 introduced the background for the current study and the problem statement while explaining the purpose and significance of the study. Chapter 1 also included delimitations, assumptions, research questions, and definitions of terms to clarify terminology used throughout the dissertation. Chapter 2 presents a review of the literature surrounding accessibility, online course design, and Blackboard Ally, while Chapter 3 includes a description of the research methodology, participant selection, instrumentation, data collection, and data analysis process. The results of the data analysis associated with four research questions are provided in Chapter 4. Chapter 5 presents a summary of the study, a discussion of the findings, the implications of those findings, and recommendations for action and future research.

Chapter 2

Review of the Literature

Digital accessibility has made learning and teaching inclusive for all students. Digital accessibility allows productivity and inclusion through participation in online education (Dobransky & Hargittai, 2006; Kent, 2015; Lazar et al., 2015). The Higher Education Academy reported inclusive learning and teaching recognizes students' entitlement to a learning experience that respects diversity, removes barriers, enables participation, and considers various learning needs (Dobransky et al., 2015). This inclusive approach was referred to as Universal Design for Learning (UDL) and has been incorporated when institutions recognize that courses and teaching methods are designed and planned products.

This literature review provides context and background for this research study by focusing on seven main strands.

- Online Learning
- Disabilities and Accessibility
- Legislation
- Need for UDL
- Quality Assurance
- Blackboard Ally
- Support & Training

Online Learning

According to Paulsen and McCormick (2020), online learning is the fastest-growing sector in higher education, with all types of institutions adopting it. The

flexibility of learning anytime and anywhere appealed to higher education institutions. However, the growth of online learning and technological advancements have raised concerns about accessibility to content and curriculum for college students, bringing accessibility issues to the forefront and existing inequities among college students and faculty may have been exacerbated (Bronzino et al., 2021; Correia, 2020). These inequities pose challenges in designing inclusive learning environments for all students. Some students lack technological proficiency, and students with disabilities requiring accommodations may face difficulties accessing learning materials and assessments. Faculty members may also need more awareness of the diverse needs of students in a virtual learning environment, and even if they are aware, they may need training and support to effectively address those needs (Behling, 2017; Travers, 2016).

To address the array of accessibility issues and create a more inclusive learning experience for college students, the implementation of Universal Design for Learning (UDL) in online course design is suggested. Existing literature explores the design decisions of instructional designers trained in learning theories, instructional design theories, design models, frameworks, and strategies, as well as inclusive instructional design (Grier-Reed & Williams-Wengerd, 2018; Gropper, 2015; Love et al., 2019; Merrill, 2007; Moriña & Carballo, 2017; Ning et al., 2019; Travers, 2016). However, there is limited knowledge about the design decisions made by faculty members who are increasingly developing online courses and their utilization of best practice standards such as Quality Matters (Teclehaimanot & Marshall, 2020).

Disabilities and Accessibility

On average, 11% of all college students are living with a disability, including mental issues, learning disabilities, physical/medical disabilities, autism spectrum disorders, and sensory disabilities, and national studies show significant disparities for this demographic in terms of academic success and degree attainment (Faggella-Luby et al., 2014). The inability to navigate electronic documents and websites or discern information from images, video, and audio are among commonly listed accessibility complaints (Mckenzie, 2017; NAD, 2015; University of Washington, 2018).

Roberts et al. (2011) found that many students with disabilities believed their disability did or could impact their ability to succeed in an online class regardless of whether they had ever participated in one. Students in several studies indicated that accessibility barriers negatively impacted their ability to understand instruction or fully participate in the learning experience (Black et al., 2015; Fuller et al., 2004; Kumar & Owston, 2016; Roberts et al., 2011).

Different perspectives exist among students regarding their accommodation and the influence of their disability on their academic performance. Researchers such as Catalano (2014), Erickson and Larwin (2016), McGregor et al. (2016), Muilenburg and Berge (2005), Roberts et al. (2011), and Slater et al. (2015) have explored this topic. For instance, Roberts et al. (2011) discovered that numerous students with disabilities perceived their disability as a potential hindrance to their success in online courses, regardless of their prior participation in such classes. In another study, Muilenburg and Berge (2005) reported that 6% of all students believed their learning was adversely affected by biases stemming from their disability or other personal characteristics.

Surveys have revealed that universities lack adequate policies and procedures to address the accessibility of their websites and online courses. This deficiency has made these institutions susceptible to complaints and lawsuits related to accessibility and the Americans with Disabilities Act (ADA). According to Green (2010a, 2010b), universities are still grappling with ADA and accessibility concerns, with 40% of surveyed institutions failing to implement formal approaches to address these needs. The persistence of these issues is evident, as 70% of institutions acknowledge that their online courses are not yet fully accessible and less than half have established systems to handle accessibility problems (OLC & WCET, 2019). Green (2019) also discovered that most institutions consider these issues moderately important.

Legislation

According to the National Center for Education Statistics (2023). In fall 2021, approximately 61 percent of all undergraduate students, totaling 9.4 million individuals, were enrolled in at least one distance education course. Of these, 28 percent (4.4 million students) exclusively took distance education courses. This represented a decrease from the peak in the fall of 2020 but remained higher than the pre-pandemic levels in the fall of 2019. Most exclusively online students (74 percent) attended institutions within their state. For postbaccalaureate students in fall 2021, approximately 56 percent participated in at least one distance education course, with 40 percent taking classes exclusively online.

In the United States, the legislation mandates accommodations for websites, digital content, and physical environments (Sapega, 2020). The Web Content Accessibility Guidelines (WCAG), introduced in 1999, set the expectation that online

content should be accessible (Sapega, 2020). While postsecondary institutions are required to provide accommodations following a medical model of disability, emerging case law and updated legal requirements expect institutions to offer accessible content and inclusive learning experiences without the need for accommodation requests (McAfee & Taft, 2019; Online Learning Consortium & WICHE Cooperative for Educational Telecommunications [OLC & WCET], 2019).

The increase in lawsuits and complaints across the United States has made accessibility a significant concern for postsecondary institutions (Francovich, 2017; Taylor, 2020; UsableNet, 2019). Despite the initial slowdown caused by the pandemic, there was a notable rise in ADA and accessibility lawsuits against universities in 2020 compared to previous years (Vu et al., 2020; Weissman, 2020). Before the pandemic, institutions reported that 69% of their online courses did not comply with accessibility legislation (OLC & WCET, 2019). Anecdotal reports suggest that ensuring course accessibility was not a priority during the shift to online instruction (M. Smith et al., 2020). Consequently, higher education institutions face unprecedented pressure to provide accommodations and accessible content. This situation presented a conflict in higher education, as traditional disability accommodation processes are rooted in the medical model of disability, while the concept of universally designed and accessible learning environments aligns with the social model of disability (Bogart & Dunn, 2019; Toutain, 2019). The main challenge lies in effectively addressing the needs of students with disabilities in online higher education, with a lack of ownership over accessibility efforts contributing to disorganized approaches (Huss & Eastep, 2016).

As a result, there is still a lack of collaborative institutional infrastructure dedicated to addressing accessibility (K. C. Green, 2010b, 2019; Linder et al., 2015; OLC & WCET, 2019). Existing literature often treats accessibility as a compliance requirement, lacking a comprehensive approach to creating accessible online learning experiences (Phipps & Kelly, 2006). While some surveys have explored staff members' responsibilities, knowledge, and practices related to accessibility, limited research has examined the associations between these factors (Frey & King, 2011; K. C. Green, 2010a, 2010b, 2019; Huss & Eastep, 2016; OLC & WCET, 2019; WebAIM, 2014).

Need for UDL

Despite the abundance of interest and literature on Universal Design for Learning (UDL), there has been a surprising lack of empirical research conducted in this field. A study by Nieminen and Pesonen (2020) explored the experiences of disabled students in an extensive online mathematics course designed with UDL. The disabled students benefited from the precise organization of content, self-assessments to monitor their progress, detailed rubrics, and plain language throughout the course. However, the study also revealed the heterogeneity of disabled students' experiences, with some struggling with online components and others experiencing difficulty with digital submissions.

In addition to student perceptions, research has also focused on faculty knowledge and perceptions of UDL challenges and opportunities (Gladhart, 2009; Hartsoe & Barclay, 2017; Izzo et al., 2008; Oyarzun et al., 2021). Gladhart (2009) found that although many online faculty had disabled students in their courses, only a small percentage implemented UDL principles. Oyarzun et al. (2021) identified barriers to implementing UDL online learning, such as competing priorities, technological

challenges, lack of leadership support, and time constraints. However, faculty were motivated to adopt UDL when they recognized its potential to enhance student engagement and align with best practices in teaching and learning. Faculty also valued professional development focused on UDL and its application to online environments.

Some studies have explored the impact of UDL-related faculty development training (Davies et al., 2012; Levicky-Townley et al., 2021). Levicky-Townley et al. (2021) found that incorporating UDL into online learning activities supported students' attention, reduced distractions, and increased content relevance. Other studies have focused on developing courses designed with UDL principles (Evmenova, 2021; Rao, 2021). Evmenova (2021) highlighted the systematic design process used to create an online course on UDL for in-service instructors, which resulted in positive participant feedback. Rao (2021) discussed the application of UDL to online learning experiences, emphasizing the importance of reporting UDL use and its impact on student outcomes.

In a study conducted by Scott et al. (2015), the researchers investigated whether three online courses in a graduate-level program were in line with UDL principles and whether the instructors enrolled in these courses felt that the course design contributed to their improvement in preparation (p. 104). The results demonstrated a consensus among the participants regarding aligning the online graduate courses with UDL principles. Each UDL guideline incorporated into the course received high ratings from the participants (Scott et al., 2015, p. 108). The study also suggested that incorporating UDL principles into online college coursework holds promise, as participants strongly agreed that it positively impacts their learning and preparation (p. 108).

The study conducted by Boothe et al. (2020) focused on the implementation of Universal Design for Learning (UDL) principles in an undergraduate special education program. The researchers specifically examined the "how" of learning, emphasizing the principle of multiple means of action and expression. They suggested that university faculty can enhance their courses by adjusting how students demonstrate their understanding, thus catering to diverse needs. Based on the study's findings, Boothe et al. (2020) observed that incorporating UDL principles, such as providing choices, enabled instructors to accommodate various learning preferences. Furthermore, offering alternatives to education students helped them recognize their ability to provide more options in their courses. The authors also noted that participants were willing to adopt UDL principles in their teaching practices, demonstrating increased flexibility, openness to new ideas, and greater engagement with the content and learning activities. Boothe et al. (2020) concluded that participants successfully achieved their project goals and could create instructional approaches that facilitate multiple means of engagement and expression.

The findings of these studies indicated that faculty-designers did not have the knowledge and time to develop and implement UDL in online courses. This study intended to highlight the common pitfalls faculty-designers faced when developing online courses. The study is consistent with the literature on this topic, which indicated that faculty do not have the experience to apply UDL to courses but would benefit from formal training (Bettencourt, Kimball, & Wells, 2018).

Quality Assurance

Numerous rubrics for evaluating the quality of online learning now include guidelines for ensuring accessibility. These rubrics, such as Blackboard (2012) and Quality Matters (2023), provide checklists and criteria for assessing accessibility. While this paper does not conduct an extensive review of these rubrics, it briefly discussed the Quality Matters Review Process to demonstrate how accessibility is integrated into quality assurance practices in higher education institutions.

QM is a systematic peer review process that focused on enhancing the quality of courses. Initially designed for online programs, QM has gained national recognition and is now used as a toolkit for various course delivery methods, including online, hybrid, and traditional formats (Moorefield-Lang, Copeland & Haynes, 2016; QM, 2016). QM consisted of three components: the QM Rubric, the peer review process, and professional development. It is a collaborative and faculty-driven approach supported by research and national standards, emphasizing continuous improvement.

In QM 2023 Standard 8 (Accessibility & Usability), notable features encompass refined strategies for ease of use, a dual emphasis on presentation and content readability, and a dedicated commitment to text and image accessibility. Furthermore, the standard highlights the importance of ensuring accessibility for video and audio content, promoting user-friendly multimedia elements, and acknowledges a reduced point value for Vendor Product Accessibility Templates (VPATs). These collective standards are designed to elevate the overall accessibility and user-friendliness of online courses, contributing to a more inclusive learning environment.

Additionally, participants in the previous research emphasized using design quality assurance programs that incorporate accessibility and inclusivity standards (e.g., Quality Matters) for further training in this area (Lowenthal et al., 2022). Participants in this study also mentioned using accessibility checker tools such as Blackboard Ally to provide data and facilitate discussions with faculty.

Blackboard Ally

Blackboard Ally can help any Blackboard client build a more inclusive environment and student experience by allowing students to take control of their course content through usability, accessibility, and quality features (Blackboard Inc., 2020). While no literature discusses the research implications for utilizing a Learning Management System (LMS) accessibility checker, it does help that Blackboard Ally is LMS agnostic, which means it works well with other LMSs (Blackboard, Inc., 2020).

Blackboard Ally is designed to aid educators in creating inclusive learning materials within an LMS, like Blackboard Learn. It followed the Web Content Accessibility Guidelines (WCAG) 2.1 Standards (Blackboard, 2018). According to Blackboard, Inc. (2018), Blackboard Ally enabled institutions to establish a more inclusive learning environment and enhance the student experience by emphasizing usability, accessibility, and quality (n.p.). To assist faculty in creating accessible content, Blackboard Ally offered indicators next to file attachments, images, and other media that indicate the level of accessibility for end users. By clicking on an indicator, faculty members accessed detailed information about accessibility concerns. For instance, Blackboard Ally identified if a document required a clear heading structure or if images lacked alt attributes (textual descriptions that convey the content of images to individuals

with visual impairments or users accessing content via a text-only web browser). Furthermore, Blackboard Ally provided students enrolled in a course with access to alternative file formats, and it can also translate documents for students who speak different languages.

The findings of the research study revealed that faculty members who received training in understanding accessible course design utilized that knowledge effectively to enhance accessibility in their courses. Blackboard Ally and other tools played a significant role in complementing professional development by offering feedback to instructors on how they can improve their course materials and provide students with alternative formats that facilitate their learning. By employing Blackboard Ally, the potential for Universal Design for Learning (UDL) in online course design can be realized, as it assists in adapting the learning experience to cater to the diverse needs of students. Scott et al. (2015) emphasized the significance of UDL as a framework for online coursework and its positive impact on the quality of the learning experience for students.

Moreover, it can benefit instructor preparation programs in designing and delivering high-quality instructional experiences and improve online instructor preparation. Institutions should prioritize accessibility and inclusion at the institutional level, as highlighted by Mancilla and Frey (2021), who emphasized the crucial role of institutional support in promoting course accessibility. Establishing a culture of inclusivity is essential, ensuring that all efforts in online course development prioritize the digital accessibility of instructional materials. Therefore, institutions should invest in resources to facilitate the creation of accessible online course materials and provide

professional development and support to instructors, instructional designers, and others involved in the content creation process, thereby encouraging the development of accessible online courses.

Support and Training

Faculty who design, develop, and teach their courses are uncertain of how to plan and change courses for specific learning disabilities and feel apprehensive about developing courses to accommodate students with disabilities (Becker & Palladino, 2016; Hinshaw & Gumus, 2013; Kearns et al., 2013; Lewandowski et al., 2014; Quinlan et al., 2012). Evmenova (2018) mentioned the need for more professional development for faculty designers, including working with an instructional designer for assistance with developing accessible courses. One of the recommendations from Wynants and Dennis (2018) was that colleges need to develop a professional development plan for faculty who work with UDL.

McGahan (2018) explained the need for course revision using an instructional design process and incorporating accessibility principles into courses. Consistent with other literature, Staats and Lester (2018) demonstrated that faculty experience a level of discomfort with the workload associated with developing courses that are accessible. Making accessibility easier for faulty designers and developing relationships with other departments are essential for creating an inclusive university culture (Tinsley-Kim, 2018).

Strategies from the literature included identifying specific areas for improvement and setting measurable goals in collaboration with instructional designers and support staff, considering faculty's limited time and experience in this area (Seale et al., 2020;

Singleton et al., 2019; Tobin & Behling, 2018). Similar to previous research by Linder et al. (2015), participants in this study emphasized the importance of making the work manageable by suggesting faculty take small, proactive steps toward more inclusive course design.

Faculty training is essential, as it increased the implementation of accessible and inclusive design strategies in courses (Dallas et al., 2014; Izzo et al., 2008; Lombardi et al., 2011; Schelly et al., 2011; Wynants & Dennis, 2017). However, before the COVID-19 pandemic in 2020, only 17% of institutions provided faculty development related to content accessibility (Garrett et al., 2021). Instructional design units can be crucial in bridging this gap by offering focused and effective faculty development initiatives (Xie et al., 2021a). Nevertheless, it should be noted that the knowledge and skills of instructional designers can vary (Lowenthal & Lomellini, 2022; Singleton et al., 2019). Participants in this study heavily relied on an "accessibility guru" in many cases to lead the team and faculty in advancing initiatives in this area. This aligns with previous research demonstrating that instructional designers often assumed this responsibility informally, regardless of their level of training (Linder et al., 2015).

Park, Roberts, and Stodden (2012) found faculty were more willing to incorporate low-effort strategies such as providing lecture notes and providing materials in digital formats. However, if faculty reported low technical knowledge, the time required to create accessible materials may be perceived as overly burdensome (Kumar & Wideman, 2014; Moriarty, 2007; Singleton et al., 2019). Faculty who reported discomfort with technology were also less likely to use varied teaching strategies, technology in the classroom, or multimedia instruction (Moriarty, 2007).

Summary

Colleges have been developing and implementing policies for accessible digital content. However, there are still substantial disconnects between these policies and faculty members' awareness of students' needs and accessibility requirements. A summary of some of the barriers mentioned above would go here (need of instructional designers, faculty not having knowledge or time in areas, instructional designers not being experts, etc.. .) This study focuses on students' and faculty's awareness of and use of Blackboard Ally at the college in the Midwestern United States where the study was conducted. Chapter 3 explains the methodology used in the current study, including the research design, selection of participants, measurement, data collection procedures, data analysis, and limitations.

Chapter 3

Methods

Ensuring that online course content is accessible to all students from the course's start date is imperative. However, the challenge lies in effectively training instructors to create accessible course materials. Online courses could have suffered from diminished instructional quality, impacting the learning experience and posing a legal vulnerability. This study aimed to address these challenges and enhance the accessibility of online courses by addressing the problem through a quantitative and descriptive methodology to summarize the perceived importance of accessibility and self-reported awareness and use of Blackboard Ally for online faculty and students, then compared those perceptions from surveys to corresponding Blackboard Ally report data. The responses for both surveys were disaggregated by demographic subgroups to explore any differential trends within online instructors and online students at a college in the Midwestern United States.

Research Design

The research design for the study was a quantitative descriptive approach, utilizing three data sources. According to Lunenberg and Irby (2008), descriptive research, often considered one of the fundamental research approaches, offers valuable insights into various phenomena and occurrences within our environment. It was a way to understand the world from the viewpoints of both the researcher and the participants involved (Lunenberg & Irby, 2008).

The research design used in the study was a descriptive research design, with the principal objective of offering a comprehensive and detailed account of the current landscape of online course accessibility, explicitly focused on the perspectives,

behaviors, and awareness of faculty members and students. The design entailed the collection of data through various instruments, primarily online surveys, administered to these two key participant groups, making the study context-specific to a college situated in the Midwestern United States. The research design, being cross-sectional, enabled the capture of data at a single point in time, essentially providing a snapshot of the current state of online course accessibility. Acknowledging its limitations, such as the specific context of a college in the Midwestern United States, the design was underpinned by ethical considerations to ensure participant privacy and informed consent. Ultimately, this research design held significance as it identified areas where improvements were warranted to enhance online course accessibility, with findings that could potentially inform educational institutions and policymakers about the importance of providing accessible course materials in online education.

Selection of Participants

The participants selected for this study were chosen through convenience, non-probability, and purposive sampling, a method where participants are selected based on specific criteria to achieve the research objectives. Convenience sampling involves selecting study participants based on easy accessibility and availability to the researcher. In this study, the researcher specifically employed convenience sampling because there was only one school that met the defined criteria for the research. The researcher aimed to gather feedback regarding online learning from faculty and students at a college in the Midwestern United States. This criterion sampling method was chosen because it allowed the researcher to focus specifically on individuals with direct experience with online learning rather than including those with limited exposure or experience. To ensure that

the feedback collected was relevant and informative, only those faculty and students enrolled in courses facilitated entirely online were considered eligible for the study. By employing this selection method, the researcher obtained focused and pertinent feedback regarding various aspects of online learning perceptions within the research. This feedback was sourced from individuals deeply engaged in online learning, offering valuable insights into the genuine experiences and viewpoints of those directly involved in the online learning environment.

It is important to note that the study excluded participants enrolled in hybrid courses combining online and in-person instruction. This exclusion was made to maintain the focus on entirely online courses, as the researcher was interested in understanding perceptions of this specific learning mode.

Measurement

The measurement tools for data collection included three sources: The first data source was the Blackboard Ally report data that contained all interactions that faculty have made with the Instructor Feedback tool in Blackboard Ally during the spring semester of 2023. This report included the number of times the instructor feedback panel was opened, and the number of document fixes made with the tool. Blackboard Ally's feedback panel showed a preview of the document's content and detailed feedback and support to help instructors fix the accessibility issues. The Blackboard Ally feedback panel also indicated whether the course content's accessibility score increased, remained the same, or decreased after the fixes were implemented. Blackboard Ally generates accessibility ratings to raise awareness among faculty and students on whether the uploaded file met ADA and 508 Refresh expectations. The data points for the Blackboard

Ally report data used in the study were the number of times the alternative format window and the instructor feedback panel launched.

Beyond the Blackboard Ally report data, two surveys were administered to faculty who taught online and students who took an online course. The faculty and student surveys were created in 2018 by Blackboard as part of the user-centered design process to engage the Blackboard Ally user group to examine how well Blackboard Ally fits the needs of institutions, instructors, and students. The goal of the survey was to find out more about how accessibility was organized at institutions and how Blackboard Ally best allowed instructors and students to reach out for help.

The second data source was a 17-question survey for online faculty distributed via Google Forms. The first three questions for faculty (F1-F3) were the demographic items of gender (male or female), age grouping (25-39, 40-60, 61+), and school/department (Business, Computer, & IT, Health & Human Services, Humanities, Career & Technical Education, Natural Science & Math, Social Science, Visual & Performing Arts, Other Programs). The second (F4-F12) set of questions focused on awareness and usage of Blackboard Ally. In the second group of questions, faculty were asked about their perceived effectiveness of Blackboard Ally's tool categories in teaching (F9-F10) and the last five questions (F13-F17) honed in on the specific accessibility issues identified by Blackboard Ally. Faculty were asked to rate their level of agreement with statements regarding Blackboard Ally on a 5-point Likert-type scale (from strongly disagree to strongly agree).

The third data source was a 15-question survey distributed via Google Forms, which was aimed at gathering feedback from online students about their perceptions and

usage of online course materials. The survey included questions about demographics, such as gender, age grouping, and year (S1-S3). It also questioned how often students access course materials using different devices (desktop, mobile, and tablet) and how well they worked with their preferred devices (S4-S7). Additionally, the survey included questions about students' individual learning preferences, such as whether they learned better when they can annotate and highlight digital course readings or when they can read and listen to course materials. The survey also included questions about students' use of Blackboard Ally's alternative formats, such as how often they downloaded alternative formats, what alternative format they downloaded the most, and how they learned about downloading alternative formats (S8-S15). Students were asked to rate their level of agreement with statements using a 5-point Likert-type scale. The survey was intended to provide insight into how students engaged with and use online course materials.

Triangulating the three data sources allowed for examining "the consistency of outcomes from varying sources and methodologies for measuring a particular construct" (Stufflebeam & Shinkfield, 2007, p. 717). This analysis method was employed to ensure the validity and reliability of research findings. Triangulation was beneficial in the current study to incorporate multiple data sources for a more comprehensive understanding.

Data Collection Procedures

On February 24, 2023, the researcher submitted an Institutional Review Board (IRB) application to conduct research at a college in the Midwestern United States. The study was approved on March 5, 2023 (Appendix D). The researcher submitted another IRB to Baker University on March 14, 2023, and approval to conduct the study was

received on March 21, 2023 (Appendix E). The researcher contacted IT support and the Blackboard administration team to obtain access to the Blackboard Ally report data for Spring 2023 at the college in the Midwestern United States where the study was conducted. Furthermore, the researcher followed the IRB approval process at the college in the Midwestern United States for permission to administer the surveys on March 23rd, 2023, for the faculty and students. The Blackboard Ally Feedback Survey for Faculty and the Blackboard Ally Feedback Survey for Students were administered using an online survey tool called Google Forms.

The survey items were transferred from Blackboard Ally's instrument into the Google Forms tool, which provided URL links for both online surveys. The Online department at the college in the Midwestern United States sent the survey link for eligible online faculty and students on March 29, 2023. The survey data collection period was two weeks. After one week, a reminder email was sent to all or those who had not responded. The original and reminder emails included a description of the study, the rights of research participants, and that participation in the study was voluntary (Appendix C). The informed consent statement in the email clarified that submitting a completed survey meant that respondents consented to participate in the study. Data was retrieved from Google Forms for analysis after the final deadline on April 15, 2023. Data from the Blackboard Ally feedback surveys were downloaded and imported into IBM SPSS Statistics 28.0 for Windows.

Data Analysis and Hypothesis Testing

The analysis of the data collected by the faculty and student surveys included descriptive statistics to summarize all items on their respective surveys and disaggregated

demographic subgroups for each survey and all survey items. Four research questions with 14 hypotheses were addressed using descriptive statistics with data sources.

RQ1

To what extent do the Blackboard Ally Feedback Survey for Faculty responses and the Blackboard Ally Feedback Survey for Students responses indicate the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States?

H1. The Blackboard Ally Feedback Survey for Faculty responses indicate the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States.

For H1, descriptive statistics (*N*, frequency, and percentage of total responses) of each possible response category for Blackboard Ally Feedback Survey for Faculty item F7 (How useful are Blackboard Ally's "Alternative Formats" to your student's learning?), faculty responses on the 5-point Likert-type scale of 1 being *Not useful at all*, to 5 being *Very useful*. With item F8 (How important do you think accessible digital content is to the learning experiences of all your students?), faculty responses on the 5-point Likert-type scale of 1 being *Not important at all* to 5 being *Very important* were counted, summarized, and presented in table format.

H2. The Blackboard Ally Feedback Survey for Students responses indicate the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States.

For H2, descriptive statistics (N, frequency, and percentage of total responses) of each possible response category for the Blackboard Ally Feedback for Students items S8

(Do you feel you learn better when you can easily annotate and highlight your digital course readings?) and S9 (Do you feel you learn better when you can both read and listen to course materials?), student responses on the 5-point Likert-type scale of 1 being *No, not at all* to 5 being *Yes, very much* were counted, summarized, and presented in table format. The Blackboard Ally Feedback for Students survey responses for items S11 (How often do you download alternative formats of your course files?), for which respondents could choose *I was not aware I could, Never, Once, Several times, or Whenever they are available* were also summarized, as well as S12 (What alternative format do you download the most?), for which respondents could choose *None, Tagged PDF, HTML, ePub, Electronic braille, or Audio MP3*.

RQ2

To what extent are there differential trends within disaggregated demographic subgroups of the Blackboard Ally Feedback Survey for Faculty and the Blackboard Ally Feedback Survey for Students regarding the perceived importance of accessibility at a college in the Midwestern United States?

H3. When disaggregated by school/department, online faculty show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Faculty.

H4. When disaggregated by gender, online faculty show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Faculty.

H5. When disaggregated by age, online faculty show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Faculty.

For H3–H5, descriptive statistics (N, frequency, and percentage of total responses) of each possible response category by demographic subgroups (gender, age group, and school/department) of instructor feedback survey items F7 and F8 were counted, summarized, and presented in table format. This was done to describe trends within instructor subgroups for those survey items regarding faculty perceptions of the importance of accessibility.

H6. When disaggregated by year, online students show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Students.

H7. When disaggregated by gender, online students show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Students.

H8. When disaggregated by age, online students show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Students.

For H6–H8, descriptive statistics (N, frequency, and percentage of total responses) of each possible response category by demographic subgroups (gender, age group, and years at the college in the Midwestern United States) of the Blackboard Ally Feedback Survey for Students items S8, S9, S11, and S12 were counted, summarized, and presented in table format.

RQ3

To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the Blackboard Ally report data for online courses indicate an awareness of Blackboard Ally at a college in the Midwestern United States?

H9. Online faculty responses on the Blackboard Ally Feedback Survey for Faculty indicate an awareness of Blackboard Ally at a college in the Midwestern United States.

For H9, descriptive statistics (N, frequency, and percentage of total responses) of each possible response category for the Blackboard Ally Survey for Faculty. For item F4 (How did you find out about Blackboard Ally?), survey participants could choose all options that applied to them from six. The responses, including *Announcement on LMS front page, Email blast, Workshop or training, Department Chair, Colleague or student, and Other,* were computed, summarized, and displayed in tabular format.

H10. Online students' responses on the Blackboard Ally Feedback Survey for Students indicate an awareness of Blackboard Ally at a college in the Midwestern United States.

For H10, descriptive statistics (N, frequency, and percentage of total responses) of each possible response category for the Blackboard Ally Feedback Survey for Students item S10 (How did you learn about downloading alternative formats of your course files?), which included seven categorical response options of, *Instructor syllabus, Instructor announcement, Campus announcement, Campus event, Peer, Never heard about alternative formats, and Other*. For item S14, which assessed whether instructors

encouraged using alternative formats, respondents provided ratings on a 5-point Likert-type scale ranging from 1, indicating *No, not at all, to* 5 *indicating Yes, very much.* These ratings were tabulated, summarized, and presented in table format.

H11. The Blackboard Ally report data for online courses indicates an awareness of Blackboard Ally at a college in the Midwestern United States.

For H11, descriptive statistics (N, frequency, and percentage of total responses) for Blackboard Ally report data items, the Instructor Feedback Launches (IFL) worksheet shown instructor feedback engagement and courses that made improvements, and the Alternative Format Launches (AFL) worksheets shown alternative format engagement and distribution by alternative format type/downloaded were counted, summarized, and presented in table format.

RQ4

To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the Blackboard Ally report data indicate the use of Blackboard Ally at a college in the Midwestern United States?

H12. Responses to the Blackboard Ally Feedback Survey for Faculty at a college in the Midwestern United States reveal varying levels of reported usage among online instructors.

For H12, a descriptive analysis was conducted by counting N, frequency, and the percentage of total responses for each response category related to the Blackboard Ally Feedback Survey for Faculty items F9 and F10. These items specifically explored faculty engagement with Blackboard Ally.

Item F9, which examined how instructors initially responded to Blackboard Ally indicators in their courses, offered five categorical response options: "Mostly ignored them," "Contacted help or support," "Clicked on the indicator to learn more," "Clicked on the indicator and started fixing files," and "Other."

Item F10 investigated instructors' utilization of Instructor Feedback once they had clicked on an indicator. This item provided four categorical response options: "I have never clicked a Blackboard Ally Indicator," "I check out the issue and score but stop there," "I read the Blackboard Ally info about the issue but do not try to fix it," and "I read the feedback and try my best to fix the issue." The responses were counted, summarized, and presented in tabular format.

H13. Responses to the Blackboard Ally Feedback Survey for Students at a college in the Midwestern United States reveal varying levels of reported usage among online students.

For H13, descriptive statistics (N, frequency, and percentage of total responses) were calculated for each possible response category in the online Blackboard Ally Feedback Survey for Students, specifically in relation to S11 (How often do you download alternative formats of your course files?). Respondents had options including "I was not aware I could," "Never," "Once," "Several times," and "Whenever they are available." This analysis was focused on understanding students' usage of Blackboard Ally. This information was counted, summarized, and presented in table format.

H14. The Blackboard Ally report data at a college in the Midwestern United States indicates varying overall usage of Blackboard Ally.

For H14, descriptive statistics (N, frequency, and percentage of total responses) for Instructor Feedback Launches (IFL) (How many times the IFL panel was opened and how often instructors fixed an accessibility issue.) and Alternative Format Launches (AFL) (How many times the AFL panel was opened and how often an alternative format was downloaded?), were collected, and presented in figure format.

Limitations

According to Lunenburg and Irby (2008), limitations of a study are conditions not within the researcher's control that could impact the study's findings or the ability to generalize the results. The results of the current study should not be generalized to institutions other than the college in the Midwestern United States where the study was conducted or populations outside of the Midwestern United States because of the instructional faculty culture and professional development that might be unique to the institution, geographic area, or both. The surveys were sent to faculty and students involved in at least one online course. The faculty and students may answer for more than one class, but only one survey per participant was submitted. The surveys cannot be generalized for the whole population, which includes hybrid, nor can they be generalized for the general population, such as face-to-face.

Summary

In conclusion, Chapter 3 has provided a comprehensive overview of the research methodology employed in this study to investigate the usage of Blackboard Ally at a college in the Midwestern United States. The quantitative research approach, characterized by descriptive analysis methods, was chosen to systematically examine the perceptions and behaviors of online faculty and students regarding Blackboard Ally.

The chapter detailed the survey instruments designed for faculty and students, elucidating the process of survey administration, data collection, and quality control measures implemented to ensure the reliability and validity of the collected data. Additionally, it highlighted the statistical techniques employed for data analysis, including descriptive statistics and cross-tabulations, which are crucial in exploring the patterns within the data.

The robust methodological foundation established in Chapter 3 is vital for generating meaningful insights into utilizing Blackboard Ally within the college community. These insights are pivotal in addressing this study's research questions and hypotheses. Chapter 4 delve into the findings from the data collected through these rigorous research methods, shedding light on the extent of Blackboard Ally's usage among faculty and students and providing valuable insights into accessibility practices within online education at the college in the Midwestern United States where the survey was conducted.

Chapter 4

Results

This study examined faculty and student usage, awareness of, and perceived importance of Blackboard Ally. Data collection took place during the Spring 2023 term, focusing on assessing the awareness, perceived importance, and usage of Blackboard Ally for improving online course accessibility among different demographic groups of online instructors and students at a college in the Midwestern United States. The researcher used quantitative methods to summarize and describe the perceived importance of accessibility, self-reported awareness, and use of Blackboard Ally. The findings emphasized the importance of building awareness among different groups of users when implementing Blackboard Ally effectively for promoting accessibility in online courses at a college in the Midwestern United States.

Descriptive Statistics

The descriptive statistics section aimed to understand the participants' perceived importance, awareness, and use of Blackboard Ally tools. Additionally, the analysis thoroughly explored various demographic subgroups, encompassing school/department, gender, age, and academic year to investigate potential variations within these categories.

RQ1

To what extent do the Blackboard Ally Feedback Survey for Faculty responses and the Blackboard Ally Feedback Survey for Students responses indicate the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States?

H1. The Blackboard Ally Feedback Survey for Faculty responses indicate a perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States.

The results from the analysis of responses to item F7 on the Blackboard Ally Feedback Survey for Faculty (How useful are Blackboard Ally's "alternative formats" to your students' learning?) showed that most faculty respondents rated Blackboard Ally's alternative formats as useful for students. The combined percentage of respondents who found it somewhat useful, fairly useful, and very useful from the response categories is 75.0% (33.3% + 25.0% + 16.7% = 75.0%), as presented in Table 1.

Table 1

Usefulness of Blackboard Ally's Alternative Formats for Student Learning

Levels of Usefulness	Responses	
	N	%
	Blackboard Ally Feedback Survey for Faculty Results	
Not useful at all	1	8.3
Slightly useful	2	16.7
Somewhat useful	4	33.3
Fairly useful	3	25.0
Very useful	2	16.7

The results from the analysis of responses to item F8 on the Blackboard Ally Feedback Survey for Faculty (How important do you think accessible digital content is to the learning experiences of all your students?) showed that most faculty respondents believed that accessible digital content is very important to the learning experiences of all students.

The combined percentage of respondents who found it somewhat important, fairly important, and very important from the response categories is 100% (8.3% + 25.0%+66.7% = 100%), as presented in Table 2. Based on responses to item F8, it is evident that a significant proportion of the participants recognized the importance of accessible digital content in enhancing the learning experiences of all students.

Table 2

Importance of Accessible Digital Content for Student Learning

Levels of Importance	Responses	
	N	%
	Blackboard Ally Feedback Survey for Faculty Results	
Not important at all	0	0
Slightly important	0	0
Somewhat important	1	8.3
Fairly important	3	25.0
Very important	8	66.7

The results from the analysis of the responses to items F7 and F8 on the Blackboard Ally Feedback Survey for Faculty suggested faculty at the college in the Midwestern United States where the study was conducted think accessible digital content is important for student learning. Moreover, the findings also indicated the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States.

H2. Responses to the Blackboard Ally Feedback Survey for Students indicate the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States.

The results from the analysis of the responses to item S8 of the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can easily annotate and highlight your digital course readings?) showed more than half of student respondents believed that annotating and highlighting digital course materials positively impacted their learning. The combined percentage of respondents who found it slightly, moderately, and yes, very much from the response categories is 66.7% (7.7% + 23.1%+35.9% = 66.7%), as presented in Table 3.

Table 3

Impact of Annotating and Highlighting Digital Course Readings on Learning

Levels of Impact	Responses	
	N	%
	Blackboard Ally Feedback Survey for Students Results	
No, not at all	2	5.1
Neutral	11	28.2
Slightly	3	7.7
Moderately	9	23.1
Yes, very much	14	35.9

The results from the analysis of responses to item S9 of the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can both read and listen to course materials?) showed that most student respondents believed that when they can both read and listen to course materials, it positively impacted their learning. The combined percentage of respondents who found it slightly, moderately, and yes, very much from the response categories is 71.8% (12.8% + 25.6% +33.4%= 71.8%), as presented in Table 4.

Table 4

Effectiveness of Reading and Listening to Course Materials

Levels of Effectiveness	Responses	
	N	%
	Blackboard Ally Feedback Survey for Students Results	
No, not at all	2	5.1
Neutral	9	23.1
Slightly	5	12.8
Moderately	10	25.6
Yes, very much	13	33.4

The provided data pertained to responses from students regarding their frequency of downloading alternative formats of course files. Notably, a significant proportion of students (41.0%) never downloaded alternative formats. Additionally, 30.8% of students mentioned that they were unaware they could download alternative formats, suggesting a lack of awareness about this accessibility feature. Only a small percentage reported downloading alternative formats once (7.7%) or several times (20.5%), as presented in Table 5. These findings indicated that students need increased awareness and education about the availability and benefits of alternative formats for course materials.

Table 5

Frequency of Downloading Alternative Course File Formats

Levels of Frequency	Responses	
	N	%
	Blackboard Ally Feedback Survey for Students Results	
I was not aware I could	12	30.8
Never	16	41.0
Once	3	7.7
Several times	8	20.5

The results from the analysis of responses to item S12 of the Blackboard Ally Feedback Survey for Students (What alternative format do you download the most?) showed the majority do not download any alternative format for their course materials. Among those who do, tagged PDFs are the most popular alternative format, with 25.6% of participants preferring this option. A smaller percentage of participants chose HTML (7.7%) or audio MP3 (7.7%) files as their most frequently downloaded alternative format, as presented in Table 6.

Table 6

Most Downloaded Alternative Course File Formats

Types of File Format	Responses	
	N	%
	Blackboard Ally Feedback Survey for Students Results	
None	23	59.0
Tagged PDF	10	25.6
HTML	3	7.7
Audio MP3	3	7.7

The Blackboard Ally Feedback Survey responses from online faculty and students at a college in the Midwestern United States for RQ1 indicated faculty support for alternative formats and accessible content. The findings underscore the critical need to raise awareness among students about the availability of alternative formats.

RQ2

To what extent are there differential trends within disaggregated demographic subgroups of the Blackboard Ally Feedback Survey for Faculty and the Blackboard Ally Feedback Survey for Students regarding the perceived importance of accessibility at a college in the Midwestern United States?

H3. When disaggregated by school/department, online instructors' responses show different levels of perceived importance of accessibility based on the Blackboard Ally Feedback Survey for Faculty.

The results of the analysis of responses to item F7 on the Blackboard Ally Feedback Survey for Faculty (How useful are Blackboard Ally's "alternative formats" to your student's learning?) varied across different schools and departments, as presented in Table 7. The "Health and Human Services," "Humanities," and "Social Science" groups had the most positive responses overall. In contrast, the "Natural Science and Math" group had no participants who found the alternative formats helpful.

Table 7

Usefulness of Blackboard Ally's Formats Across Departments

Levels of Usefulness	Survey participants by school/department					
	Health & Human Services	Humanities	Natural Science & Math	Social Science	Other Programs	Total
Not useful at all	0	0	1	0	0	1
Slightly useful	1	0	0	0	1	2
Somewhat useful	1	2	0	1	0	4
Fairly useful	1	0	0	2	0	3
Very useful	0	1	0	0	1	2
Total	3	3	1	3	2	12

Note. Survey participants by school/department.

The responses to item F8 on the Blackboard Ally Feedback Survey for Faculty (How important do you think accessible digital content is to the learning experiences of all your students?) varied across different schools and departments, as presented in Table 8. Respondents from the "Health and Human Services" and "Social Science" departments indicated a mix of perceived importance, with some finding accessible digital content

somewhat important or fairly important. However, respondents from the "Humanities" and "Other Programs" departments emphasized the importance of accessible digital content for the learning experiences of all students. The "Natural Science and Math" department also acknowledged the importance, albeit to a lesser extent.

Table 8

Importance of Accessible Content by School/Department

Levels of Importance	Survey participants by school/department					
	Health & Human Services	Humanities	Natural Science & Math	Social Science	Other Programs	Total
Somewhat important	1	0	0	0	0	1
Fairly important	1	0	0	2	0	3
Very important	1	3	1	1	2	8
Total	3	3	1	3	2	12

Note. Survey participants by school/department.

H4. When disaggregated by gender, the Blackboard Ally Feedback Survey for Faculty responses showed different levels of perceived importance of accessibility.

The results of the analysis of responses to item F7 on the Blackboard Ally Feedback Survey for Faculty (How useful are Blackboard Ally's "alternative formats" to your student's learning?) varied across different genders, as presented in Table 9. Among the respondents, some females found Blackboard Ally's "alternative formats" more useful for students' learning, while a few males found them fairly useful.

Table 9

Usefulness of Blackboard Ally's Formats by Gender

Levels of Usefulness	Responses		
	Male	Female	Total
Not useful at all	0	1	1
Slightly useful	0	2	2
Somewhat useful	0	4	4
Fairly useful	3	0	3
Very useful	0	2	2
Total	3	9	12

Note. Survey participants by gender.

The responses to item F8 on the Blackboard Ally Feedback Survey for Faculty (How important do you think accessible digital content is to the learning experiences of all your students?) varied across different genders, as presented in Table 10. Female respondents indicated a higher level of perceived importance of accessible digital content for their students' learning experiences, with a larger number of participants considering it very important. Compared with the responses from female respondents, male respondents recognized the importance.

Table 10

Importance of Accessible Content by Gender

Levels of Importance	Responses		
	Male	Female	Total
Somewhat important	0	1	1
Fairly important	1	2	3
Very important	2	6	8
Total	3	9	12

Note. Survey participants by gender.

H5. When disaggregated by age, responses on the Blackboard Ally Feedback Survey for Faculty showed different levels of perceived importance of accessibility.

The results of the analysis of the responses to item F7 on the Blackboard Ally Feedback Survey for Faculty (How useful are Blackboard Ally's "alternative formats" to your student's learning?) varied across different ages, as presented in Table 11. Respondents aged 40-60 showed the highest perceived usefulness of Blackboard Ally's "alternative formats" for students' learning.

Table 11

Usefulness of Blackboard Ally's Formats by Age

Levels of Usefulness	Age Values			
	25-39	40-60	61+	Total
Not useful at all	1	0	0	1
Slightly useful	0	1	1	2
Somewhat useful	1	3	0	4
Fairly useful	0	3	0	3
Very useful	0	1	1	2
Total	2	8	2	12

Note. Survey participants by age.

The responses to item F8 on the Blackboard Ally Feedback Survey for Faculty (How important do you think accessible digital content is to the learning experiences of all your students?) varied across different ages, as presented in Table 12. Respondents in the age group 40-60 indicated the highest level of perceived importance of accessible digital content for their students' learning experiences, with the majority considering it either fairly important or very important.

Table 12

Importance of Accessible Content by Age

Levels of Importance	Age Values			
	25-39	40-60	61+	Total
Somewhat important	0	1	0	1
Fairly important	1	2	0	3
Very important	1	5	2	8
Total	2	8	2	12

Note. Survey participants by age.

H6. When disaggregated by year, online students show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Students.

The results of the analysis of responses to item S8 on the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can easily annotate and highlight your digital course readings?) varied across different years, as presented in Table 13. The majority of respondents across all year levels indicated that they learned better when they can easily annotate and highlight their digital course readings. They look for homogeneous responses for 3rd year and other years compared to the other groups. Notably, a significant number of 1st-year and 2nd-year undergraduate students expressed a strong preference for easily annotating and highlighting digital readings as enhancing their learning experience.

Table 13

Annotating and Highlighting Preferences by Year in School

Levels of Annotating	Year in school				
	1st-year undergraduate student	2nd-year undergraduate student	3rd-year undergraduate student	Other	Total
No, not at all	1	1	0	0	2
Neutral	1	5	2	3	11
Slightly	1	2	0	0	3
Moderately	2	3	1	3	9
Yes, very much	5	7	1	1	14
Total	10	18	4	7	39

Note. Survey participants by year.

The results of the analysis of the responses to item S9 on the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can both read and listen to course materials?) varied across different years, as presented in Table 14. Respondents across all year levels generally expressed a belief that they learned better when they could both read and listen to course materials. Among 1st-year and 2nd-year undergraduate students, a significant portion indicated that they learned better in this dual mode. Third-year undergraduate students and those in other unspecified years had fewer responses, but some still found this approach beneficial.

Table 14

Reading and Listening Preferences by Year in School

Levels of Reading	Year in school				
	1st-year undergraduate student	2nd-year undergraduate student	3rd-year undergraduate student	Other	Total
No, not at all	1	1	0	0	2
Neutral	2	3	1	3	9
Slightly	1	2	0	2	5
Moderately	3	5	1	1	10
Yes, very much	3	7	2	1	13
Total	10	18	4	7	39

Note. Survey participants by year.

The results of the analysis of the responses to item S11 on the Blackboard Ally Feedback Survey for Students (How often do you download alternative formats of your course files?) varied across different years, as presented in Table 1 5. An indication number of respondents, especially 1st-year and 2nd-year undergraduate students, were unaware they could download alternative formats of their course files. A portion of students from all year levels indicated they never downloaded alternative formats. A smaller number of students, across various years, have downloaded alternative formats once or several times.

Table 15

Downloading Habits by Year in School

Levels of downloading	Year in school				
	1st-year undergraduate student	2nd-year undergraduate student	3rd-year undergraduate student	Other	Total
I was not aware I could	3	7	0	2	12
Never	5	7	1	3	16
Once	0	2	1	0	3
Several times	2	2	2	2	8
Total	10	18	4	7	39

Note. Survey participants by year.

The responses to item S12 on the Blackboard Ally Feedback Survey for Students (What alternative format do you download the most?) varied across different years, as presented in Table 16. Among the respondents, the most common category for response was "None," indicating that many students do not download alternative formats. Tagged PDFs were the most downloaded format, particularly among 2nd-year undergraduate students. A smaller number of students, across different years, reported downloading HTML and Audio MP3 formats.

Table 16

Most Downloaded Formats by Year in School

Types of Downloaded	Year in school				
	1st-year undergraduate student	2nd-year undergraduate student	3rd-year undergraduate student	Other	Total
None	6	12	1	4	23
Tagged PDF	2	4	3	1	10
HTML	0	1	0	2	3
Audio MP3	2	1	0	0	3
Total	10	18	4	7	39

Note. Survey participants by year.

H7. When disaggregated by gender, online students show different levels of perceived importance of accessibility with their responses on the Blackboard Ally Feedback Survey for Students.

The results of the analysis of responses to item S8 on the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can easily annotate and highlight your digital course readings?) varied across different genders, as presented in Table 17. Female respondents similarly believed they learned better when they could easily annotate and highlight their digital course readings. A large majority of female participants indicated either a moderate preference or a very strong preference for this feature.

Table 17

Annotating and Highlighting Preferences by Gender

Levels of Annotating	Gender Variables		
	Male	Female	Total
No, not at all	0	2	2
Neutral	3	8	11
Slightly	0	2	2
Moderately	0	9	9
Yes, very much	2	12	14
Total	5	33	38

Note. Survey participants by gender.

The results of the analysis of responses to item S9 on the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can both read and listen to course materials?) varied across different genders, as presented in Table 18. Both male and female respondents generally indicated they learned better when they could both read and listen to course materials. However, female respondents showed a stronger preference for this multimodal approach, with a larger number of participants indicating that they learned moderately or very much better when they can both read and listen. Male participants had fewer respondents, and their responses were more varied across the response categories.

Table 18

Reading and Listening Preferences by Gender

Levels of Reading	Gender Variables		
	Male	Female	Total
No, not at all	0	2	2
Neutral	1	8	9
Slightly	2	3	5
Moderately	2	8	10
Yes, very much	0	12	12
Total	5	33	38

Note. Survey participants by gender.

The results of the analysis of the responses to item S11 (How often do you download alternative formats of your course files?) varied across different genders, as presented in Table 19. This data suggested a significant number of female respondents were not aware they could download alternative formats, and a larger proportion of females reported never downloading such formats. Some females, however, did download alternative formats, with a few doing so once or several times. Among male respondents, a small number reported never downloading alternative formats, and a few reported doing so once or several times.

Table 19

Downloading Habits by Gender

Levels of Downloading	Gender Variables		
	Male	Female	Total
I was not aware I could	0	11	11
Never	3	13	16
Once	1	2	3
Several times	1	7	8
Total	5	33	38

Note. Survey participants by gender.

The results of the analysis of the responses to item S12 on the Blackboard Ally Feedback Survey for Students (What alternative format do you download the most?) varied across different genders, as presented in Table 20. The majority of both male and female respondents indicated that they did not download any alternative formats by choosing "None." Among those who did download, "Tagged PDF" was the popular format for both males and females, but it was downloaded by more female participants. Overall, based on the given data, the "None" category dominated among both males and females and "Tagged PDF" was the most common format among those who downloaded alternative formats.

Table 20

Most Downloaded Formats by Gender

Types of Downloaded	Gender Variables		
	Male	Female	Total
None	3	19	22
Tagged PDF	1	9	10
HTML	1	2	3
Audio MP3	0	3	3
Total	5	33	38

Note. Survey participants by gender.

H8. When disaggregated by age, responses to the Blackboard Ally Feedback Survey for Students showed different levels of perceived importance of accessibility.

The results of the analysis of responses to item S8 on the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can easily annotate and highlight your digital course readings?) varied across different ages, as presented in Table 21. The majority of respondents across all age groups indicated they believed they learned better when they could easily annotate and highlight their digital course readings.

The highest number of participants who strongly agreed with this statement falls within the age group 18-25, where respondents marked "Yes, very much." The age group 26-39 showed the same pattern. The neutral response was presented across all age groups, indicating some uncertainty about the impact of annotation and highlighting, but it was less prominent among those aged 18-25.

Table 21

Annotating and Highlighting Preferences by Age

Levels of Annotating	Age Variables			
	18-25	26-39	40-59	Total
No, not at all	2	0	0	2
Neutral	8	2	1	11
Slightly	2	0	1	3
Moderately	8	0	1	9
Yes, very much	6	4	4	14
Total	26	6	7	39

Note. Survey participants by age.

The responses to item S9 on the Blackboard Ally Feedback Survey for Students (Do you feel you learn better when you can both read and listen to course materials?) varied across different ages, as presented in Table 22. The majority of respondents across all age groups indicated a belief they learned better when they could both read and listen to course materials. The highest number of participants who strongly agreed with this statement falls within the age group 18-25, where respondents marked "Yes, very much." While the "No, not at all" response was present, it was relatively low in all age groups. All the age groups marked "yes, very much" as the highest response.

Table 22

Reading and Listening Preferences by Age

Level of Reading	Age Variables			
	18-25	26-39	40-59	Total
No, not at all	2	0	0	2
Neutral	7	1	1	9
Slightly	2	1	2	5
Moderately	8	1	1	10
Yes, very much	7	3	3	13
Total	26	6	7	39

Note. Survey participants by age.

The results of the analysis of responses to item S11 on the Blackboard Ally Feedback Survey for Students (How often do you download alternative formats of your course files?) varied across different ages, as presented in Table 23. Among the respondents, there was a significant lack of awareness about the opportunity to download alternative formats of course files, especially in the 18-25 age group. The majority of participants in all age groups indicated that they never downloaded alternative formats. A small number across age groups reported downloading alternative formats once or several times. Overall, based on the given data, there appeared to be a lack of awareness and utilization of alternative formats for course materials, with the need for increased awareness of the number of respondents. The percentage of "not-aware" was similar to the group (18-25) and group (26-39).

Table 23

Downloading Habits by Age

Levels of Downloading	Age Variables			
	18-25	26-39	40-59	Total
I was not aware I could	9	2	1	12
Never	9	3	4	16
Once	3	0	0	3
Several times	5	1	2	8
Total	26	6	7	39

Note. Survey participants by age.

The results of the analysis of responses to item S12 on the Blackboard Ally Feedback Survey for Students (What alternative format do you download the most?) varied across different ages, as presented in Table 24. The majority of respondents in all age groups indicated that they downloaded "None" of the alternative formats, which suggested a significant number of participants were not downloading alternative formats. Among those who downloaded, "Tagged PDF" was the most popular format for the 18-25 age group. Overall, based on the given data, there seemed to be limited utilization of alternative formats for course materials across all age groups, with the "None" category being the dominant response.

Table 24

Most Downloaded Formats by Age

Types of Downloaded	Age Variables			
	18-25	26-39	40-59	Total
None	14	4	5	23
Tagged PDF	9	1	0	10
HTML	1	1	1	3
Audio MP3	2	0	1	3
Total	26	6	7	39

Note. Survey participants by age.

For H6–H8, descriptive statistics (N, frequency, and percentage of total responses) of each possible response category by demographic subgroups (gender, age group, and years at a college in the Midwestern United States) of items S8, S9, S11, and S12 on the Blackboard Ally Feedback Survey for Students were calculated, summarized, and presented in table format.

RQ3

To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the Blackboard Ally report data for online courses indicate an awareness of Blackboard Ally at a college in the Midwestern United States?

H9. Responses to the Blackboard Feedback Survey for Faculty for online courses indicate an awareness of Blackboard Ally at a college in the Midwestern United States.

The results from the analysis of responses to item F4 on the Blackboard Ally Feedback Survey for Faculty (How did you find out about Blackboard Ally?) showed the different sources through which respondents became aware of Blackboard Ally. The most common ways respondents discovered Blackboard Ally were through email blasts

(33.3%), workshops or training (25.0%), and the department chair (16.7%). A smaller portion learned about Blackboard Ally from colleagues or students (8.3%). The combination of methods was also mentioned by some respondents, indicating that multiple channels contributed to their awareness of Blackboard Ally, as presented in Table 25.

Table 25

Sources of Awareness about Blackboard Ally

Source of Information	Responses	
	N	%
	Blackboard Ally Feedback Survey for Faculty Results	
Department Chair	2	16.7
Email blast	4	33.3
Workshop or training	3	25.0
Colleague or student	1	8.3
Department Chair, Email blast, Workshop and Training	2	16.7

H10. Online students' responses on the Blackboard Ally Feedback Survey for Students indicate an awareness of Blackboard Ally at a college in the Midwestern United States.

The results of the analysis of responses to item S10 on the Blackboard Ally Feedback Survey for Students (How did you learn about downloading alternative formats of your course files?) indicated that a portion of respondents (41.0%) had never heard about alternative formats, suggesting a lack of awareness among some students regarding this feature as presented in Table 26. The most common methods of raising student awareness of alternative files included the instructor syllabus.

Table 26

Methods of Learning About Alternative Formats

Method of Learning	Responses	
	N	%
	Blackboard Ally Feedback Survey for Students Results	
Exploring Blackboard prior to classes beginning	1	2.6
Found out myself	1	2.6
Instructor syllabus	7	17.9
Campus announcement	2	5.1
Instructor syllabus and Instructor announcement	5	12.8
Blackboard orientation informed me	1	2.6
Never heard about alternative formats	16	41.0
Instructor syllabus/Blackboard orientation/Peer	6	15.4

The results from the analysis of responses to item S14 on the Blackboard Ally Feedback Survey for Students (Did your instructor encourage your class to use the alternative formats?) showed the majority of instructors did not encourage using alternative formats. A single student selected "Yes, very much," making this the lowest response percentage as presented in Table 27. The results showed that students' awareness might grow if students were encouraged by the instructor to use the alternative formats feature.

Table 27

Instructor Encouragement to Use Alternative Formats

Levels of Instructor Encouragement	Responses	
	N	%
	Blackboard Ally Feedback Survey for Students Results	
No, not at all	23	59.0
Seldom	5	12.8
Sometimes	7	17.9
Often	3	7.7
Yes, very much	1	2.6

Overall, these findings suggested that while there is recognition of Blackboard Ally among students, there are also gaps in awareness, particularly among students, regarding the availability of alternative formats. Additionally, instructor encouragement to use these alternative formats appeared to be limited, which could impact student awareness and utilization. These results provided valuable insights for institutions aiming to enhance awareness and utilization of accessibility features such as Blackboard Ally.

H11. The Blackboard Ally report data for online courses indicated an awareness of Blackboard Ally at a college in the Midwestern United States.

The report showed instructors actively engaged with Instructor Feedback, with 420 instances launched. These interactions resulted in 349 fixes and indicated that instructors made necessary modifications to improve the accessibility of course materials.

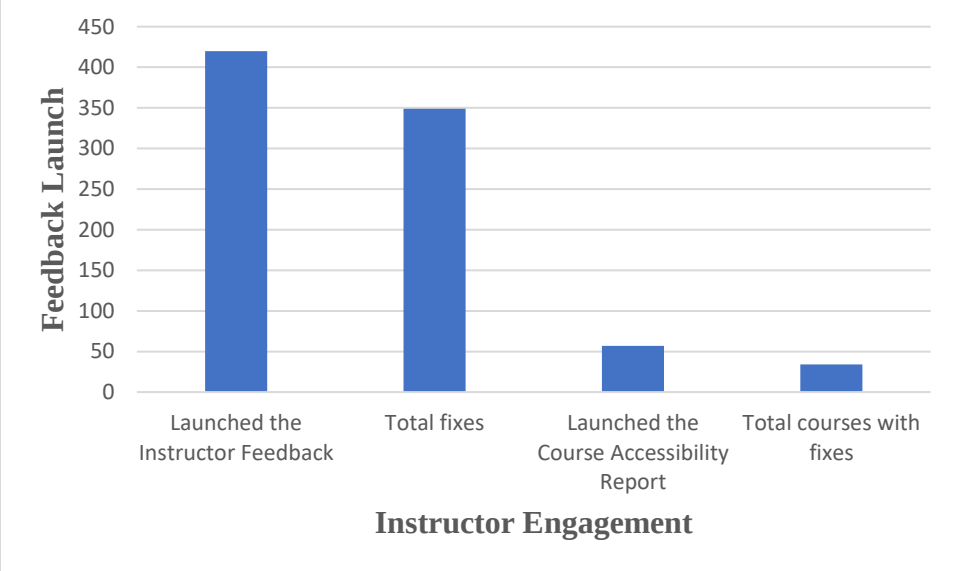
The conversion rate showed the percentage of fixes out of the total number of times the panel was opened. The conversion rate of 83.10% signified how frequently instructors accessed the Instructor Feedback, and the resulting fixes led to actual improvements. Furthermore, instructors accessed the Course Accessibility Report in 57 instances and demonstrated their interest in understanding the accessibility status of their

courses. Of the courses assessed, 34 underwent fixes, underscoring continuous efforts to enhance accessibility. As illustrated in Figure 1, this highlighted a positive level of awareness and engagement with Blackboard Ally, demonstrating a commitment to improving accessibility in online courses at a college in the Midwestern United States.

The Blackboard Ally report data for online courses at a college in the Midwestern United States unveiled awareness and engagement with Blackboard Ally. Furthermore, it offered valuable insights into the accessibility status of different content types.

Figure 1

Blackboard Ally Instructor Feedback Launch

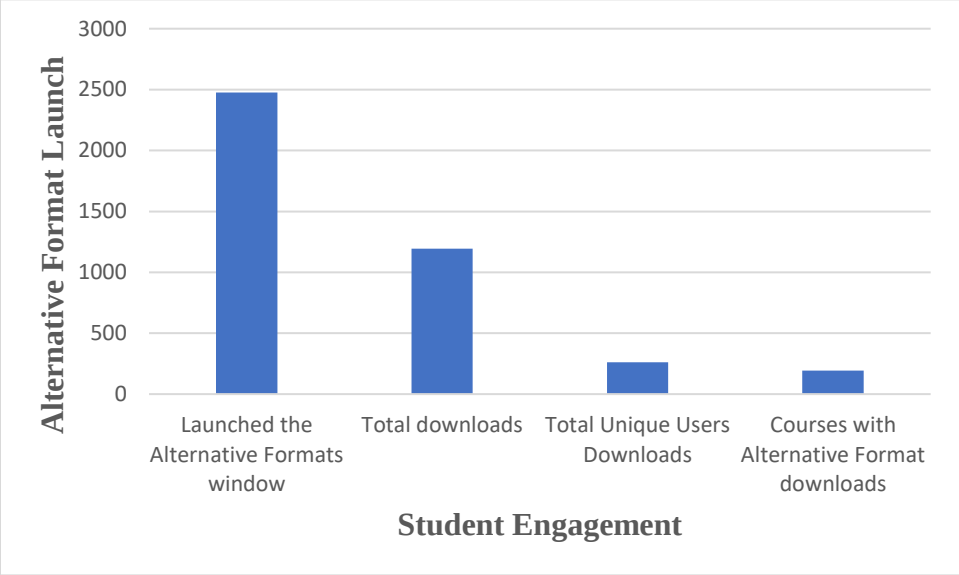


Based on the Blackboard Ally report data, online students accessed alternative formats 2,477 times using the Launch the Alternative Formats window. Of these instances, 1,194 downloads were made, representing a conversion rate of 48.20%. The conversion rate showed the percentage of downloads out of the total number of times the panel was opened.

A total of 262 unique users downloaded alternative formats, indicating some students are using this feature, as presented in Figure 2.

Figure 2

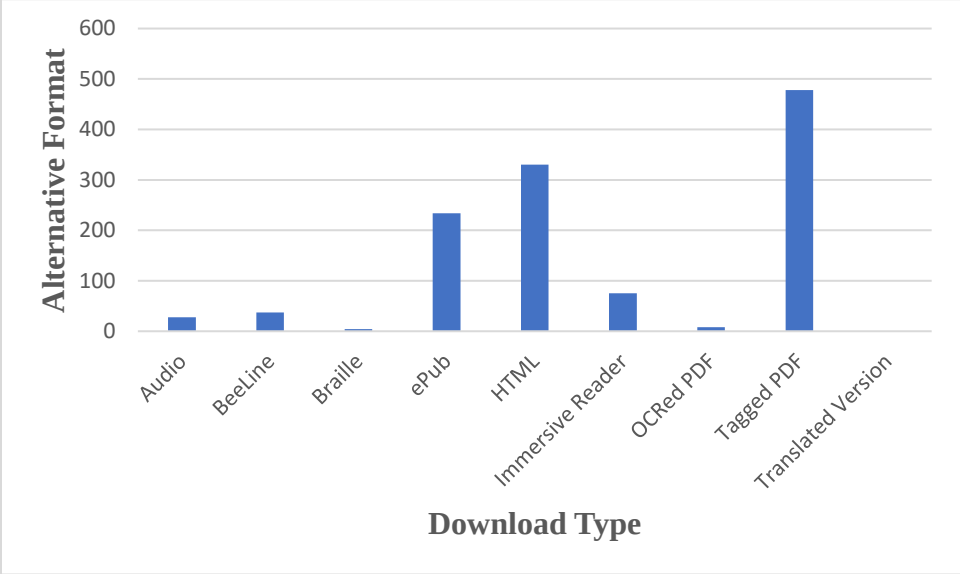
Blackboard Ally Student Alternative Format Launch



The data indicates that among the various alternative format types, Tagged PDF was the most commonly downloaded format by online students, with 478 instances. HTML formats were the second most popular, downloaded 330 times, followed by ePub (234 downloads) and Immersive Reader (75 downloads). BeeLine was also relatively widespread, with 37 downloads. Other formats, such as Audio, Braille, OCRed PDF, and Translated Version, had fewer downloads, with 28, 4, 8, and 0 instances, respectively, as presented in Figure 3.

Figure 3

Blackboard Ally Student Alternative Format Download Type



The results of RQ3 indicated a notable level of awareness of Blackboard Ally among online faculty. In contrast, online students demonstrated lower awareness levels, indicating the need for targeted awareness campaigns and educational efforts. These findings suggested that improving awareness and promoting the benefits of Blackboard Ally may enhance its utilization and impact in fostering accessibility in online courses at a college in the Midwestern United States.

RQ4

To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the Blackboard Ally report data indicate the use of Blackboard Ally at a college in the Midwestern United States?

H12. Responses to the Blackboard Ally Feedback Survey for Faculty at a college in the Midwestern United States reveals varying levels of report usage among online faculty.

The results from the analysis of responses to item F9 on the Blackboard Ally Feedback Survey for Faculty (How did you first respond to seeing the Blackboard Ally indicators in your course?) showed that most faculty respondents (58.3%) clicked on the indicator to learn more. A smaller percentage (16.7%) started fixing files immediately after clicking on the indicators. Some respondents either ignored the indicators or had yet to notice them as presented in Table 28.

Table 28

Initial Response to Blackboard Ally Indicators

Action by Faculty	Responses	
	N	%
	Blackboard Ally Feedback Survey for Faculty Results	
Mostly ignored them.	2	16.7
Clicked on the indicator to learn more.	7	58.3
Clicked on the indicator and started fixing files.	2	16.7
I have not noticed them but will be looking for them now.	1	8.3

The results from the analysis of responses to item F10 of the Blackboard Ally Feedback Survey for Faculty (How do you use the instructor feedback once you have clicked an indicator?) showed that most faculty respondents (75%) read the feedback and "Try my best to fix the issue." A small percentage (8.3%) checked the issue and score but

did not proceed further, while a minority (16.7%) has never clicked on a Blackboard Ally indicator presented in Table 29.

Table 29

Use of Instructor Feedback from Blackboard Ally Indicators

Instructor Feedback	Responses	
	N	%
	Blackboard Ally Feedback Survey for Faculty Results	
I have never clicked a Blackboard Ally indicator.	2	16.7
I check out the issue and score but stop there.	1	8.3
I read the feedback and try my best to fix the issue.	9	75.0

H13. Responses to the Blackboard Ally Feedback Survey for Students at a college in the Midwestern United States reveals varying levels of reported usage among online students.

The results of the analysis of responses to item S11 on the Blackboard Ally Feedback Survey for Students (How often do you download alternative formats of your course files?) showed that most student respondents never downloaded alternative formats of the course files. The data indicated a varying degree of engagement with downloading alternative formats among the surveyed population. The majority of respondents either were not aware of this option or never utilized it, suggesting potential areas for improving awareness and promoting the use of alternative formats to enhance course accessibility. However, a notable percentage of respondents used alternative

formats several times, highlighting the importance of providing accessible options for diverse learning needs.

Table 30

Downloading Frequency of Alternative Formats

Frequency of Downloads	Responses	
	N	%
	Blackboard Ally Feedback Survey for Students Results	
I was not aware I could	12	30.8
Never	16	41.0
Once	3	7.7
Several times	8	20.5

H14. The Blackboard Ally report data at a college in the Midwestern United States revealed varying levels of overall usage of Blackboard Ally among faculty and students.

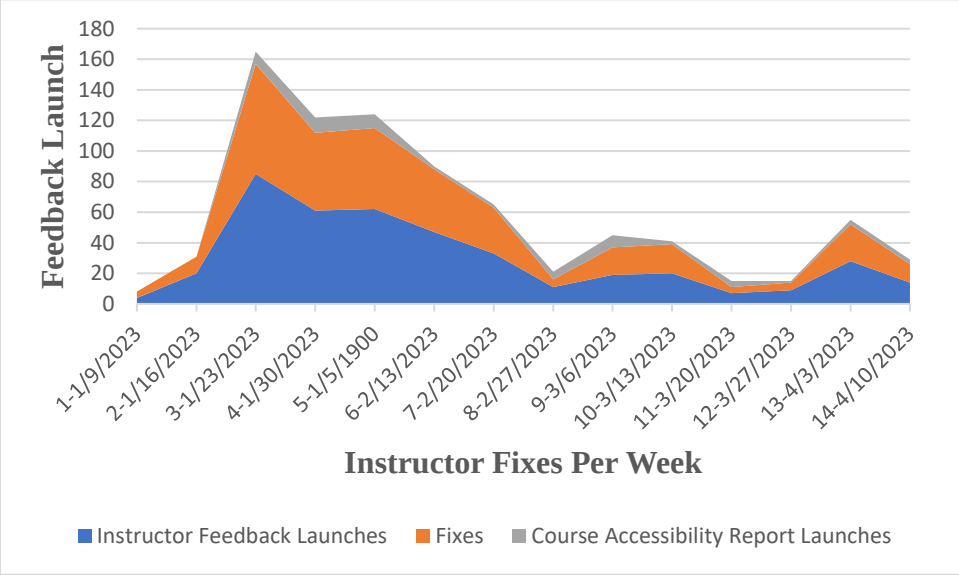
The Blackboard Ally report data indicated the faculty's interest in Blackboard Ally, especially in clicking indicators to learn more. However, not all faculty members acted immediately to address accessibility issues. Students seemed to have limited awareness and need for downloading alternative course file formats.

Notably, the Blackboard Ally report data from January 15 to April 15, 2023, the overall use levels of Blackboard Ally have been relatively consistent over the 14 weeks focused on for this study. The data provided revealed fluctuations in instructor feedback launches and fixes related to Blackboard Ally over several weeks. Following this, there was a period of relatively consistent use, albeit with some fluctuations. However, in the later weeks (Weeks 11 to 14), both launches and fixes declined, with the lowest usage occurring in the twelfth week. Instructors at the college in the Midwestern United States

engaged with Blackboard Ally's instructor feedback tool, particularly during the mid-phase of the data collection period, as presented in Figure 4.

Figure 4

Blackboard Ally Instructor Fixes Per Week

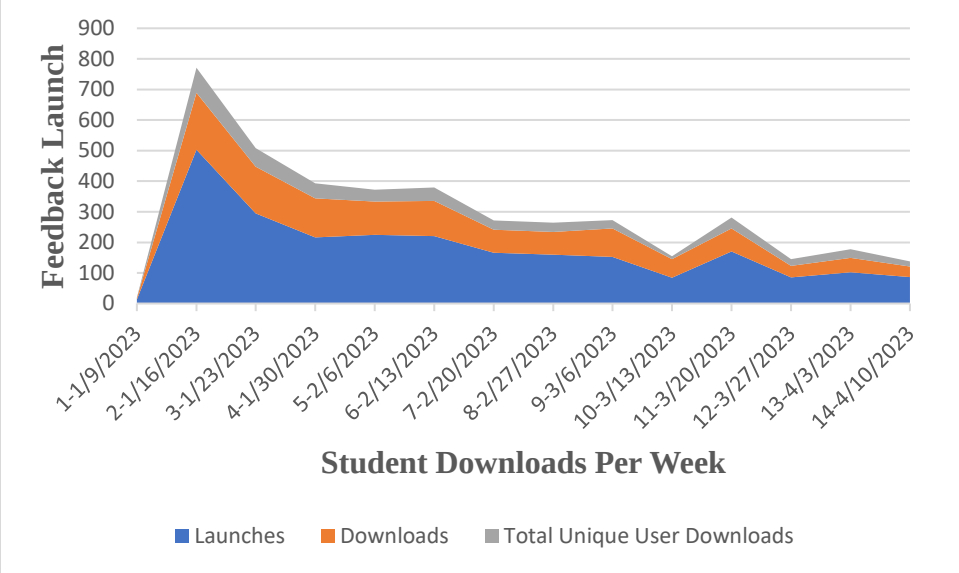


The Blackboard Ally Students Alternative Format Report results at a college in the Midwestern United States indicated varying use levels for Blackboard Ally. The data identified fluctuations in launches, downloads, and total unique user downloads by examining the data. Initially, there was a gradual increase in activity, with the second week reaching the highest levels at 503 launches and 186 downloads, as presented in Figure 5. However, there was a decline in activity for several weeks, with some minor fluctuations. Towards the end of the data period, there was a slight increase in activity, although the numbers remained lower compared to the earlier weeks. These results demonstrated the varying levels of engagement with Blackboard Ally over the given weeks, representing a mix of higher and lower usage percentages throughout the analyzed period.

These findings suggested varying usage levels with Blackboard Ally among faculty members and students at a college in the Midwestern United States, as indicated by survey responses and Blackboard Ally report data.

Figure 5

Blackboard Ally Student Alternative Format Download Per Week



Summary

This study combined descriptive statistics from various survey questions, including how instructors and students learned about Blackboard Ally, responded to the prompts, and the frequency by which students downloaded alternative formats of their course files. Combining this data with the Blackboard Ally Students Alternative Format Report, revealed usage rates and patterns among online students and faculty. Chapter 5 discusses findings related to the literature and concludes with implications for action, recommendations for future research, and final remarks.

Chapter 5

Interpretation and Recommendations

Study Summary

The study aimed to explore faculty and students' self-reported awareness and use of Blackboard Ally for online course accessibility at a college in the Midwestern United States. The researcher collected usage data for Blackboard Ally and surveys from faculty and students to analyze the data and answer the research questions and hypotheses. The study was focused on understanding the level of awareness and use of Blackboard Ally. The study's results may potentially inform the college's efforts to enhance online course accessibility through faculty and student awareness by encouraging the use of Blackboard Ally as a tool to achieve that goal.

Overview of the problem

The problem statement focused on the accessibility of digital content in online learning to all students regardless of their disabilities. The lack of accessibility in online courses has been widely discussed and is a critical challenge facing higher education in the United States (NCES, 2019). Distance education programs have consistently increased enrollment, particularly online education (Inside Higher Education, 2018). Postsecondary institutions are legally obligated to provide accommodations for students with disabilities, but this approach, based on the medical model of disability, has limitations and creates barriers. The social model of disability emphasized creating inclusive environments for all individuals, leading to legal requirements for accessibility in digital content.

The increasing number of lawsuits and complaints related to accessibility highlighted the challenges institutions face in ensuring compliance (Phipps & Kelly, 2006). Accessibility issues in higher education reflected a conflict between the traditional accommodation process and the concept of universally designed and accessible learning environments. The lack of a collaborative institutional infrastructure further hindered effective accessibility practices in online education (K. C. Green, 2010b, 2019; Linder et al., 2015; OLC & WCET, 2019). Limited research has explored the association between faculty responsibilities, knowledge, and practices regarding accessibility.

Although there is an abundance of literature arguing the importance of making online learning accessible, there is a lack of detailed guidance for instructors on how to interpret and implement accessibility guidelines, legislation, standards, and tools that develop accessible online courses (Coombs, 2010). Motivators and barriers such as compensation, prestige, promotion and tenure, interest in innovation and technology, time commitment, and administrative and technical support have influenced faculty participation in accessibility initiatives (Xie et al., 2021a). Inaccessible content in online courses, such as multimedia without accurate captions, transcripts, or documents incompatible with assistive technologies, can significantly impede a student's progress (Bartz, 2020; Fichten et al., 2009). Blackboard Ally is a potential solution to increase awareness of the benefits of making online courses more accessible.

Purpose statement and researched questions

The study explored faculty and student awareness and use of Blackboard Ally for online course accessibility at a college in the Midwestern United States. The study aimed to explore the awareness and utilization of Blackboard Ally among different demographic

groups of online faculty and students, with some students being unaware of its existence. The researcher used quantitative methods to summarize and describe the perceived importance of accessibility and self-reported awareness and examined the use of Blackboard Ally. The study collected surveys from online instructors and students and disaggregated the data by demographic subgroups to explore any differential trends. Additionally, the study investigated student knowledge of accessibility to online courses and the college's potential to deliver online courses in ways that are accessible to all.

The current study was guided by four research questions that aimed to quantify and summarize the overall and disaggregated perceived levels of faculty and students' awareness, the importance of accessibility, and levels of use of Blackboard Ally. The study also explored differential trends for demographic subgroups and compared Feedback with the relevant Blackboard Ally report data.

RQ1: To what extent do the Blackboard Ally Feedback Survey for Faculty responses and the Blackboard Ally Feedback Survey for Students responses indicate the perceived importance of accessibility for student learning in online courses at a college in the Midwestern United States?

RQ2: To what extent are there differential trends within disaggregated demographic subgroups of the Blackboard Ally Feedback Survey for Faculty and the Blackboard Ally Feedback Survey for Students regarding the perceived importance of accessibility at a college in the Midwestern United States?

RQ3: To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the

Blackboard Ally report data for online courses indicate an awareness of Blackboard Ally at a college in the Midwestern United States?

RQ4: To what extent do the Blackboard Ally Feedback Survey for Faculty responses, the Blackboard Ally Feedback Survey for Students responses, and the Blackboard Ally report data indicate the use of Blackboard Ally at a college in the Midwestern United States?

Review of the methodology

This chapter discussed the research design, selection of participants, and measurement tools used in a study aimed at understanding the perceived importance of accessibility and self-reported awareness and use of Blackboard Ally for online faculty and students. The study utilized a quantitative descriptive research design, with data collected from Blackboard Ally Usage Reports and two surveys administered to faculty and students at college in the Midwestern United States. The surveys included Likert-type scaled items to measure online instructor and student levels of perceived importance for accessibility, awareness of Blackboard Ally, and self-reported use of Blackboard Ally. The data collected from the surveys coalesced into frequencies and percentages for each item's response categories, and demographic subgroups were described. The Blackboard Ally report data was used to triangulate the survey data, providing a better understanding of Blackboard Ally awareness at a college in the Midwestern United States. The selection of participants for the study involved a criterion sampling approach, with only online instructors and students enrolled in courses that were facilitated entirely online being considered eligible.

Major findings

The significant finding for Research Question 1 (RQ1) in this study was that faculty members demonstrated varying levels of engagement with Blackboard Ally's accessibility features. Specifically, when presented with Blackboard Ally indicators in their courses, most participating faculty (58.3%) clicked on the indicator to learn more, indicating an initial interest in understanding accessibility issues. However, a smaller percentage (16.7%) started fixing files immediately after clicking on the indicators. Additionally, a minority (8.3%) ignored the indicators or did not notice them. This suggested that while there is initial curiosity and engagement with Blackboard Ally's accessibility features, a significant portion of faculty may need further support or encouragement to improve accessibility in their online courses.

The significant finding for Research Question 2 (RQ2) in this study was related to the faculty's utilization of instructor feedback provided by Blackboard Ally. The results indicated that when faculty members clicked on Blackboard Ally indicators and accessed instructor feedback, a majority that responded (75%) reported that they read the feedback and made an effort to fix the accessibility issues identified. This finding suggested that faculty members who engaged with the feedback provided by Blackboard Ally were generally proactive in addressing accessibility issues in their course materials. However, a small percentage of respondents (8.3%) checked the issue and score but did not proceed further, indicating some level of engagement without immediate action. Notably, a minority (16.7%) of faculty respondents had never clicked on a Blackboard Ally indicator, highlighting the need for strategies to encourage more instructors to engage with accessibility feedback.

The significant finding for Research Question 3 (RQ3) in this study was related to student awareness and usage of alternative formats provided by Blackboard Ally. The results showed that a significant portion of students (41%) reported that they were never aware that they could download alternative formats of course files. Additionally, 30.8% of students indicated they were unaware they could download alternative formats, and 7.7% of students reported doing so only once. These findings suggested a notable need for more awareness among students regarding the availability of alternative formats for course files through Blackboard Ally.

The significant finding for Research Question 4 (RQ4) in this study pertained to the overall usage of Blackboard Ally among faculty and students at the college in the Midwestern United States where the survey was conducted. The results revealed varying levels of use reported among both groups.

For faculty, the survey responses indicated that when they encountered Blackboard Ally indicators in their courses, 58.3% of faculty clicked on the indicator to learn more, and 16.7% started fixing files immediately after clicking on the indicators. However, 8.3% of faculty respondents had not noticed the indicators but expressed the intention to look for them now. This suggested a relatively positive response from faculty, with the majority having demonstrated engagement with the tool.

For students, the findings showed that a significant portion (41%) reported that they were never aware they could download alternative formats of course files, which indicated limited awareness of this feature. This indicated a need for more awareness because there was relatively low usage of Blackboard Ally's alternative formats among students.

In summary, the major finding for RQ4 was varying usage levels of Blackboard Ally among faculty and students. Faculty generally showed more engagement and positive responses to the tool, when aware, while many students had limited awareness and limited usage of Blackboard Ally's alternative formats.

Findings related to the literature

The literature review of existing literature uncovered critical gaps and insights pertinent to the research. Firstly, a substantial gap was identified in understanding the awareness and training of faculty members regarding accessibility tools such as Blackboard Ally, which emphasized the need to enhance faculty knowledge and skills in this domain. Second, the literature underscored the importance of exploring the experiences of students in accessing and benefiting from accessibility features—a gap that requires more profound consideration of student perspectives. Third, while the theoretical benefits of accessibility tools were well-documented, practical implementation factors, including institutional support and faculty motivations, remained underexplored. This highlighted the significance of understanding contextual factors affecting tool integration. Fourth, the literature pointed to a need to investigate these tools' long-term impact on course design, student outcomes, and institutional practices. Lastly, there was a gap in comprehending the effectiveness of faculty development initiatives concerning accessibility tools, emphasizing the importance of holistic faculty support. These findings collectively informed the study's research questions and provided a roadmap for comprehensively addressing accessibility in online education. The following sections describe implications for action from the surveys and Blackboard Ally report data and their relation to the literature reviewed in Chapter 2.

Implications for action

Blackboard Ally offers tools and resources that enhance the accessibility of online course materials. Its implementation enables educational institutions to ensure that students with disabilities can access educational content equally. This led to better learning outcomes and promoted inclusivity in online learning settings. By adopting Blackboard Ally, institutions fulfilled accessibility requirements, minimizing the risk of legal issues and fostering a more inclusive learning environment. A comprehensive awareness and training program is necessary to utilize Blackboard Ally effectively. Faculty and staff should receive education on best practices for accessibility and how to effectively use the features provided by Blackboard Ally. This training cultivates a culture of accessibility within the institution and empowers educators to create accessible content in the future. Blackboard Ally generates accessibility scores and offers feedback on the accessibility of course materials. This feedback assists instructors in identifying areas for improvement and making necessary adjustments to ensure content accessibility for all students. Over time, this process results in higher-quality educational materials and a more inclusive learning experience. Blackboard Ally also provides alternative accessible formats for course materials, such as audio, ePub, and electronic braille. By implementing these features, institutions can offer additional support to students with diverse learning needs, thereby enhancing engagement and comprehension for those who struggle with standard text-based materials.

Moreover, Blackboard Ally supplies data and analytics on course material accessibility at an institutional level. This data aids administrators and instructional designers in identifying trends, tracks progress, and allocating resources to improve

accessibility across various courses and departments. Implementing Blackboard Ally is not a one-time task but an ongoing commitment to accessibility. By integrating accessibility practices into the institution's workflows, policies, and procedures, potential long-term benefits include increased student retention, an enhanced reputation, and a more inclusive and equitable learning environment. It is important to note that while Blackboard Ally can provide valuable accessibility support, it should be considered as one part of a broader accessibility strategy. Institutions should also address physical accessibility, assistive technologies, and providing support services to create a genuinely inclusive educational experience for all students.

Recommendations for future research

Several recommendations for future research stem from the findings of this study:

1. Further investigation into instructors' perceptions of the Blackboard Ally information and its potential intrusiveness or intimidation factors could provide valuable insights. Conducting surveys or interviews with instructors to investigate their experiences and attitudes toward Blackboard Ally's feedback system would shed light on this aspect.
2. Exploring the specific challenges or barriers that inhibit students from utilizing alternative formats offered by Blackboard Ally, as well as their preferences for accessible content, would be beneficial.
3. Surveying institutional staff to assess the effectiveness of instructor training programs related to accessibility tools like Blackboard Ally could offer insights into the training's impact and areas for improvement.

4. Examining the long-term effects of Blackboard Ally's implementation on course design, student outcomes, and institutional accessibility practices would provide a comprehensive understanding of its impact on online education.
5. Future research should consider population expansion since this study was conducted in a Midwestern college.

Concluding remarks

The study aimed to explore faculty and students' self-reported awareness and use of Blackboard Ally for online course accessibility. The findings revealed that faculty and students reported moderate awareness and use of Blackboard Ally. It also identified several barriers to using Blackboard Ally, including lack of training, time constraints, and technical difficulties. Addressing these barriers may increase the use of Blackboard Ally and improve online course accessibility.

Overall, the study highlights the need to provide adequate training and support for faculty and students to use Blackboard Ally and improve online course accessibility effectively. Further research is needed to explore how to overcome the identified barriers and enhance the use of Blackboard Ally.

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Appendix A: The Blackboard Ally Feedback Survey for Faculty

Ally feedback survey for faculty

Survey Purpose

This survey is designed to help us become a more accessible and inclusive campus. To better align our support and resources, we want to learn more about your experiences and understandings of accessibility using Blackboard Ally. We understand accessibility may be new to you, and that is OK. Responding honestly will help inform how our team can better support you.

About the Survey

This survey should take 5-10 minutes and includes 17 items.

Survey Structure

The survey consist of three parts:
1. Your demographic (3 questions)
2. Your awareness and usage of Ally (9 questions)
3. Your usage of Ally to address specific accessibility issues (5 questions)

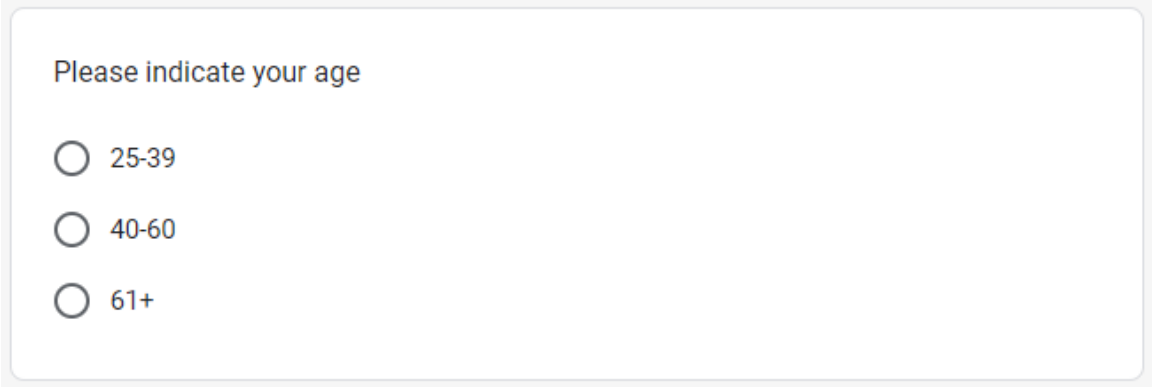
* Required

F1

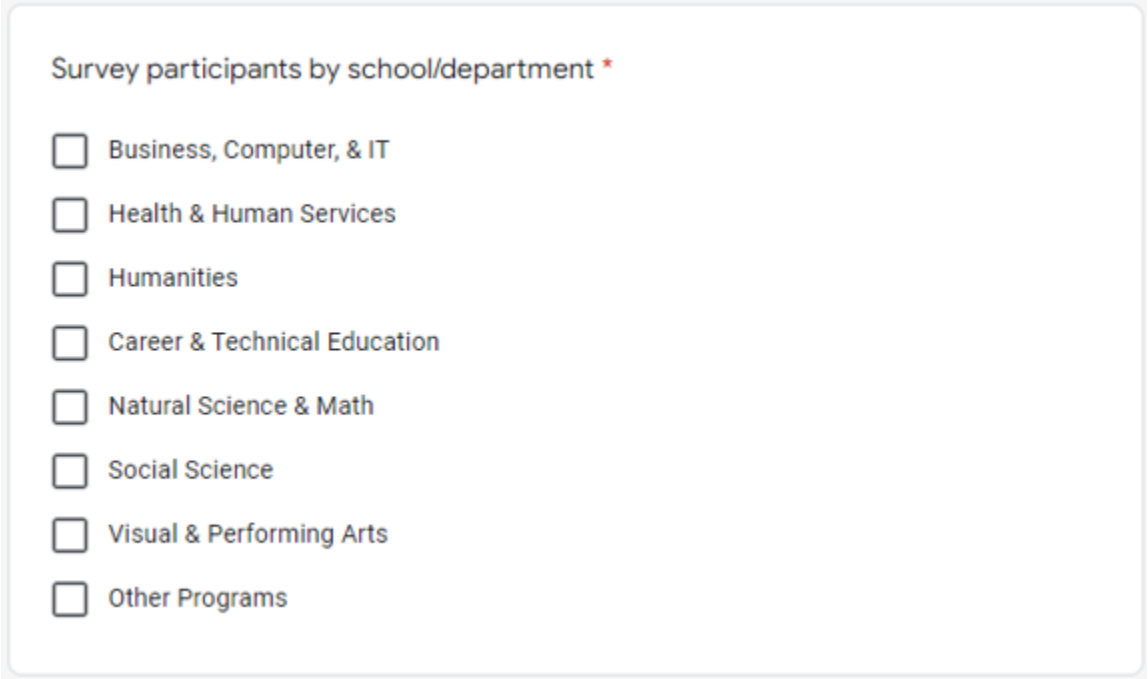
Please indicate your gender

- ◯ Male
- ◯ Female
- ◯ Prefer not to respond

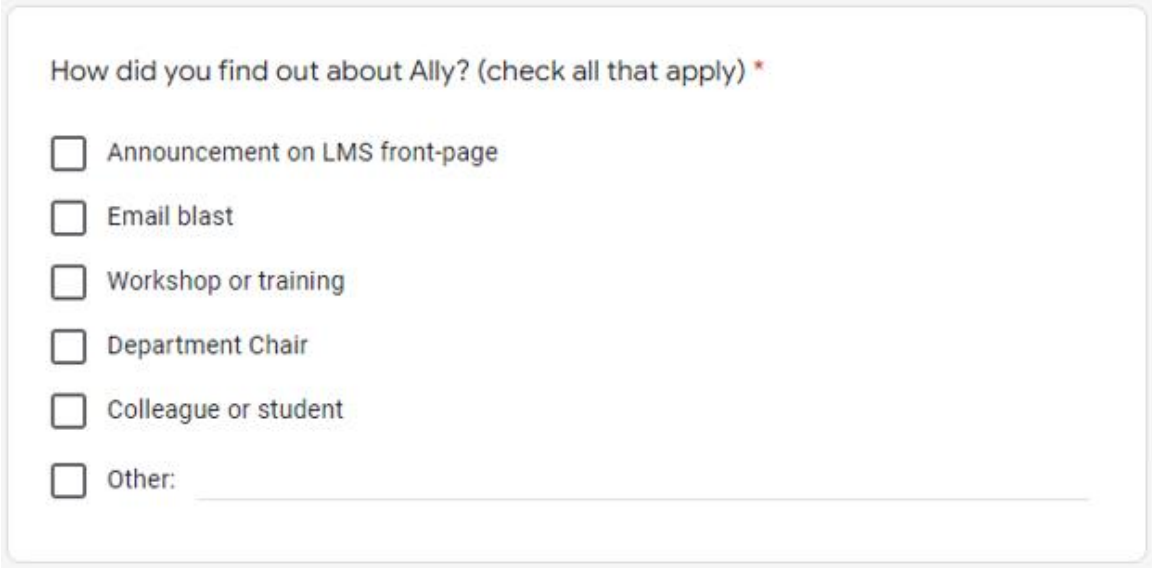
F2


Please indicate your age
25-39
40-60
61+

F3

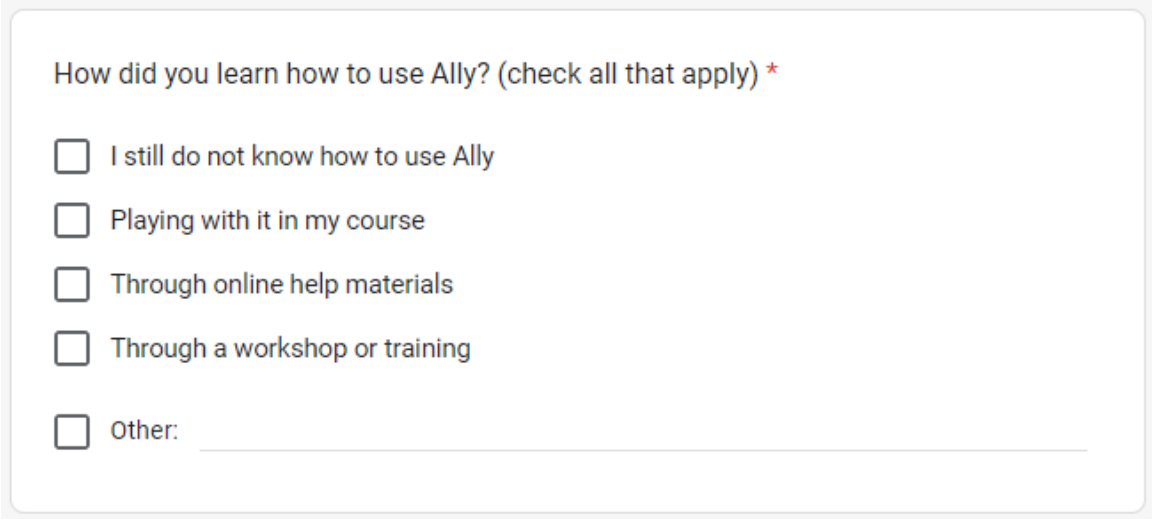

Survey participants by school/department *
Business, Computer, & IT
Health & Human Services
Humanities
Career & Technical Education
Natural Science & Math
Social Science
Visual & Performing Arts
Other Programs

F4


How did you find out about Ally? (check all that apply) *

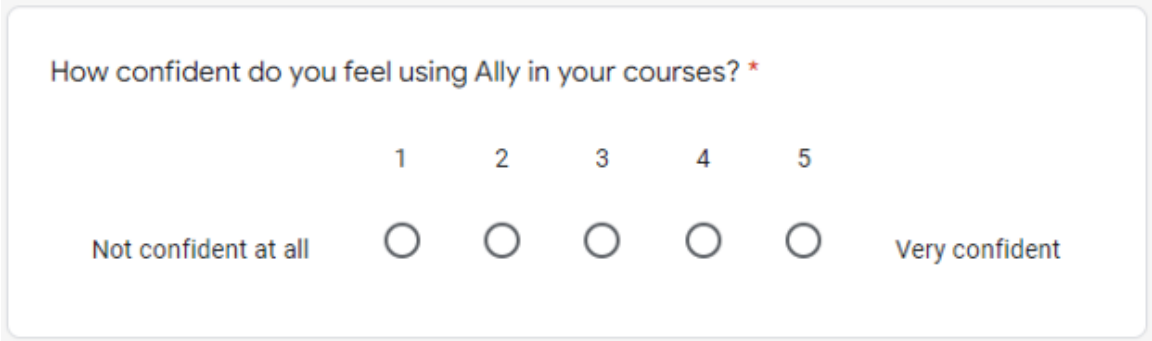
- [ ] Announcement on LMS front-page
- [ ] Email blast
- [ ] Workshop or training
- [ ] Department Chair
- [ ] Colleague or student
- [ ] Other: _____

F5


How did you learn how to use Ally? (check all that apply) *

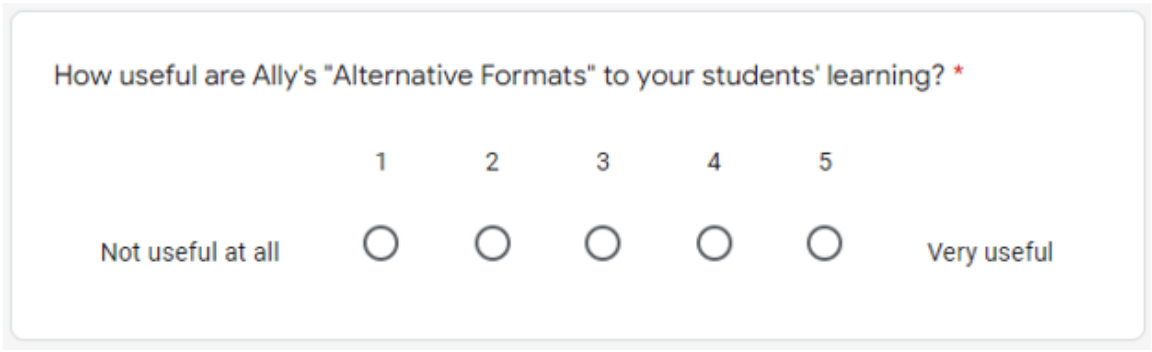
- [ ] I still do not know how to use Ally
- [ ] Playing with it in my course
- [ ] Through online help materials
- [ ] Through a workshop or training
- [ ] Other: _____

F6

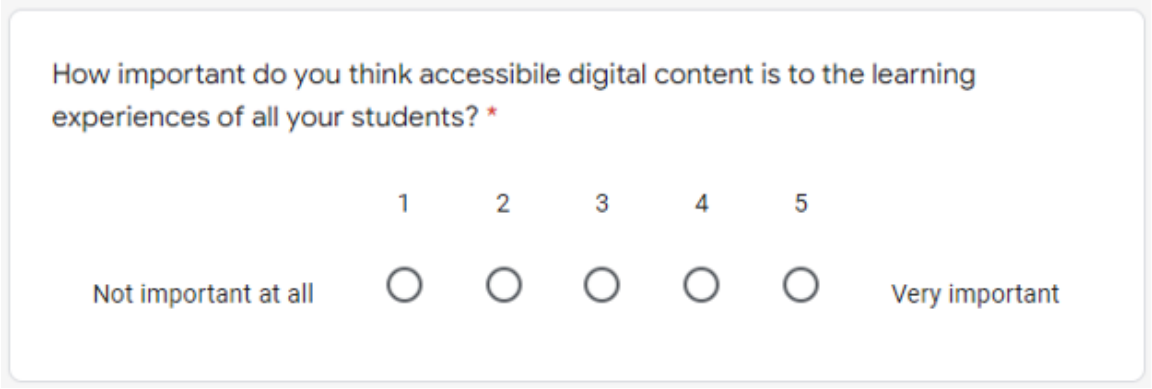

How confident do you feel using Ally in your courses? *

	1	2	3	4	5	
Not confident at all	○	○	○	○	○	Very confident

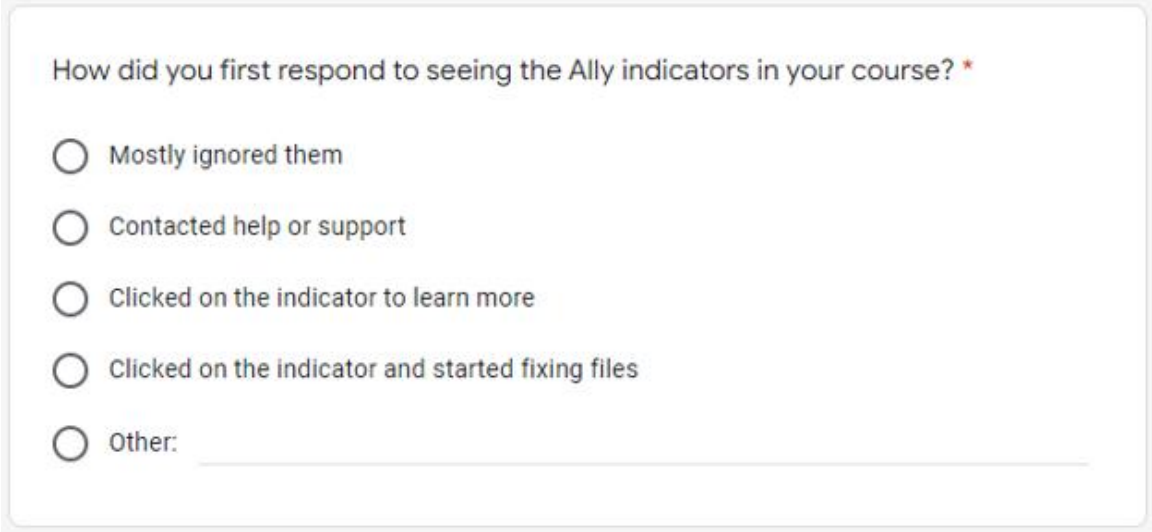
F7


How useful are Ally's "Alternative Formats" to your students' learning? *
1
2
3
4
5
Not useful at all
Very useful

F8


How important do you think accessibile digital content is to the learning experiences of all your students? *
1
2
3
4
5
Not important at all
Very important

F9


How did you first respond to seeing the Ally indicators in your course? *
Mostly ignored them
Contacted help or support
Clicked on the indicator to learn more
Clicked on the indicator and started fixing files
Other:

F10

How do you use the Instructor Feedback once you have clicked an indicator? *

- ○ I have never clicked an Ally indicator
- ○ I check out the issue and score, but stop there
- ○ I read the Ally info about the issue, but do not try to fix it
- ○ I read the feedback and try my best to fix the issue

F11

If you cannot figure out how to solve an accessibility issue with the Instructor Feedback, what would you do next? *

- ○ Ignore the issue
- ○ Look online for accessibility tutorials
- ○ Replace the file with a new one
- ○ Contact support at my institution
- ○ I am always able to fix the issue

F12

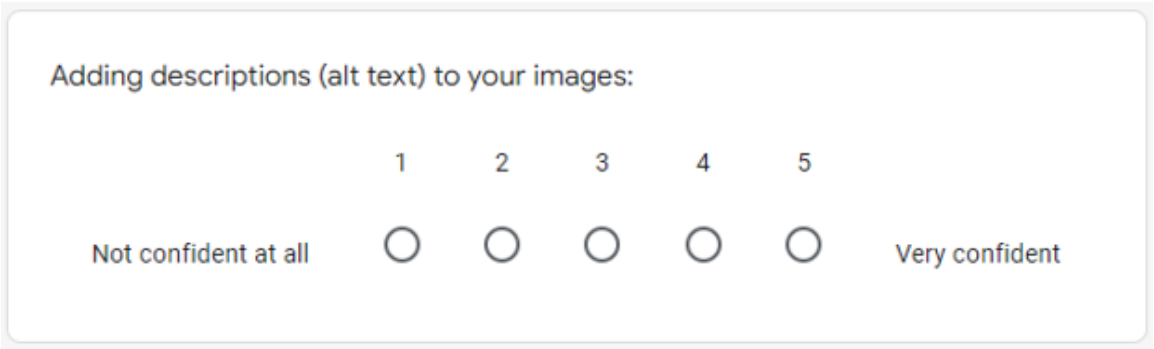
How would you rate the Instructor Feedback for fixing accessibility issues? *

	1	2	3	4	5	
Not helpful at all	○	○	○	○	○	Very helpful

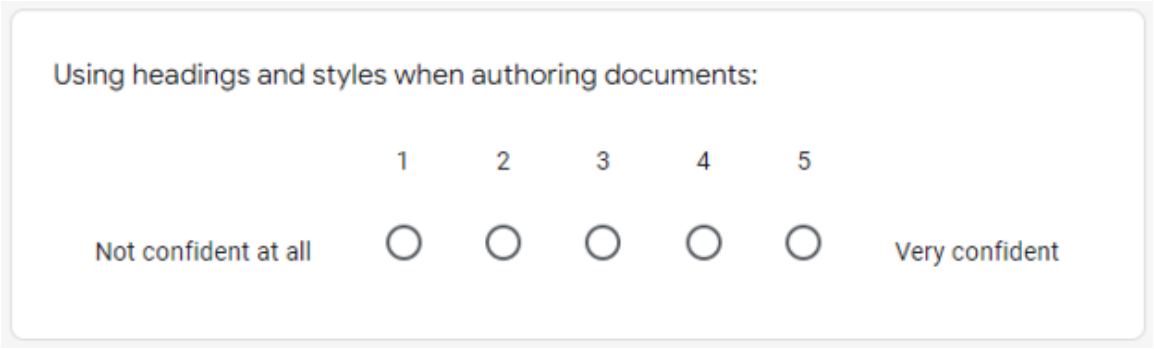
Accessibility Issues

The 5 items below cover specific accessibility issues. How confident do you feel using Ally to fix these issues? If you have never encountered an issue, leave the survey item blank.

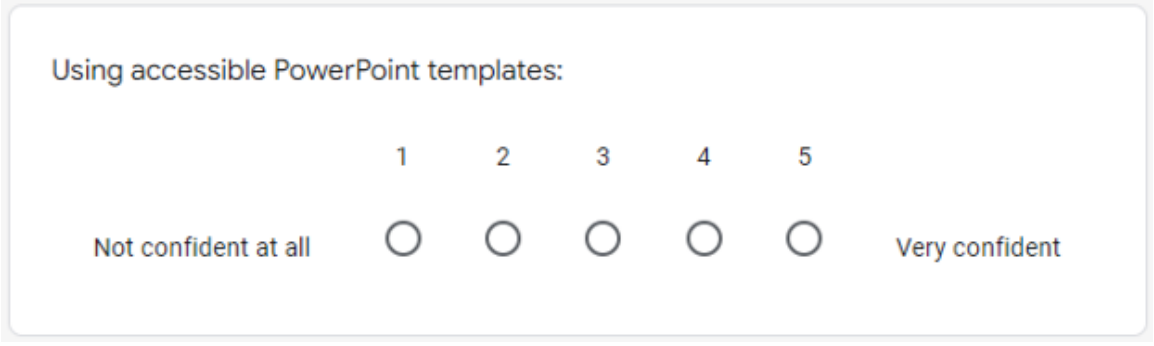
F13



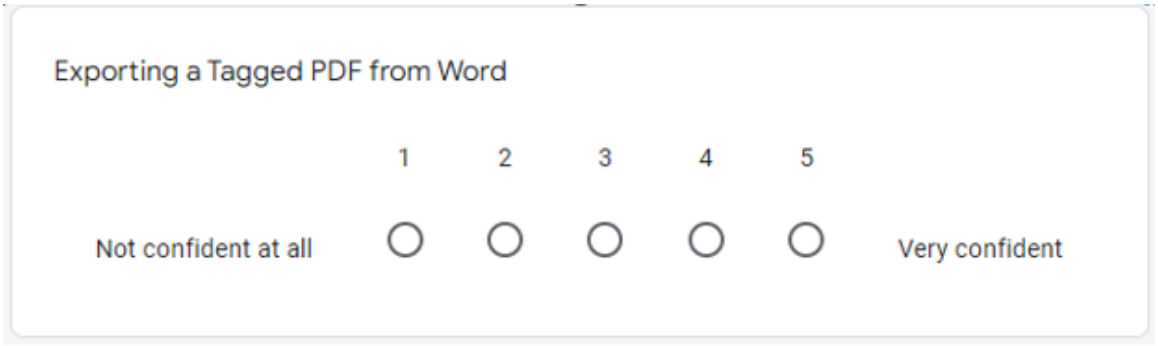
F14



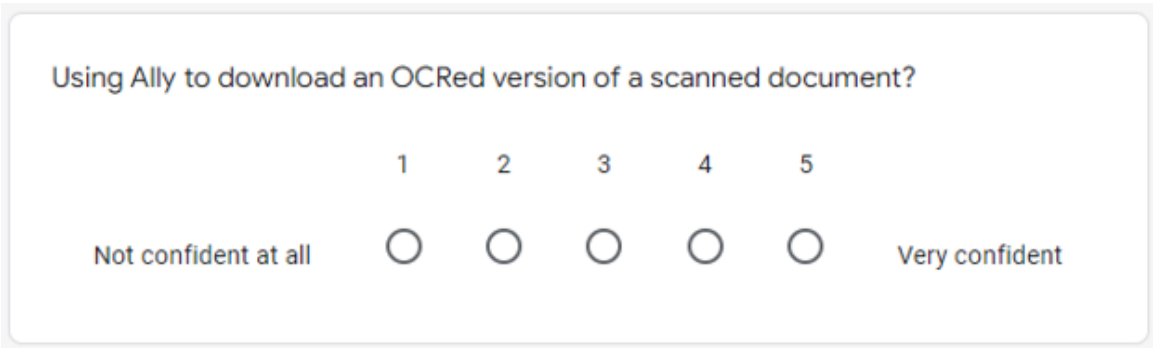
F15



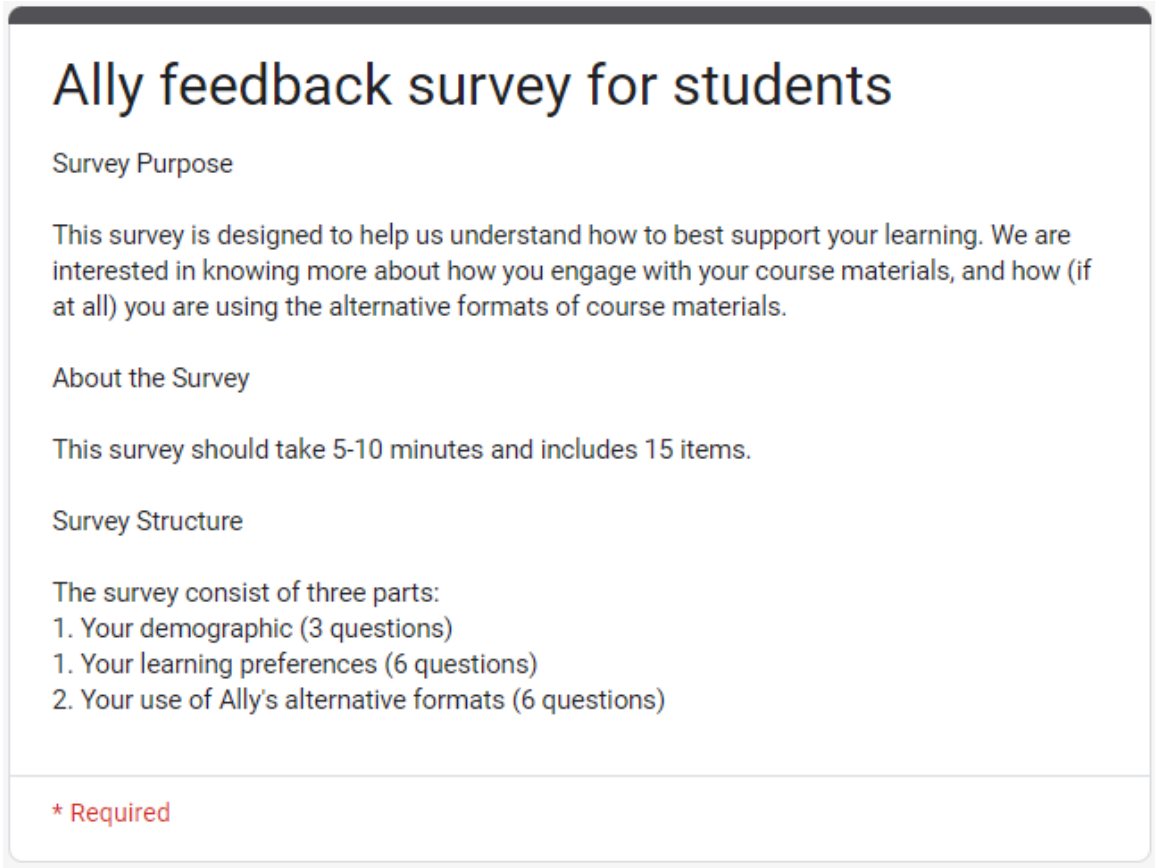
F16


Exporting a Tagged PDF from Word
1
2
3
4
5
Not confident at all
Very confident

F17


Using Ally to download an OCRed version of a scanned document?
1
2
3
4
5
Not confident at all
Very confident

Appendix B: The Blackboard Ally Feedback Survey for Students



Ally feedback survey for students

Survey Purpose

This survey is designed to help us understand how to best support your learning. We are interested in knowing more about how you engage with your course materials, and how (if at all) you are using the alternative formats of course materials.

About the Survey

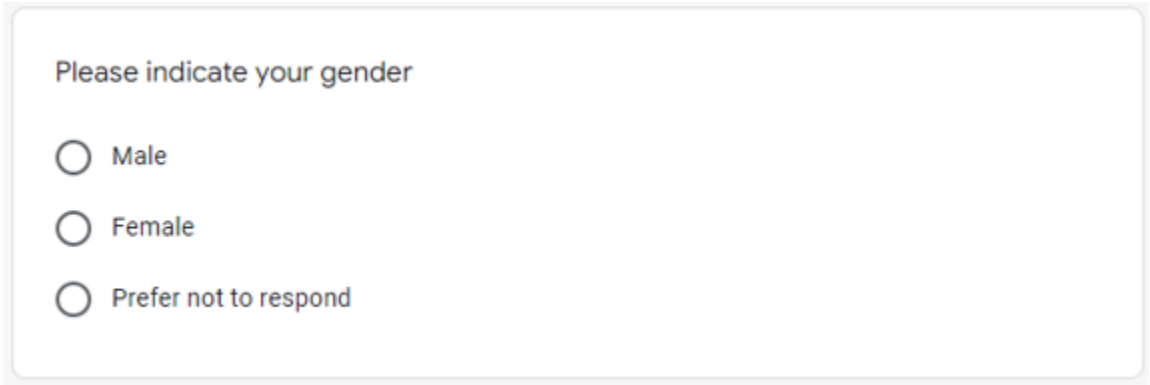
This survey should take 5-10 minutes and includes 15 items.

Survey Structure

The survey consist of three parts:
1. Your demographic (3 questions)
1. Your learning preferences (6 questions)
2. Your use of Ally's alternative formats (6 questions)

* Required

S1



Please indicate your gender

- ○ Male
- ○ Female
- ○ Prefer not to respond

S2

Please indicate your age

- ○ 18-25
- ○ 26-39
- ○ 40-59
- ○ 60+

S3

What year are you?

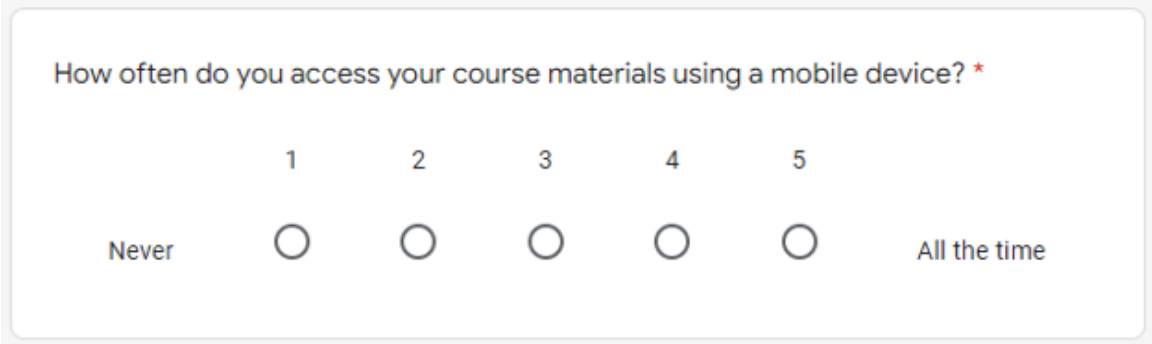
- ○ 1st year undergraduate student
- ○ 2nd year undergraduate student
- ○ 3rd year undergraduate student
- ○ Other

S4

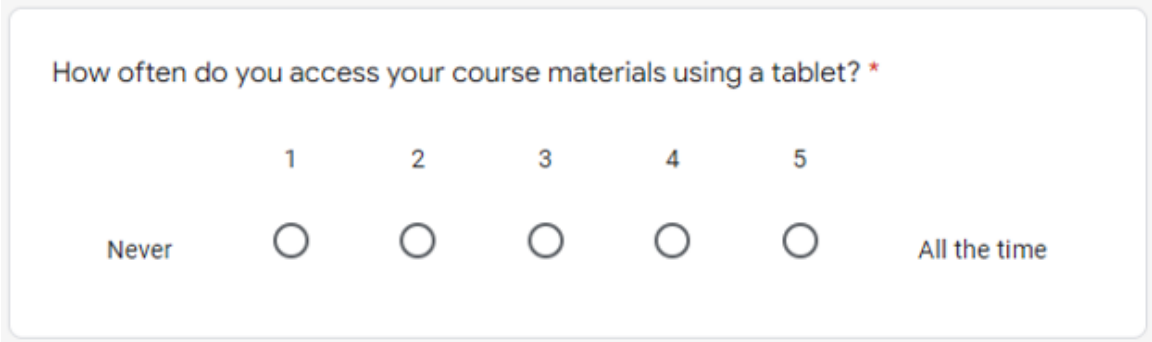
How often do you access your course materials using a desktop or laptop? *

	1	2	3	4	5	
Never	○	○	○	○	○	All the time

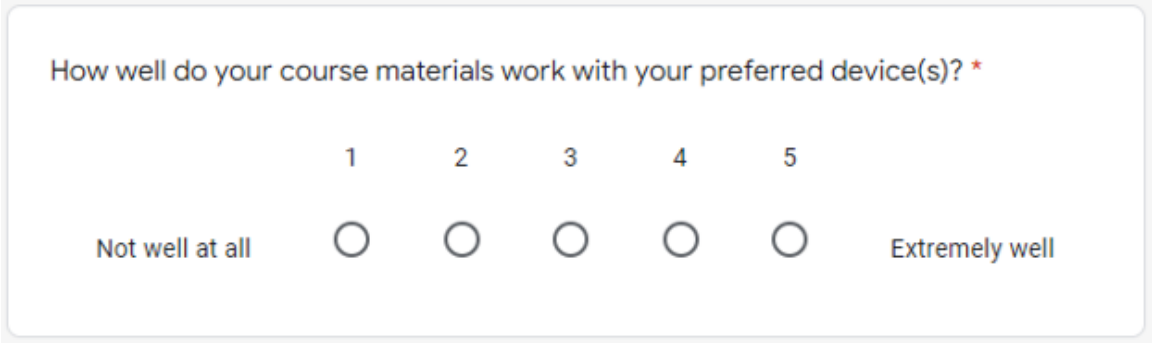
S5


How often do you access your course materials using a mobile device? *
1
2
3
4
5
Never
All the time

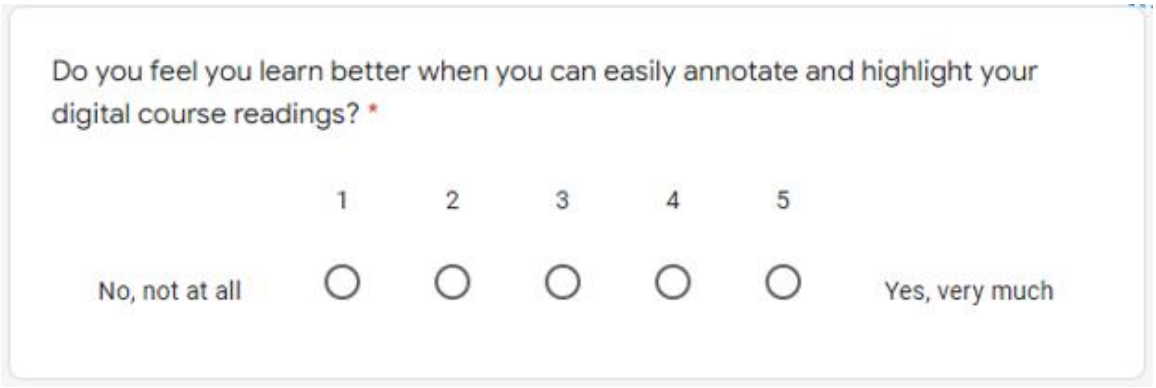
S6


How often do you access your course materials using a tablet? *
1
2
3
4
5
Never
All the time

S7


How well do your course materials work with your preferred device(s)? *
1
2
3
4
5
Not well at all
Extremely well

S8


Do you feel you learn better when you can easily annotate and highlight your digital course readings? *
1
2
3
4
5
No, not at all
Yes, very much

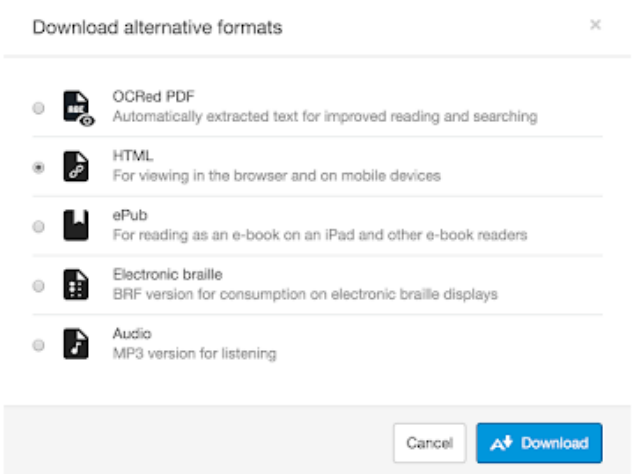
S9

Do you feel you learn better when you can both read and listen to course materials? *

	1	2	3	4	5	
No, not at all	○	○	○	○	○	Yes, very much

S10

How did you learn about downloading alternative formats of your course files? *



Screenshot of alternative formats download with different formats

- [ ] Instructor syllabus
- [ ] Instructor announcement
- [ ] Campus announcement
- [ ] Campus event
- [ ] Peer
- [ ] Never heard about alternative formats
- [ ] Other: _____

S11

How often do you download alternative formats of your course files? *

- ◯ I was not aware I could
- ◯ Never
- ◯ Once
- ◯ Several times
- ◯ Whenever they are available

S12

What alternative format do you download the most? *

- ◯ None
- ◯ Tagged PDF
- ◯ HTML
- ◯ ePub
- ◯ Electronic braille
- ◯ Audio MP3

S13

Do you download formats based on the device you are using? *

	1	2	3	4	5	
No, never	◯	◯	◯	◯	◯	Yes, all the time

S14

Did your instructor encourage your class to use the alternative formats? *

	1	2	3	4	5	
No, not at all	○	○	○	○	○	Yes, very much

S15

How is the quality of the alternative formats you have downloaded? (leave blank if you have never downloaded)

	1	2	3	4	5	
Very low quality	○	○	○	○	○	Very high quality

Appendix C: Participant Email

Dear faculty:

I am presently a doctoral student at Baker University, completing my dissertation. As part of this study, I am examining the faculty awareness and confidence in using Blackboard Ally. I kindly ask for your participation in a survey, which you can find by clicking on the following link:

https://docs.google.com/forms/d/e/1FAIpQLSeLeV9JjOnIrtDlCR6kl-7Jh8yJyWyxpST0aEpVoYUSb0jWYQ/viewform?usp=sf_link

The entire survey should take 10-15 minutes for you to complete. Your responses will remain anonymous.

All answers will be kept confidential and combined with responses from other participants in summary form. The survey's completion will indicate your consent to participate and permission to use the information you provided in my research study. Thank you in advance for your time and participation in the study. I sincerely appreciate your willingness to support this work. Please do not hesitate to let me know if you have any questions or concerns regarding the survey. Participants can reach me anytime at GaileenTNguyen@stu.bakeru.edu.

Sincerely,
Gaileen

Dear students':

I am presently a doctoral student at Baker University, completing my dissertation. As part of this study, I am examining the students' awareness and confidence in using Blackboard Ally. I kindly ask for your participation in a survey, which you can find by clicking on the following link:

https://docs.google.com/forms/d/e/1FAIpQLScUhSimeLQWdNU7307yMUNwyPWfqfCvkbq351Kwg-jl7TaA3g/viewform?usp=sf_link

The entire survey should take 10-15 minutes for you to complete. Your responses will remain anonymous.

All answers will be kept confidential and combined with responses from other participants in summary form. The survey's completion will indicate your consent to participate and permission to use the information you provided in my research study. Thank you in advance for your time and participation in the study. I sincerely appreciate your willingness to support this work. Please do not hesitate to let me know if you have any questions or concerns regarding the survey. Participants can reach me anytime at GaileenTNguyen@stu.bakeru.edu.

Sincerely,
Gaileen

Appendix D: Cowley IRB Approval

March 5, 2023

Ms. Nguyen,

The research project *An Exploration of Faculty and Students' Self-Reported Awareness and Confidence in Using Ally for Online Course Accessibility* (IRB code 202202) has been approved without modification by the Cowley College Institutional Review Board. Based on the timeline included in the IRB application this approval for research expires at the end of May 2023, but may be extended upon request. If you have additional questions, concerns, or modifications please contact me using the information below.

Scott Layton
IRB Chair
620-441-5331
scott.layton@cowley.edu

Appendix E: Baker IRB Approval

Baker University Institutional Review Board

March 21st, 2023

Dear Gaileen Nguyen and Regena Aye,

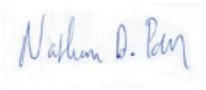
The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,



Nathan Poell, MLS
Chair, Baker University IRB

Baker University IRB Committee
Tim Buzzell, PhD
Nick Harris, MS
Scott Kimball, PhD
Susan Rogers, PhD