Blackboard

Making education accessible throughout the learning environment

Why accessibility is so crucial in higher education

The estimates vary, but it's safe to say that more than 10% of students enrolled in higher education have some type of disability. That number may be low, as there is evidence suggesting that many students—eager to blend in and hoping to avoid being labeled with the stereotypes associated with diverse abilities—choose not to disclose that they're dealing with a physical or cognitive challenge.

Worldwide, an estimated one billion people experience some sort of physical, visual, hearing or cognitive disability. Blackboard considers making education accessible to these individuals both a moral and legal imperative. For an in-depth discussion on this topic, please see our recent white paper, *Why Accessibility: the accessibility imperative for education.*

Having such a challenge doesn't mean that a student isn't fully capable. Rather, it means that they must work harder to overcome educational barriers, however inadvertently those barriers may have been erected. To ensure that all students have equal access to learning, colleges and universities are making accommodations related to information accessibility and the use of technology. Given how rapidly technology is being deployed throughout the campus environment, where so much student interaction occurs online, such accommodations are critical.

Many schools offer online courses: asynch, synchronous, or blended. Even a fully face-to-face course given in a traditional classroom may have an online component such as an in-class survey, as instructors look to keep students engaged and attentive. Whether the classroom is virtual or physical, it must be inclusive. And given the role that technology plays, accessibility is essential not just inside the inclusive classroom, but throughout the entire learning environment.

What are the online outside-the-classroom activities that need to be made accessible?

- Student support and office hours
- Class projects calling for online collaboration
- Receiving and submitting assignments
- Course materials and grading

- Admissions, registration, financial aid
- Student accounts
- Emergency alerts
- Library services

Colleges and universities making a commitment to accessibility can attract and retain a more diverse set of students, help ensure that they're meeting government standards, and, most importantly, meet the needs of all students.

"You can tell in just some of the wording that they use, referring to accessibility in the design process and products that are born accessible and don't require retrofitting. The fact that they're asking the accessibility question that much earlier on makes all the difference, and you can see it when you actually go to use one of Blackboard's products—like Collaborate, where you don't have to memorize entire lists of different commands or learn a counterintuitive way to navigate the interface. It just works. It works intuitively, and it works well. That's all because of Blackboard's considering accessibility so early in the design process. And that's what really makes them a leader."

Aaron Page
Accessibility Specialist, University of Montana

At the heart of the accessible learning environment: the inclusive classroom

When describing the inclusive classroom, the definition of inclusivity created by the National Center for Educational Restructuring and Inclusion (NCERI) is a good place to start. According to the NCERI, inclusivity means:

> Providing to all students, including those with significant disabilities, equitable opportunities to receive effectual educational services, with the needed supplementary aids and support services, in age appropriate classrooms in their neighborhood schools, in order to prepare students for productive lives as full members of society.

While this definition addresses younger students, it applies to post-secondary learners as well. With the need to provide for all students in mind, many colleges and universities do integrate those with diverse needs into the learning process, with the expectation that they will complete the same work in the same manner as their classmates. A truly inclusive classroom takes this a step further enabling all the students in a classroom to reach the same goals, but via a different path if needed. An example may help explain the difference between an integrated classroom and an inclusive one.

In an integrated writing class, all students are asked to find a photo of something that illustrates the topic they're studying, and tell the class about it. A Blind student would have to ask someone to pick a photo and describe it for them. With this knowledge, the Blind student can complete the task. In an inclusive writing class, the assignment asks students to find a poem, photo, song, or other item illustrating the topic they're studying, and tell the class about it. This gives all students multiple ways to satisfy the assignment. Each student can now do more than complete the activity on their own. Now they can achieve the objective: share something meaningful with the class.
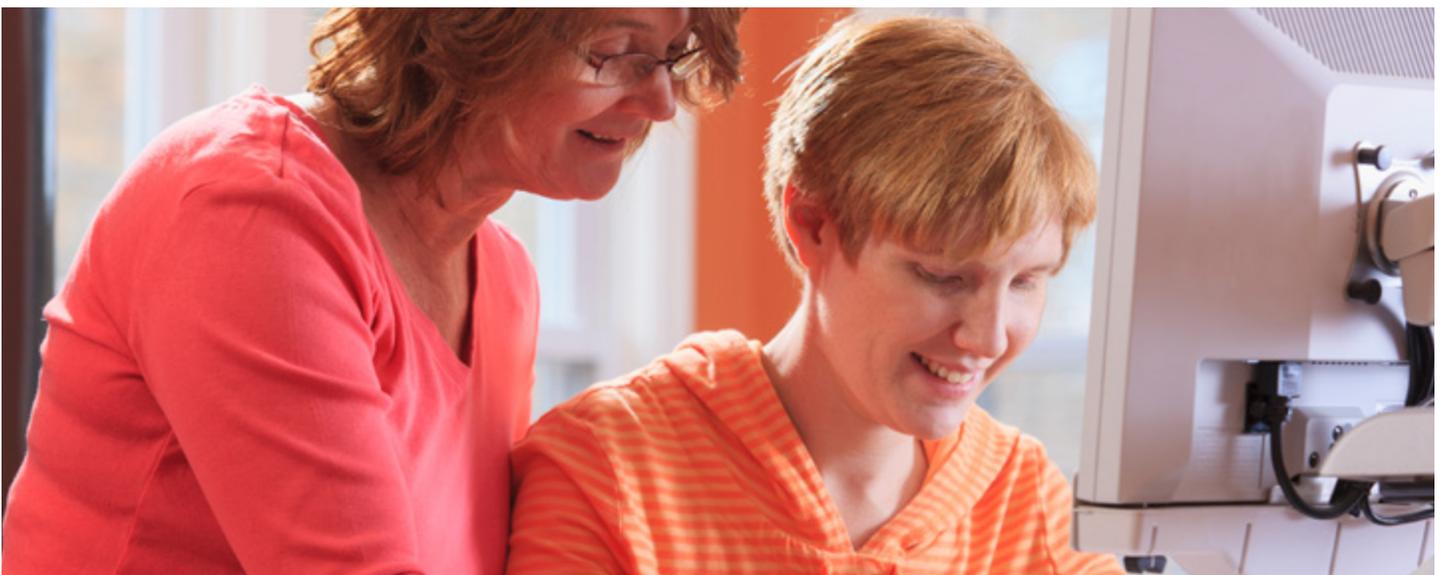
What are the needs that the inclusive classroom must be able to respond to?

Building inclusive classrooms, and an overall approach to creating an accessible learning environment, starts with understanding the diverse needs your students may have—not all of which are apparent or obvious.

Someone with a visual disability…

- May struggle to see certain colors.
- May have low vision and rely on assistive devices to help them see (glasses, magnifiers, etc.).
- May be completely blind and rely on screen readers to consume digital content.

Someone with a hearing disability…

- May have limited hearing and rely on assistive devices to help them (hearing aids, implants, etc.).
- May be completely deaf and rely on sign language or text based alternatives to audio content.

Someone with a physical disability…

- May not have control over gross or fine motor skills required to use technology.
- May rely on alternative input devices to interact with digital content.

Someone with a cognitive disability…

- May have difficulty receiving and processing information that's delivered in certain formats.
- May be easily distracted and have trouble with memory.
- May rely on assistive tools for reading and comprehension assistance.

"Gallaudet University is known as the global leader in deaf education. We saw an opportunity to extend that to online education. To that end, we asked Blackboard to assist with developing a roadmap for strengthening the infrastructure for online education at Gallaudet."

Mary "Tammy" Weiner, PhD
Director, Office of Distance Education, Gallaudet University

Building an inclusive classroom

Blackboard has created a framework that gives instructors the foundation they need to create an inclusive classroom. This framework covers the three elements required for true inclusivity:

Create inclusive pedagogy

Creating an inclusive pedagogy may mean rethinking how learning is achieved, and providing new means to help students succeed. Instructors should start with their curriculum, looking for ways to ensure these best practices throughout their courses.

- A syllabus has been made available within the course and is easily accessible for all students. A well-crafted syllabus includes all important course details: description, materials, assignments, tests, instructor contact information, etc. It will enable students to quickly gain an understanding about what the class entails and what the instructor's expectations are.

- The course goals and learning outcomes are clearly defined, either in the syllabus or in the course units themselves. With this information, students can understand precisely what skills and knowledge they will be developing in the course.

- Differentiated activities have been incorporated where and when applicable. Giving students options for how best to showcase their knowledge and understanding increases engagement and ensures all learning styles and needs can be met without complex accommodations.

- There are opportunities for collaborative learning throughout the class. Collaboration enables students to learn from their peers, and build crucial community, which enables those with diverse abilities to work with and gain and understanding of each other. Collaboration also fosters the teamwork and joint problem-solving skills that today's employers are looking for.

- Explicit instruction is provided for all units, assessments, and activities. It's important that people understand exactly what's expected of them.

- The principles of Universal Design for Learning (from the National Center or Universal Design for Learning) are incorporated throughout the curriculum.
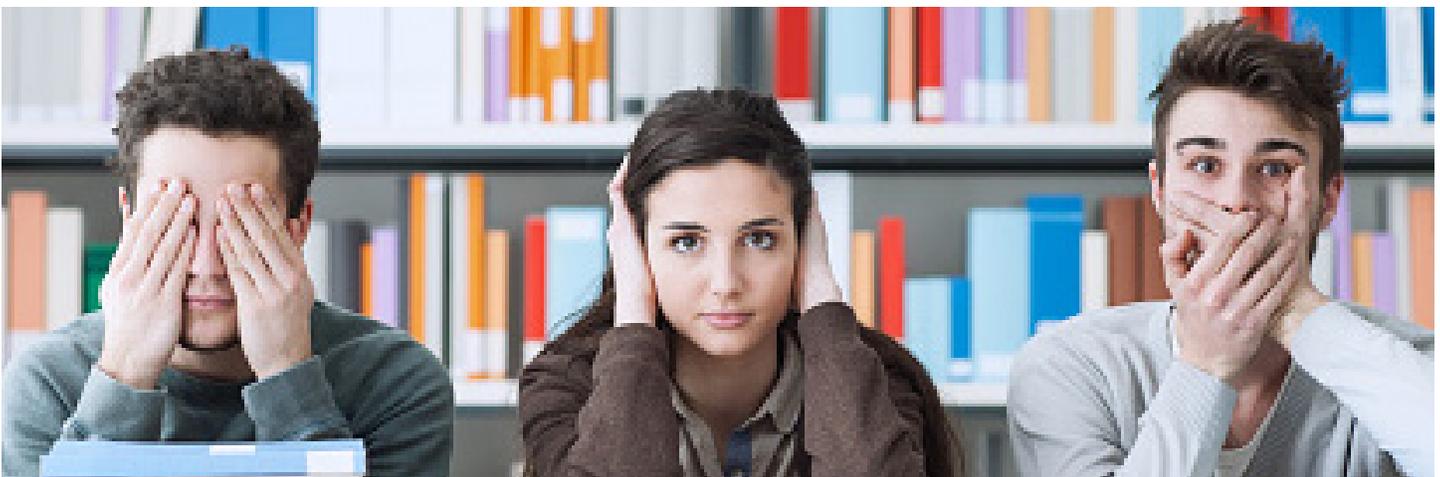
Develop inclusive content

Content may need to be revisited to ensure that it's ready for universal consumption. All course content should be evaluated for the following elements:

- All images that convey meaning and information to the learner have alternative text or textual equivalents. Ones that are decorative have been explicitly marked as decorative.

- No images of text are used as they cannot be read by screen readers.

- There are no blinking images or animations in the course materials. These types of images can cause seizures in people with extreme ADHD or epilepsy. If such images and animations are critical to the material, they need to be properly explained. Note what the animation is conveying in alternative text or detailed text descriptions.

- All Word and PowerPoint documents are properly structured.

- All PDFs are tagged for accessibility.

- All videos are captioned.

- All the colors used have proper contrast between the background and foreground

- Links are descriptive and provide proper indication of what information they will present—avoid using phrases like "click here" and "see more."

- Avoid using tables anywhere in the content unless you are conveying data best represented in tabular forms. Use bulleted or numbered lists instead.

- In recorded or live sessions, verbal descriptors should be provided for any visually referenced items. Avoid using statements such as "on the graph you will see why the item is trending downward." First verbally describe the graph.

Use inclusive technology and tools

When choosing tools and technology that will be deployed in the classroom, instructors should consider how it may impact people with diverse needs.

- Do colors within the application have proper contrast?

- Does the entire page magnify, not just the text?

- Are all controls accessible with a keyboard?

- Does clicking form labels move the cursor to the right element? This is an indicator that the form is properly labeled for screen reader use.

- Are audio and visual notifications provided in more than one format?

- Is the content clear when style sheets are disabled in the browser?

- Are there additional plug-ins and downloads required? These can be troublesome for people to install and may prevent a student from completing the task.

Building an inclusive classroom is about setting up all students for success. The same principles—making sure that the needs of all students are being met—apply for activities that take place outside of the classroom, as well, especially with respect to the technology and tools used in areas such as collaboration on assignments, office hours, student services, etc.

Today's technology enables an inclusive learning environment

Fortunately, technology are available to help colleges and universities create a learning environment that meets accessibility requirements. The best of today's learning technology is designed and developed in accordance with the Web Content Accessibility (WCAG) Guidelines 2.0 Level AA, as well as with U.S. Section 508 standards, which lay out specific requirements for accessibility.

For the learning management systems (LMS) at the heart of today's campus, support for assistive technology should be incorporated throughout. For those with a visual impairment, an LMS should support screen readers such as JAWS and VoiceOver. For navigational ease, pages must follow a common structure. Alt tags should be used to identify all images used within the LMS. When instructors are building course content, they should be prompted to add alt text to uploaded images, ensuring tha visual information is available to all users.

For those with a hearing impairment, the LMS should provide full support for captions in all media types that can be uploaded or viewed within course content. Those with mobility impairments should be supported with special navigation features. For those with a learning disability, support should include the ability to reduce page clutter, and special test accommodations.

Web conferencing and collaboration technology is increasingly used throughout the learning environment, for courses, projects, study groups, office hours, and student services. Among the accessibility features that a collaboration solution should include are full screen reader support for all key workflows; screen reader support for whiteboard activities, and uploaded files, without requiring complex conversions; global keyboard shortcuts for common actions; and live closed captioning.

Technology is also available that can be used to evaluate course materials to determine whether they're accessible or not. There are also services that can help colleges and universities gain an understanding of any limitations they may have across the learning environment. Services can also help institutions create and execute plans for a more accessible learning environment.

Colleges and universities are increasingly recognizing that providing all their learners with an accessible learning environment, one that's inclusive both inside the classroom and beyond, is essential—and that the technology and services available today can make it a reality.

How Blackboard supports the inclusive classroom, both inside the classroom and beyond

Blackboard has a long-standing commitment of partnering with institutions to create and execute plans for a more accessible learning environment. fully inclusive education models. We offer a three-part solution: accessible technology, tools to help make content accessible, and services to help schools understand and adapt current programs and policies around online accessibility.

Accessible technology that creates an inclusive learning environment: In all our products, we strive to deliver experiences that meet or exceed the highest levels of expectation around accessibility. A third party conducts regular audits of our software to ensure accessibility expectations are met and maintained, and industry documentation, such as VPATs and WCAG 2.0 support statements, is available for all audited products.

> **Blackboard Learn** is designed to provide a platform for students and instructors that offers equal access to online courses. Along with other recognition, Blackboard Learn was the first LMS in the industry to achieve gold-level certification for non-visual access from the National Federation of the Blind.

> **Moodlerooms**, Blackboard's open source, Moodle-based eLearning solution, also offers support for assistive technologies such as screen readers, text magnifiers and speech-to-text solutions, and global keyboard shortcuts for common action, and all functionality is designed to be keyboard accessible.

> **Blackboard Collaborate** is a web conferencing solution designed specifically for education. Blackboard Collaborate has long defined itself in terms of making sure that there would be "no user left behind," and offers a broad range of support for accessibility, such as a realtime closed captioning feature and both audio and visual interaction cues.

> **Blackboard Ally** is a software product designed to make course content more accessible. Seamlessly integrated into the LMS and available to all instructors in an institution, Ally uses an accessibility checklist that automatically checks course content for common accessibility issues, including many WCAG 2.0 AA rules. As well as providing feedback and guidance for making course content more accessible, Ally automatically creates more accessible formats that students can access immediately including epub, semantic HTML, electronic braille, and audio. Ally also delivers a comprehensive institution-wide course content accessibility report, enabling institutions to gain an understanding of their performance with respect to accessibility.

Accessibility services, from planning, to course development, to best practices:
Blackboard offers a range of accessibility-related services:

eLearning accessibility course audit This service is designed to assist professors, instructional designers and staff who create and build eLearning courses. Applying a rubric and checklist based on WCAG 2.0 AA standards, Blackboard consultants conduct a comprehensive accessibility audit of eLearning courses, identifying areas that present barriers to individuals with disabilities.

eLearning accessibility plan This service provides a comprehensive eLearning accessibility plan (including goals, strategies, and performance metrics), designed to help institutions provide a barrier-free eLearning experience for individuals with disabilities. Deliverables also include a set of recommendations for removing barriers to eLearning-related student lifecycle functions—recruitment, admission, financial aid, registration, student support, graduation, and alumni. These recommendations, along with the overall plan, can then serve as the basis for revised policies, processes, and procedures to be implemented by the institution.

Conclusion

Throughout today's learning environment, technology is pervasive. Whether students are in a physical or virtual classroom, collaborating with classmates, seeking support, or taking care of the "business end" of being a student—registering for classes, applying for financial aid—technology is in play. To achieve their mission of providing an education for students with diverse abilities, and to satisfy a growing body of standards, colleges and universities are making accessibility a top priority. With the assistive technology that's now available, and with services that help institutions take advantage of such technology, schools are now able to ensure that this top priority becomes a reality.