# The Shifting Landscape of Digital Accessibility for Students With Visual Impairments in K–12 Schools:
## Inclusion, Diversity, Equity, and Accessibility

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## EXECUTIVE SUMMARY

*Technologies based on universal design foster greater inclusion and proactively embed accessibility for all learners. Today, the digital workflow of students with visual impairments incorporates universally accessible tools used alone or alongside specialized assistive technologies. At the same time, opportunities remain to address persisting gaps in inclusion, diversity, equity, and accessibility within the K-12 landscape. Among these priorities, there is a need to empower educators and administrators with the tools to ensure accessibility in classroom content, embed disability allyship in change management efforts, consider access equity within change measurement outcomes, and contemplate the empowering ways that accessible digital tools can be used to deepen student engagement and diversify the curriculum. This chapter traces the shift from traditional to mainstream digital accessibility for students with visual impairments, outlining how broader issues of inclusion, diversity, equity, and accessibility can inform and advance inclusive*

*learning and UDL implementation efforts.*

## INTRODUCTION

The digital revolution of the 21st century continues to redefine teaching and learning by pushing the boundaries of inclusive pedagogy, shifting where and how learning takes place, and changing who has a voice in the classroom. Advancements in accessible educational technologies provide students with multiple means of representation, engagement, action and expression, enabling access for students with disabilities who have traditionally remained marginalized (Rose & Meyer, 2002). With a focus on students with visual impairments, this chapter explores how accessible educational technologies can also be harnessed to enhance broader equity, diversity, and inclusion within the curriculum.

Embedded accessibility - such as text-to-speech software on mainstream classroom computers - carries important implications from a cost equity perspective, but also recognizes the natural variability that exists among all learners by not limiting accessibility features to specific end-users (Fichten et al., 2014). In the process of encouraging students to become self-empowered expert learners, access to embedded accessibility solutions provides an opportunity for all students to explore their needs and preferences, and to potentially adopt new and more effective learning approaches that they may have not previously considered (Siu & Presley, 2020).

There is a growing emphasis placed on the accessibility benefits of digital classroom tools that proactively integrate universal design principles, and this is especially evident when considering the experiences of students with visual impairments in the K-12 landscape. For students who are blind or who have low vision, the last decade has seen the proliferation of innovative accessible and inclusive educational technologies that enable greater access to information (Candela, 2006; Kamei-Hannan et al., 2017). In fact, in the not-so-distant past, many published works were entirely exclusionary to end-users unable to read print, with a vast majority of blind students relying heavily on human readers, when such services were available (Page, 1980). The development of traditional assistive technologies, now shifting towards a more proactive mainstream accessibility model, continues to significantly change the landscape for these students. Unlike traditional assistive technologies designed and marketed to meet specialized needs, mainstream access technologies integrate these features for all users from inception (Martiniello et al., 2019).

Driven by the disability civil rights movement, this acceleration towards greater digital universal accessibility has been shaped by the social model of disability, which recognizes that disabling barriers encountered by learners can often be reduced or altogether eliminated through proactive inclusive design (Shakespeare,