

**Chapter One**

**Understanding  
Transformative Change**

**In 2011, the Center on Online Learning for Students with Disabilities (COLSD, or the Center) was funded by the Office of Special Education Programs (OSEP) to research the transformative changes taking place in K-12 online education for students with disabilities.**

The Center was specifically tasked with a) identifying and verifying trends, issues, and outcomes for students with disabilities in online settings, b) identifying and developing promising approaches for increasing the accessibility and effectiveness of online learning, and c) testing the feasibility, usability, and potential effectiveness of promising practices.

The Center interpreted this charge through a research framework that focused on investigating these priorities through three aspects of the interwoven and contextualized nature of the emerging online environment. Specific focuses included: 1) students with disabilities and their families, 2) the personnel and institutions through which these students are being served, and 3) the digital materials and delivery

systems that support learner interactions within the full-time virtual, blended, and supplemental instances of online learning.

This inaugural publication will present some of the preliminary understandings from a number of Center research projects and experiences and inform the various stakeholder groups of the emerging trends, outcomes, challenges, and promising practices in this developing field of practice. Special education was founded on—and continues to operate as—a collaboration among students with disabilities, families, professionals, and policymakers. Now with the digital education industry's growing and major influence in this new area of education, it is important they join this collaborative effort. The overall goal for this publication is to spark discussion,

reflection, and debate, with a focus on enhancing understanding within all participant groups, leading to the design of more responsive systems, practices, and policy to support enhanced outcomes for all learners—especially students with disabilities.

## **Defining the Field of Practice**

Other reports (e.g., Keeping Pace 2014) have reflected that the field of K-12 online education has rapidly evolved from a primary focus on full-time virtual settings to the growing preeminence of blended (and personalized) environments. These options in online learning vary greatly in how they are implemented and interpreted across states, school districts, buildings, individual teachers, parents, and other stakeholders. Beyond this variability, the field's emergent nature (in

conjunction with the fast-paced and disruptive nature of the digital education industry itself), our work has continued to highlight the importance of context. A nuanced understanding of the variables and interactions within these environments—how, when, where, and with whom online learning occurs—is critical to understanding the trends, issues, and outcomes associated with policies and practice. As such, the terminology used in this publication is clearly defined. For example, online learning refers to the larger field encompassing full-time virtual, blended, and supplemental offerings. A reference to full-time virtual learning or blended learning specifically focuses on only the contextual

setting being referenced. Personalized or competency-based learning references a practice that may occur within each of these contexts. The Center also employs the terminology of digital learning to characterize the interplay among digital technologies, digital delivery systems, and student learning. Thus, digital learning takes place across all online learning spaces, is a key contributor to outcomes, and represents, optimally, the integration of various technologies and systems that support learning. Digital learning, digital materials, and delivery systems are a primary determinant within online learning environments, however, the impact—positive or negative—can only be assessed in context.

## Reference Terms (as defined for this publication)

**Online Learning:** Education in which instruction, content, and learning are mediated primarily by network technologies such as the Internet.

**Full-time Online Learning:** When students are primarily taking all academic classes in online environments. This type of learning generally takes place in virtual schools or what is referred to as fully online schools.

**Blended Learning:** “A formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student’s learning path within a course or subject are connected to provide an integrated learning experience” (Christensen Institute, 2013).

**Supplemental Online Learning:** When students are enrolled in an online environment to supplement another primary learning environment. An example would be someone taking a course in Mandarin Chinese or object-oriented programming online rather than in a face-to-face classroom environment because the local school does not offer the course.

**Digital Learning:** Use of digital technology to support learning. The use of this term is context free including the type of technology, environment, pedagogy, instructional design, and learner-interaction with the material, technology, or environment. Digital learning includes, but is not limited to, online learning, blended, or personalized learning. Digital learning would also encompass non-online environments that are simply focused on integrating digital technologies to support learning.

**Digital Materials:** Electronic textbooks, workbooks, activities, simulations, assessments, and other components of the elementary and secondary school curriculum made available to students via computer, tablet, or mobile devices.

**Digital Delivery Systems:** Content management or learning management utilities that display, provide access to, or otherwise render digital materials for students’ use. Most of these systems require an individual student logon via username/password or unique student identification number, and record and display student usage and achievement data.

**Personalized Learning:** An approach in which the instructional approach, outcomes, content, activities, pace, tools, and supports are customized for each learner’s needs. Personalized learning takes advantage of the real-time progress monitoring capacity of many digital delivery systems to provide timely (e.g., daily, weekly), actionable updates on student learning and/or achievement through a course of study. Many personalized learning settings also follow a competency or proficiency-based instructional design.

**Competency/Proficiency-Based Learning:** In this curricular structure, students progress based on mastery of successive goals. Students are often grouped by age and/or proficiency levels—not by grades—and movement through a course of study is based on evidence-based skills or knowledge learning, not seat time.

**Universal Design for Learning (UDL):** A scientifically-based framework that is focused on supporting the variability of every learner through proactive and iterative design that integrates multiple means of engagement, representation of information, and action and expression of understanding. (Learn more at [UDLcenter.org](http://UDLcenter.org).)



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## Conducting Research in the Field of Online Learning

The field of K-12 online learning is still new, and, as with any emerging cultural shift, its practice has wide variance with each instance having limited empirical evidence to support its efficacy.

At present, sparse independent research is available to help distinguish educationally effective digital materials, activities, delivery systems, and progress monitoring procedures from those materials and practices that yield little gain—or even lead to negative outcomes. While a number of groups across education and industry actively welcome the involvement of researchers, others vigorously avoid any association with independent inquiries as those research activities may identify negative (as well as positive) outcomes. The digital education industry is highly competitive and materials, delivery systems, and emergent learning designs that become

associated with less than optimal effects can (and do) disappear overnight. This intensely competitive climate precipitates avoidance of transparent, objective, and rigorous inquiry as much as it encourages it. Until some stabilization occurs, research in this ecosystem will face ongoing challenges.<sup>1</sup>

While immense amounts of data are generated across these environments, establishing research agreements to acquire these data and working across siloed digital systems is challenging. The complexities of understanding how special education mandates, policies, and procedures are to be addressed in online settings may be further complicated by the existence of contracts or regulations that prohibit student data tracking or sharing. In some circumstances, the uncertainties of interpreting student data privacy statutes prompts some entities (both in education and industry) to act conservatively and prohibit the involvement of outside researchers.

These challenges (and others) are key contributors to the complex nature of research in online learning. The research represented in this publication is an initial understanding of what has been learned from preliminary explorations, interactions, and experiences that have taken place with the Center and its research partnerships, as well as from the limited published research base. The findings and associated discussion represent the Center’s preliminary understanding of practice and policies, and are likely to change with additional research and more nuanced understanding of the interplay among the systemic elements.

## Some Key Findings

From a variety of research inquiries including national scans, forums, surveys, interviews, observations, and data analysis involving various stakeholders in online learning (administrators, teachers, parents, students, and developers and vendors of digital curriculum materials and delivery systems), the following items represent a sample of important issues for all or some of these constituents:

- Few states offer or require certification or endorsements in online teaching, despite the fact that all stakeholders generally agree that the knowledge and skills, both technological and pedagogical, necessary for success differ dramatically from those skills and knowledge required in brick-and-mortar settings.
- A shared belief is that the flexibility of digital learning materials, when combined with appropriately designed online delivery systems and instruction, can address the variable learning needs of elementary and secondary students with disabilities in ways difficult or impossible to otherwise achieve.
- The capacity of online learning systems to track, record, and present information about student progress—at the point of instruction—offers enormous potential for supporting more personalized learning for all students, including those students with disabilities. Unfortunately, the current data gathered within many of these systems are often siloed and do not always support instructional decision making.
- State Directors of Special Education agree that great potential exists for online systems to collect a variety of data, but, currently, these data do

not support the reporting requirements they are charged with addressing.

- Leaders of full-time virtual and blended online schools, and digital materials and systems vendors uniformly agree that Individualized Education Programs (IEPs) developed for brick-and-mortar settings need to be re-visited (and likely revised) once a student enrolls in online learning.
- Parents of students with disabilities who are being educated in full-time virtual settings spend more time supporting their students in day-to-day online learning than do parents of these students in blended or supplemental settings, despite the fact that few parents report having expertise in providing special education services.

## Overview of This Publication

**Chapter One:** This chapter provides an overview of the Center, Center work, and this publication.

**Chapter Two:** The second chapter provides an overview of a state and territorial policy scan of all 50 states and five U.S. territories with a focus on online learning for students with disabilities.

**Chapter Three:** This chapter presents an understanding of major topics impacting the field and is based on the Center’s (and others’) research. In looking across the field of practice and Center holdings, the focus of Chapters 3 and 4 is on four topical areas, each within a targeted stakeholder emphasis. This chapter addresses issues that have emerged at the local school district with respect to Individualized Education Programs (IEPs) and the placement of students with disabilities in online settings, and challenges and opportunities related to teachers’ roles in supporting students with disabilities in virtual environments.

**Chapter Four:** This chapter continues the exploration of major topics within the context of two additional stakeholder groups: 1) state education agencies and their need to acquire progress and activity information related to students with disabilities in online settings for reporting and program planning, development, and evaluation purposes, and 2) the changing role of parents when these students are enrolled in online learning in full-time virtual, blended, or supplemental settings.

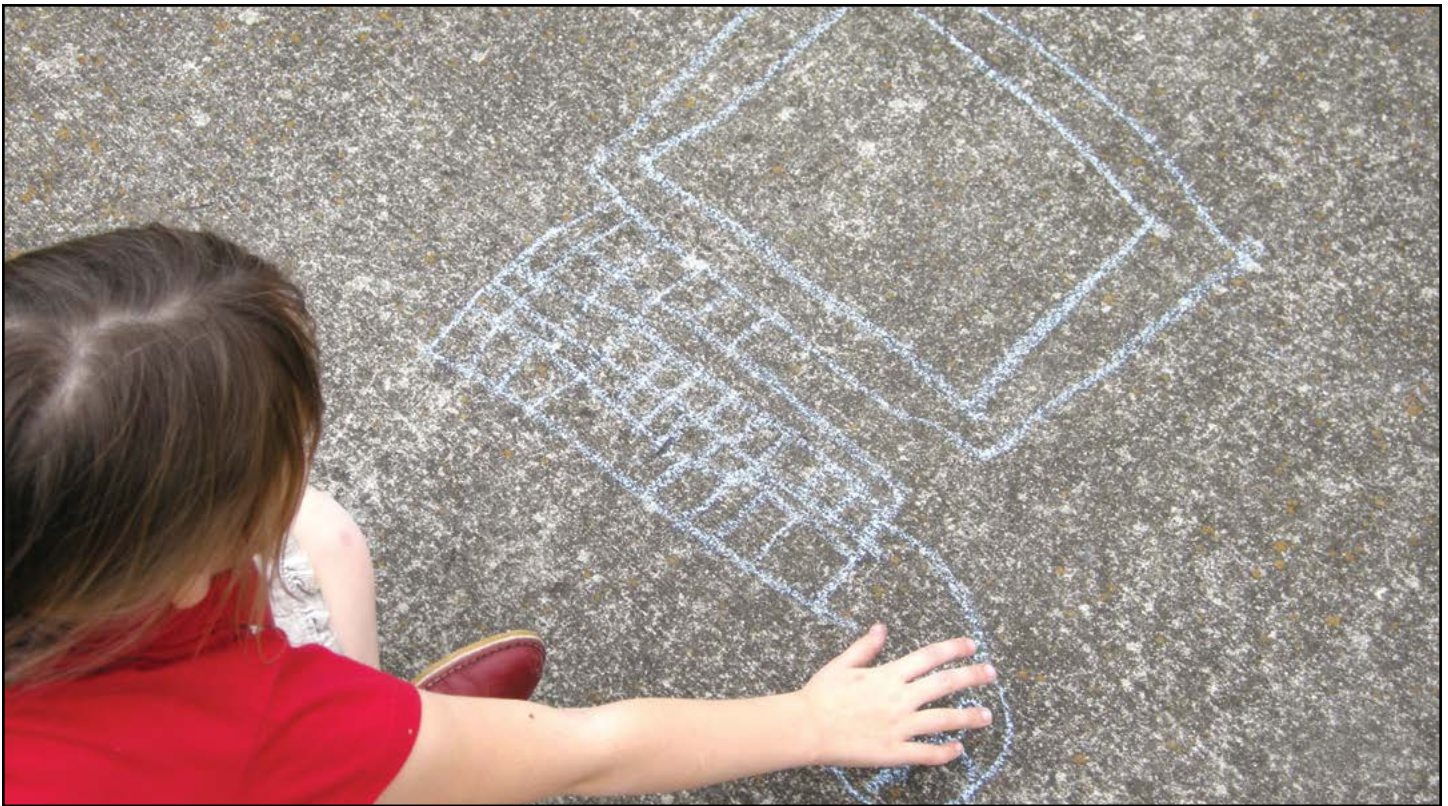


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**Chapter Five:** Provides a quick summary of the topics discussed and outlines some primary topics for the field to consider as it continues to grow and expand. In addition, three topics were chosen for specific reference based on the importance of the topic relative to student learning, its prominence in industry, society, news media, and as well as the comments or questions received from SEAs. Topics include: 1) Access to Online Education, 2) Data and Privacy, and 3) Graduation.

## Conclusion

Online education is an evolutionary transformation in K-12 education that is now rapidly influencing many stakeholders, policies, procedures, and practices for students with disabilities. Overall, the system is responding quickly with individuals sometimes making necessary decisions with very little evidence at their disposal. In some circumstances the impact of these decisions on the system at-large, the learners, their families, or the professionals that serve them has been positive; in some circumstances the decisions have not. This publication highlights the great importance of developing, conducting, and sharing research findings that are directly focused on supporting the needs of all learners, especially learners with disabilities and other diverse learning needs. This publication encourages greater active and open collaboration among all stakeholders to support

the needed research, findings, and needs of all learners.

Learn more at <http://centerononlinelearning.org/>  
If you have questions or comments about this publication, you are encouraged to reach out to the Center by emailing: [info@centerononlinelearning.org](mailto:info@centerononlinelearning.org)  
James D. Basham, Ph.D., [jbasham@ku.edu](mailto:jbasham@ku.edu)  
Skip Stahl, [sstahl@cast.org](mailto:sstahl@cast.org)

**Disclaimer:** *The Center on Online Learning and Students with Disabilities works with teachers, parents, and industry leaders to research and disseminate high-quality reports about engagement, effectiveness, and accessibility of online education for students with disabilities. The contents of this publication were developed under a grant from the US Department of Education #H327U110011. However, those contents do not necessarily represent the policy of the US Department of Education, and you should not assume endorsement by the Federal Government. Project Officer, Celia Rosenquist.*

## Endnotes

1. Pinker, S. (2003). *The blank slate: The modern denial of human nature*. New York: Penguin.

## References

Pinker, S. (2003). *The blank slate: The modern denial of human nature*. New York: Penguin.