

Utilization of the Online Environment's Unique Properties

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Introduction

Currently, online learning reaches millions of K-12 learners and its annual growth has been exponential over the past number of years. This growth has and will likely continue to lead to dramatic changes in the educational landscape. While online learning appears to hold great promise, a paucity of research addresses the pedagogical implications for students with disabilities (SWDs). Researchers urgently need to conduct investigations that describe what is happening in the field and demonstrate how online learning should be designed and delivered to impact these students' educational outcomes. The Center on Online Learning and Students with Disabilities (COLSD) has been conducting research in this area.

COLSD, a cooperative agreement among the University of Kansas, the Center for Applied Special Technologies (CAST), and the National Association of State Directors of Special Education (NASDSE), is focused on four main goals:

1. To identify and verify trends and issues related to the participation of SWDs in K-12 online learning in a range of forms and contexts such as fully online schools, blended or hybrid instruction consisting of traditional and online instruction, and online courses;
2. To identify and describe major potential positive outcomes and negative consequences of participation in online learning for SWDs;
3. To identify and develop promising approaches for increasing the accessibility and potential effectiveness of online learning for SWDs; and
4. To test the feasibility, usability, and potential effectiveness of one or more of these approaches.

To meet the first two goals, the Center has conducted a number of activities. Exploratory research activities include case studies of two fully online schools; national surveys of purposeful samples of parents, students, teachers, and district and state administrators; interviews with members of individualized education program (IEP) teams; and a review of one state's student participation, retention, and completion data. Additionally, to describe the landscape of online learning for students with disabilities, the Center is conducting a series of forums with different stakeholder groups. This forum was held with state department of education staff to provide an in-depth view from the state perspective.

Participants and forum topics

In the summer of 2014, COLSD staff began planning for the series of forums to shed light on the state of online learning and SWDs from the practitioners' perspective. The first forum was held with state department of education staff in a face-to-face gathering November 17th and 18th, 2014. Participants were staff members from six state departments of education and one local district administrator. A list of participants is included as an appendix to this report. The states represented at this forum were Arizona, Florida, Georgia, Massachusetts, Ohio, and Virginia. These states were selected based on three factors: (1) Each state has a relatively detailed state policy on online learning. (2) Each state has state-level activity in special education and online learning. (3) Each state is geographically diverse. While staff from other states had asked to attend the forum, the forum process and resource constraints required that a limited number of individuals participate in order to gather in-depth information. Although the experiences and information from the participating states do not represent the nation as a whole, they do provide an informed sample. Other than Massachusetts and Florida, each state's director of special education attended. Massachusetts and Florida's representatives were educational specialists with knowledge in both special education and virtual education.

COLSD staff reviewed previous literature reviews and other research activities (e.g., case studies, surveys, and interviews) to determine the topics for this first forum. Staff gave suggestions for collapsing some topics and extrapolating concepts from others. The final eight topics covered at the forum included the following:

- Enrollment, persistence, progress, and achievement;
- Parents' preparation and involvement in their child's online experience, including promising practices to support parents' roles;
- IDEA principles in the online environment (e.g., FAPE, least restrictive environment, parental notification, due process protections);
- Access to student data, including privacy concerns, sharing, integration, and instructional usage among the parties involved in online instruction (e.g., instructional setting, instructor, administrator, provider, and vendor);
- Teacher preparation -- both preservice and inservice -- for the online learning environment;
- Integration of optimal evidence-based instructional practices; availability of skill/strategy instruction in online environments;
- Utilization of the online environment's unique properties and affordances (i.e., those features that would not be possible or practical in the offline environment) in the areas of collaboration, personalization of instruction, and multiple means of demonstrating skill mastery; and
- Differential access to online learning across the state (e.g., computer or tablet access, connection speed, district restrictions to material access and assistive technologies).

Participants received a packet of materials prior to the meeting, including the agenda (see Appendix B), a list of the topics and questions to be considered, a draft of a Center publication entitled, "The Landscape of Online Learning," and the publication "Using

Technology to Support At-Risk Students' Learning" by Darling-Hammond, Zieleski, and Goldman. This latter publication can be found at <https://edpolicy.stanford.edu/sites/default/files/scope-pub-using-technology-report.pdf>.

The forum began with introductions and a comprehensive discussion of the importance of online learning and students with disabilities from each state staff member's perspective. Next, each state representative responded to a set of questions about the selected eight topics. In a round-robin fashion so each participant had an opportunity to describe his/her state's need, status, importance, and other perspectives pertaining to the topic.

For each of the eight topics, participants responded to six questions:

- How is the topic addressed in your state?
- How important is this topic?
- What direction is your state moving on this topic?
- What are the top challenges around this topic in your state?
- What is going well regarding this topic?
- What research question could have significant impact on this area?

As a closing exercise, participants described their top leadership challenges in regard to online learning for students with disabilities.

Utilization of the Online Environment's Unique Properties

This seventh document in the series of eight forum proceeding papers presents participant responses to a set of six questions around the topic of utilization of the online environment's unique properties, especially those not possible or practical offline. These unique properties include a different type of collaboration for instructors (e.g., classroom teachers, online teachers, and parents) and students (virtual), the ability to personalize instruction for students, and the ability for students to demonstrate learning and achievement through multiple means for addressing their diverse needs and abilities. The Center's initial activities found online assessment of mastery was comprised primarily of multiple choice questions measures, a format that isn't always the most appropriate way for a student to demonstrate mastery (Rice & Deshler, 2015). This is just one example of the need for further training and development of tools that take advantage of the adaptive and least restrictive properties afforded by the online learning environment.

How is this topic addressed in your organization?

A recurring theme among state representatives was the lack of state education agency (SEA) involvement in assuring the use of the online learning environment's inherent properties (e.g., student-teacher and student-to-student collaboration, personalized instruction, real time feedback, and the ease with which students can use multiple means to demonstrate mastery). This lack of involvement seems tied to the relationship of the SEA, the local education agency (LEA), and the vendors. Thus far, LEAs shoulder the primary responsibility of contracting with vendors and seeing that vendors uphold their contracts. This situation has presented LEAs with

two common problems: vendors neglecting the diversity of student needs and LEAs not knowing when and how to be explicit in their vendor agreements. In neglecting the diversity of students' needs, especially those needs associated with students with disabilities, the online learning environment is failing to provide the inherent advantages over the traditional classroom. From the participants' responses, however, an apparent shift is occurring in most SEAs to address this situation. The SEAs are creating more explicit requirements for vendor eligibility or other means of vetting vendors. The vetting process would be completed before LEAs would be able to contract with vendors. At the time of the forum, no SEA guidelines or policies were prescribed for the affordances vendors must provide or the language LEAs should be incorporating into their guidance to assure their students' needs are being met. Presently, vendors are the force driving the utilization of the online learning environment's unique properties, often as selling points. No unified or authoritative voice has communicated the needs of students in special education in such a way that has required them to address these students' needed modifications and tools.

LEAs have teachers who are filling in curriculum gaps from vendors, but their abilities to address other problems with the vendors or to take advantage of online learning qualities vary widely. In some states, the LEA has the power to address a problem with the vendor if a program or tool isn't working (FL), but in other states, the LEAs have had to call on the SEA to address problems between the LEA and vendor (GA). Ideas also differ about the necessity of access to online learning for students with disabilities. In Ohio, for example, educational technology in general is viewed as only one of many means of meeting student needs and therefore not a necessary component of education. However, if Ohio plans to continue their membership with the Partnership for the Assessment of Readiness for College and Careers (PARCC), one of the nation's foremost comprehensive assessment consortia, they will be required to give online assessments. Thus, increasing students' access to online activities might be viewed as important to developing their skills and familiarity so that high stakes testing results are viewed as accurately representing the students' knowledge, skills, and abilities. Without such exposure, the students might be disadvantaged by the assessment method (e.g., online administration), which could result in less accurate results. In Florida, information technology and assistive technology have been meshed at the state level because the state views the incorporation of online learning elements as compulsory. Because of this view, Florida wants all of their technology to be based on universal design and accessible to all students from the beginning, rather than retrofitting the technology in the future.

How important is this topic from your perspective?

Participants indicated the topic of fully utilizing the online learning environment's inherent advantages was important for improving instruction and in turn, student outcomes. Using the unique properties available in an online education environment was important for two specific reasons. The first reason is the availability of tools distinct to the online environment. These tools could have a significant positive impact on the learning outcomes for students with disabilities as well as improve their ability to communicate what they know. The second reason the online environment's unique properties is a priority is because of their novelty, and educators want and need to use all that's available to help address the diversity of

learners' needs. While the technologies have not been tested, they have an intuitive appeal, great potential, and can support the unifying construct of specially designed instruction. Instructors also want appropriate and on-going staff development to learn how to use tools effectively. Teachers are relying on SEAs and LEAs to provide them with professional development so they can effectively individualize student instruction and show students how to use the tools available in the online environment.

What direction do you see your state going on this topic?

As opposed to some other topics covered in this forum, all participants were in agreement about the direction their state is moving in terms of using the native properties and tools available in the online environment. The impetus is the frequent issues between vendors and LEAs in many states, often related to discrepancies between students' varied needs and vendors' responsiveness. The perception of SEA representatives is vendors' products may not support the diversity of learners' needs, or vendors may not be willing support changes in their products to address learners' needs. Because of this discrepancy, many states are moving to establish requirements for vendor eligibility. The SEA will establish procedures to vet the vendors and approve the contract before the vendor and LEA can sign an agreement.

What are the various stakeholder concerns or challenges faced?

Many stakeholders or groups believe significant challenges exist to fully utilizing the online environment's unique properties, namely in the areas of staff development, addressing special education needs, and the potentially deleterious aspects of a virtual environment. Specifically, stakeholders are concerned about the difficulty parents, teachers, and school administrators face in becoming fluent in new technology, the lack of students' opportunity to have face to face socialization, and addressing a wide array of students' needs in online learning.

Teachers who completed their preservice instruction just a few years ago are being asked to teach with technology that was unavailable or not taught when they were learning best practices. Being comfortable enough to teach with new technology takes hours of learning and practice for many teachers, which is a luxury their school districts can't provide, let alone time to develop the skills necessary to individualize the technology and tools for students with disabilities. In addition to teaching with the technology are the issues of helping parents understand what they need to know to help/coach/monitor their child who is enrolled in an online learning environment. Participants viewed parents as having an expanding role in their children's educational experiences (e.g., instruction, curricular selections, assessments, and feedback). Safety and privacy risks can also be increased in the online environment, which adds another layer of education and responsibility for teachers and parents working in the online learning environments.

Many participants voiced the concern of vendors often not being able to meet individual student needs with the content and tools they provide. For some participants, this challenge is because vendors' curriculum doesn't always align well with states' curriculum standards, so teachers must determine which content areas to address and how to fill in curriculum content

gaps. In fact, participants indicated vendor contracts are often not tailored to many of the district's needs. Currently no safeguards are provided for the district to be able to address any deficits with the vendor before their contract expires, such as insufficient assistive technology or tools for students with disabilities. Along with the potential for increased difficulty in individualizing materials, technology, and tools for students with disabilities, the online environment often restricts students' opportunities to interact with their peers in person. For some students this missed opportunity can be immensely beneficial in terms of removing them from distractions and potentially harmful environments, however for others, they are losing the opportunity to practice necessary and fundamental social interaction skills.

What's going well?

Despite the difficulty of integrating new technology on both small and large scales, the participants indicated a number of practices going well. The themes across SEAs and LEAs who are seeing areas of success in online learning are collaboration and an attitude of student needs being the top priority. Participants shared stories of technology departments spending time and effort to support students with disabilities when they need modified or different tools to access the content they are studying (GA), and teachers filling in curriculum gaps so students in online learning environments aren't missing exposure to content not addressed by the vendor's lessons (AZ). In addition, students also have opportunities to be more self-sufficient and responsible for their own learning, while having access to more one-on-one instruction when needed, an opportunity often unique to online learning environments (AZ).

Some states have created online technology learning centers that allow for virtual meetings, online professional development, and other resources supporting easy collaboration and communication beyond email (FL). These supports allow all persons involved in a student's education to participate in a meeting, even if they are not all in the same location. The support for online technology learning centers is just one example of how districts and SEAs are attempting to add to their technological capacities. In Ohio, the state has funded projects for educational technology including applications to support students in their access to content and studying. In Virginia acquiring technology has been an important focus. LEA superintendents have used innovation funds to purchase technology and applications for students. SEAs are actively looking at opportunities to leverage their resources and existing online supports for expanding technology to all facets of education.

What research questions could have a significant impact?

Utilizing the online environment's unique properties appears to be a topic ripe with research directives. One theme of possible research is a focus on classroom structural changes that have taken place and those changes still needing to be made because of the new instructional and interaction tools available to students (e.g., student grouping, length of class periods, and frequency of teacher-student contacts). Participants wanted to know how to best prepare staff to utilize the qualities of online learning in meeting students' instructional and curricular goals. This research would focus on determining professional development opportunities that enhance implementation. As these new properties and tools become

available, learning how to use technology to the fullest of its educational capacity becomes critical. Teachers and administrators alike are wondering what potential benefits are available with the new online learning applications, applications that differ based on the vendor providing services. In addition, another area of research is how to best match learners' needs to the properties of online learning. The assumption is some applications are more appropriate for some students and not other students. Researching the differential benefits of similar applications to determine which work best for students with specific disabilities or needs, (e.g., for a student with a reading disorder versus a student with vision impairment [VA])?

The novelty of online learning, like many new things, is both exciting and comes with a steep learning curve. Having access to the technology doesn't ensure usage will occur or even be beneficial. The modifications previously demonstrated to be helpful and effective in the traditional learning environment have to be re-conceptualized for students in online learning environments, leaving those who work with students with disabilities wondering how to make such determinations (VA).

Research should not just be limited to the cognitive domains associated with academics but also the influence on social skills development. The meaning of social interaction or peer collaboration is changing because of technology (FL). For example, in the online environment, a students' disruption is not distracting to peers in the class because they are not interacting with others in the same physical space (i.e., classroom). Similarly, teachers' role in classroom discipline is quite different. The online environment is changing many qualities of social interaction between students and their instructors and their peers.

Further research about vendors' offerings and online features would be valuable to SEAs and LEAs. Such research would influence SEAs and LEAs as they develop contractual arrangements with their vendors of online services. This research might identify key elements for assessing vendors' implementation of features in online instruction thought to enhance the instruction for students with disabilities (e.g., ease of highlighting text, quality of captioning, and usability of audio supported reading). That is, the desire is to research and identify the implementation of online features that should be compared across vendors and guidance on making a fair comparison of the online features. As was discussed previously, districts have had the sole responsibility of choosing what vendors to use for their associated online learning courses. However, since these related decisions are a new endeavor, no standards, criteria, and/or conditions are available by which to judge the appropriateness of fit between the district's students and the vendor's applications. Unfortunately this gap often means special education needs are over looked in the original process of contracting with vendors, and then the vendor cannot be held accountable for the missing features students with disabilities need for success. More and more SEAs are now thinking about, or actively working on, ways to influence the process of vetting vendors for their districts. The questions at hand are what needs to be assessed when reviewing contracts with vendors and what needs to be spelled out for the vendors to avoid problems (GA). Essentially, what has been learned through trial and error, and how can those experiences be applied to future decisions?

Implications

The features of the online environment do pose potential advantages for helping students with disabilities. State representatives agreed utilization of those native properties is

an important topic of discussion. One of the pressing difficulties for SEAs is developing the appropriate contracts with vendors. These difficulties have become readily apparent in most if not all states, and many SEAs already have plans in place so vendors and the contracts can both be vetted prior to the LEA's signing of the contract. The participants unanimously agreed increased involvement from the state would be helpful, as would a list of crucial items to address in vendor contracts to facilitate a clearer understanding of a district's needs and expectations. The challenges extend beyond vendor difficulties, though, in terms of the arduous task of developing parents, teachers, administrators and students' knowledge and skills in how to safely and appropriately use new technology in the most beneficial way. Finally, several states are already finding great success in using new technology in blended and online classrooms, including technology departments supporting students with disabilities who need assistive technology tools, the creation of software and apps to help students, and the development of online technology learning centers, which allow for virtual meetings and online trainings.

The discussions lead to several questions for further investigations:

1. What conditions do districts need explicitly to address in vendor contracts, especially regarding meeting the needs of students with disabilities? How can the SEA help with this task?
2. What are the best options for professional development of existing teachers on how to use recently introduced educational technology?
3. How can the online learning environment be best tailored to the diverse needs of students with disabilities?

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Reference

Rice, M. & Deshler, D. (2015, April). *Exploring the nature of vocabulary support in online earth science courses for secondary students with reading disabilities*. Presentation at the annual meeting of the American Educational Research Association. Chicago, IL.

Appendix A
Forum Participants

OSEP AND COLSD FORUM

Practices and Challenges in On-line Instruction for Students with Disabilities

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Appendix B
Forum Agenda

OSEP and COLSD Forum
**Practices and Challenges in On-line Instruction for
Students with Disabilities**

NOVEMBER 18-19, 2014

AGENDA

Tuesday, November 18, 2014

8:30 – 8:45	Welcome	<i>OSEP staff and Bill East</i>
8:45 – 9:10	Introductions:	Your SEA experiences with online instruction (Questions suggested in the second cover letter)
9:10 – 9:15	Overview	<i>Explanation of how we hope this discussion proceeds</i>
9:15 – 10:30	Discussion	<i>Topic #1:</i> Enrollment, persistence, progress and achievement; Disaggregated by disability category
10:30 – 10:45	Break	Check in with the office; Refresh your brain
10:45 – 11:45	Discussion	<i>Topic #2:</i> Parent preparation and involvement in their child’s online experience; Promising practices to support parents’ roles
12:00 – 1:00	Lunch	Task: Evaluation and planning (Handout)
1:00 – 2:15	Discussion	<i>Topic #3:</i> IDEA principles in the online environment (e.g., FAPE, least restrictive environment, parental notification, due process protections)
2:15 – 2:30	Break	
2:30 – 3:30	Discussion	<i>Topic #4:</i> Effective and efficient student response data access, sharing, integration, and instructional usage among the parties involved in online instruction (e.g., instructional setting,

		instructor, administrator, provider, and vendor) and addressing privacy concerns
3:30 – 4:30	Discussion	<i>Topic #5: Effectiveness of teacher preparation in the online learning environment; Promising or negative practices that facilitate (negate) professional development</i>
4:30 – 4:45		<i>Wrap-up, suggestions for improving our process and preview for day 2</i>

Wednesday, November 19, 2014

8:15 to 8:30	Review	<i>Review of yesterday and preview of the today's activities</i>
8:30 – 9:15	Discussion	<i>Topic #6: Integration of optimal evidence-based instructional practices; availability of skill/strategy instruction in online environments</i>
9:15 – 9:30	Break	
9:30 – 10:30	Discussion	<i>Topic #7: Utilization of the online environment's unique properties and affordances especially those features that would not be possible or practical in the offline environment: collaboration, personalizing instruction, multiple means of demonstrating skill mastery</i>
10:30 – 11:45	Discussion	<i>Topic #8: Differential access to online learning within and across your districts (e.g., computer or tablet access, connection speed, district restrictions to material access & assistive technologies)</i>
11:45 – 1:00	Lunch	Leadership challenges: What are 2-3 questions that you need answered about online learning and students with disabilities to help you provide state leadership?

1:00 – 2:00	Discussion	Your views on: (1) The Center’s future activities, (2) Value of this forum and (3) Stakeholders for future forums
2:00 – 2:15	Wrap Up	<i>Reimbursement issues and closing comments; Thank you and safe travels</i>