

Using, Sharing and Integrating Student Response Data from the Online Environment

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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 first 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 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.

Issues with Student Response Data in the Online Environment

This fourth document in a series of manuscripts presents issues with effective and efficient student response data access, sharing, integration and instructional usage among the parties involved in providing and monitoring online learning. The Center's initial activities found that issues in this area included concerns that student disability and performance data frequently were not considered when determining appropriateness of an online environment for a student with a disability (Burdette, Greer, & Woods, 2014; Greer & Deshler, 2014). In addition the center has had very limited success in understanding the students' outcomes in online programs (e.g. Deshler, Rice, and Greer, 2014), and much work remains unfinished in terms of standardized or strategic data collection and sharing across states or even within states and their school districts and schools. The sense is that a number of factors have limited the sharing of student information and for an integrated approach for instructional planning. Those factors included concerns about the confidentiality of information, the lack of access to information, and the lack of inter-operability among systems such that often a school's, district's, and online provider's databases cannot be readily linked.

How is this topic addressed in your organization?

Most participants lamented that their state's data system hasn't been collecting the information necessary to characterize online instruction that supports achievement for students with disabilities (e.g., skill area, content focus, supplemental instruction, guided with a tutor, linkage to the classroom instructional methods, engagement activities, frequency of assessments and types of feedback about performance). On the other hand, they also felt

satisfied with the efforts underway. They indicated that their states have been moving, and continue to move, toward integrated data systems that allow administrators to cull information in order to connect student attribute data, program attributes, and student outcome data. Participants indicated different issues with the current collection of data have been identified and are on the radar of SEA's as they seek to enhance the data collection and tracking systems they have or acquire new ones.

Several participants agreed that fully online programs are generally unable to report whether a student has been identified with a disability. One state representative (FL) reported that their supplemental online class school system was "antiquated," meaning that staff relied on paper and pencil tracking methods for much of their data collection and tracking. Ohio's representative reported that limitations existed on the data that educational entities are allowed to share with each other due to state legislation and Family Education Rights and Privacy Act (FERPA) policies. However, another state (GA) reported having a fairly robust student performance system that tracks student growth information and reports a variety of aggregated data by LEA, grade level, and various student attributes publicly.

How important is this topic from your perspective?

All six state staff members felt this topic was one of the most important issues surrounding the implementation of online learning programs. One state participant indicated collecting student growth data is extremely important for many reasons, but potentially most importantly, as a measure of teacher quality for evaluation purposes.

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

The participants indicated a great deal of current and future efforts were directed at improving data collection, usage, and integration. Half of the participants reported their states were moving toward more data training (AZ, MA, FL); two representatives described their current processes for better integrating their data systems (AZ, FL); and two said their states were using their data for teacher, school, and district evaluation purposes more than any other purpose (OH, GA).

Data usage is largely focused on the general education population. All participants mentioned their state's focus in terms of using student response data from online learning environments was focused on their global education system, not special education data specifically. Those participants who said that their states were moving toward more data training had diverse training topics in mind: teaching people to use data/query the data system to make decisions; training on the management of the data systems; training on coding and input issues in order to rectify previous errors (AZ); training coaches to use data to improve the collaboration between teachers and coaches and teachers and parents (MA); and training online providers to use data to solve problems inherent to online teaching models (FL).

State representatives indicated their states are integrating data systems so LEAs and the SEA could use the data to improve decision-making by providing more relevant, timely

information and support data-informed decisions. Those participants who thought their state was making progress in terms of using data for teacher, school, and district evaluation and academic growth measurement discussed the importance of making data public. One participant explained that their data currently reported student group data publicly, including by disability category, grade level, and course (GA). Another representative said that legislation was moving through state legislature to report data publicly by disability category (OH).

What's the top challenge faced?

A large challenge shared by many participants was the lack of integration of the student, school, district, state, and vendor data systems. For example, student instructional data (e.g., objectives studied and attained; time on tasks) may be in one system and assessment data in another system. Some representatives indicated that they didn't even know the questions to ask to integrate these systems. The largest concern stemming from the lack of integration is that until all of the data are in one place, SEAs can't think about how to use the data to inform educational planning or changes to practices and policies (AZ, VA). Another issue, staff turnover, has been causing big problems because many new staff members do not have experience working with data systems and many staff are not invested in the use of the available data systems. This turnover issue is particularly profound when the staff turnover involves a change in the chief state school officer (FL, AZ), but lack of investment in the system at any level is a problem. The participants noted that in addition to turnover, investment, and integration related problems, data systems are expensive and not well funded.

Another issue discussed regarding student response data access, sharing, and integration is the lack of discussion among school personnel and parents about the available data, the data analysis, or access to the results. Each of these elements can play a big role in the decision making about students. Because of this lack of communication and of parental access to data, a backlash against the online program can occur. The sense is that school changes reportedly made based on such student response data in the online programs can create problems because other stakeholders, such as parents, don't have a clear understanding of the background information, the student's presenting problems, and how to sort through the varied alternative courses of action (MA).

While the situation is problematic when teachers are unaware of student data or how to use it for selecting curricular materials, setting instructional objectives, or selecting instructional practices, the situation is further exacerbated when the schools' instructional coaches have such a limited understanding (MA). When the schools' instructional coaches and administrators do not understand the importance of or how to use data to make student, class, and school-level decisions, answering questions such as 'what are the desired outcomes and who should provide the professional development?' becomes a huge challenge. A related question is whether Institutions of higher education or the SEA is the best organization to provide this professional development?

Also the participants presented several other serious challenges to improving data collection, integration of systems, and data use in decision-making. With fully online learning

environments often being used as interim placements for students who need credit recovery or home-based education for a relatively short period, using these students' data to make determinations about a program's quality is problematic. Traditionally, states have used data across years to determine growth of programs as well as student growth and this usage is often not possible with fully online learning environments due to the transience of the students (GA). Another issue is that just having data available does not equal staff having the time to access, analyze, and incorporate the data into decision-making rubrics. This issue is at the SEA, LEA, and virtual school levels and tends to be caused in part by high staff turnover and limited professional development. The analogy might be that teachers can have access to the best curriculum available but unless they are provided instruction and supports for using the curriculum, the desired effects or maximal benefits are not attained. Without analyzing the data, staff and parents do not know what is working for which students or how online learning is supporting student learning (FL). While some online schools are using data for placement and instructional purposes, some do not seem to be using it at all (OH). Finally, families are using the online providers' marketing information to make decisions about enrollment of their children, but such information is frequently not complete, making it difficult to understand the entire picture of a school or program.

What is going well in the states?

Participants gave a variety of answers to this question, indicating they are finding some areas of success in various areas of collecting, using, and sharing student data. One participant reported that student data can be accessed quickly by teachers and it's being used as progress monitoring in order to make student-level educational changes (MA). Another participant shared that the state can access and use data around student growth percentiles for all groups of students, including students with disabilities (GA). In addition, some online schools have a firm understanding of the need to use student data and are doing an excellent job of gathering data (FL, OH). A few online schools are even using data in teacher teams to change instruction and groupings (OH).

What research questions could have a significant impact?

Participants brought a wealth of research questions to the table in regards to effective and efficient student response data access, sharing, integration and instructional usage among those staff involved in online learning. Some representatives want to know how to develop and implement guidelines and best practice procedures to promote collaboration between teachers and parents to analyze student data and to develop instructional strategies. Subsequently, they want to know how to support administrators to ensure such guidelines and best practices are applied effectively. Others are hoping to see outcome data used to determine if online learning environments are at least as effective in educating students with disabilities as traditional learning environments. Another point raised was the usefulness of determining what data is most important to collect in online environments compared to what is traditionally collected in brick and mortar environments. For instance is actual instructional time as important of a variable in online environments as it is in brick and mortar? Is teacher-directed instruction as

relevant as teacher facilitated learning? What is the relevant data to inform development and quality of online programming?

Implications

The quantity of available data suggests that a great potential exists for informing and evaluating instructional and curricular decisions and our participants suggested that this impact could be meaningful. That promise, however, is yet to be realized for several reasons. For example, states need to develop guidelines for data collection (what to collect, how to collect it, and how to use it appropriately) that address fully online environments, the variations of blended environments, and traditional environments. We need research that informs relevant stakeholders about what is working well in the various online learning environments for students with disabilities so that those policies and practices can be disseminated and implemented. Another need is adequate funding for developing more user-friendly data systems so that the reporting is more uniform among the various programs. The challenge is that each program or application has user interface that differs. More uniformity would facilitate access and usage. Needs for staff development exist so that they are able to use data to make informed, educationally significant decisions regarding placement, instructional strategies, and specific supports to meet students' needs and increase student achievement. Given the extensive variation in vendors, course offerings, data systems, and interfaces, staffs face ongoing challenges of working to integrate the information and develop a meaningful profile for a host of decision-making.

The discussions lead to several questions for further investigation:

1. What is the most pertinent data to collect and integrate through all student data systems in order to make appropriate education decisions for students with disabilities in online environments?
2. What research methods are needed to learn about best practices for students with disabilities in online learning environments given the current state of data systems?
3. Where are some pockets of excellence in data collection, analysis, and use that can be used as both study sites and model sites?

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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, |

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|-------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 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

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|---------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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? |

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|-------------|------------|-------------------------------------------------------------------------------------------------------------------|
| 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> |