Report on the Online Teaching Standards and Teacher Certification Workgroup for Students with Disabilities

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Workgroup Report from December 7 – 8, 2017 Meeting
at the National Association of State Directors of Special Education, Alexandria, Virginia

Report Date: March 31, 2017

Online education provides a distinctive learning experience from the historical classroom experience and one which an increasing number of students and their families are choosing. Enrollment in online education, including both blended and fully online, has grown dramatically in participation over the last decade and a half, growing from an estimated 222,000 in 2002 to 2.3 million in 2015 (Watson, Murin, Vashaw, Gemin, & Rapp, 2012; Gemin, Pape, Vashaw, & Watson, 2015). Vested groups have addressed the need for changing the standards to qualify as a teacher in the online environment (e.g., Southern Regional Education Board, 2003; iNACOL, 2008; Quality Matters, 2010). In these standards, however, little attention is given to the unique and special needs of students with disabilities and ensuring high quality instruction is provided (see Appendix 1). Online learning environments place different and added demands on instructional and related services, especially as they involve students with disabilities (Rice, East, & Mellard, 2015; Center on Online Learning and Students with Disabilities, 2016; Smith, Basham, Rice, & Carter, 2016). Furthermore, research in Ohio suggests that students with disabilities may be overrepresented in online settings (Wang & Decker, 2014). State program and teacher certifications may or may not reflect the different needs of these students in online settings, and thus students with disabilities are not experiencing the advantages associated with online learning (CREDO; Woodworth et al., 2015). Until the teachers' competency standards accurately and comprehensively reflect the instructional experience in and opportunities of online learning, scant and irregular improvement in teacher preparation can be expected.

This report summarizes a discussion by stakeholders that focused on many aspects of online teaching standards and certification requirements. The purpose of this workgroup was to provide an opportunity for an in-depth discussion of topics regarding teacher competency requirements and the standards or competencies that are guiding faculty in higher education and staff in state departments of education. The intended outcome was to arrive at a consensus from an array of key stakeholders on the current status of online teaching standards in regards to students with disabilities. Further, the workgroup was tasked with developing ideas for appropriate action steps for researchers, higher education faculties, and policy makers regarding said standards.

Methodology

Participants

Participants were recruited from five broad categories: state department of education administrators, higher education professors involved in the preparation of special educators, researchers of either online teacher preparation or special education preparation (or both), local education agency representatives (LEA), and individuals who were involved with the creation of one of the relevant standards of discussion (e.g., iNACOL, CEC). In the interest of representing all perspectives, two veteran online teachers were also invited. Because several members served more than one role (e.g., being both a teacher education researcher and being involved with standards development), the final list of participants is best summarized in tabular format.

Total participants	13
Higher education teacher preparation	7
Instructional or Curriculum researcher	3
State department of education	2
Standards developer	9
Local education agency	1
Online teacher of grades K-12	2

Discussion Topics and Length

The workgroup discussion was planned as a one-and a half day event. Topics for the discussion ranged from questions of utility of standards to ideas about ways to improve implementation of them. The agenda and list of participants are appended to this report.

Work Leading to the Workgroup and Forum

Prior to convening the workgroup, COLSD staff conducted preliminary investigations on existing relevant teaching standards. This preliminary work included a literature search of existing standards, a survey to stakeholders regarding teacher standards, and an interview with stakeholders. The purpose of the literature search was to identify existing teacher standards relevant to online instruction and students with disabilities. Specifically, a keyword search was conducted on the standards of the Council for Exceptional Children (CEC) Initial Level Special Educator Preparation Standards, the International Association for K-12 Online Learning (iNACOL) National Standards for Quality Online Teaching, the iNACOL Blended Learning Teacher Competency Framework, the International Society for Technology in Education (ISTE) Standards: Teachers, and the Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards. Following the keyword search, surveys were given to stakeholders, requesting that they rate each standard on several key dimensions. Sixty-four participants were contacted. Twelve person completed the entire survey and provided usable data. Following the results of this survey, individual interviews were held with a group of ten stakeholders as a validity check; these stakeholders were asked whether they agreed with the findings of the survey. Six of the ten interviewees had also been survey respondents, while the other four had not taken the survey. The results of the survey and the interview are appended to this report.

The workgroup's members were provided with the survey and interview findings and asked to share their thoughts about those findings. Of the 13 workgroup members, six participants had not engaged in either the survey or the interview, four had engaged in the survey, and seven had engaged in the interview (three participants had engaged in both the survey and interview). Generally, workgroup members agreed with the findings from the previous surveys and interviews. A few workgroup members indicated that some of the standards are likely harder to implement than the survey/interview results indicated. Also, one

major talking point that had not been addressed by the previous work was that existing teaching standards in general revolve around what a teacher is expected to know and do. In an online environment, however, many traditionally held notions of teacher responsibility (e.g., managing classrooms) do not hold – thus, the utility of applying traditional notions of teaching standards to online environments is not always clear.

Organization of the Discussion Process

The 13 stakeholders, an OSEP staff member, and COLSD staff were seated in the same room in a semi-circular fashion to facilitate communication ease. Four researchers representing the Center on Online Learning and Students with Disabilities (COLSD, current authors) took turns facilitating the discussion, and three took notes. COLSD staff had planned 11 discussion topics which were slated for roughly one hour discussion each. These topics are embedded in the agenda, which is appended in this report.

Analysis of Workgroup Discussions

The notes from the three COLSD researchers were compiled. A research assistant assisted by identifying unique elements of conversation that occurred under each discussion topic (i.e., omitting repeated contentions), and reducing redundancy among note takers. Using the original discussion agenda and topics, full compilation of notes, as well as this thinned version of discussion as a guide for which discussion elements were richest/most meager, the researchers reflected on the discussion to identify broader thematic elements. After several meetings of discussion and individual time spent identifying how the topics fit together to construct more broad narratives, the researchers came to agreement that the conversations generally centered on four main themes. These themes compose the discussion below.

Organization of the Findings

During analysis of the workgroup transcripts, four general themes of discussion emerged:

1. relevance of standards for online teaching,
2. additional skills online teachers need,
3. what has already been done/is being done to prepare online teachers, and
4. the next steps involving online special educator preparation/certification.

In our presentation of these four discussion areas, we will primarily focus on points relevant to research and will also attempt to separate points of discussion in terms of blended, fully-online, and supplemental programs where appropriate.

Relevance of Standards for Online Teaching

The conversation surrounding online teaching standards generally revolved around ways to improve them or else improve their implementation. We present the key points of this discussion, as these points are certainly important to consider in efforts to improve teacher

preparation, which is ultimately the goal of any teaching standard. While discussing teaching standards in general, questions arose about the relevance of such standards in the online setting, both at present and the potential for relevance in the future. One topic of conversation was about how to best integrate standards in the training of teachers. While some participants thought that such standards should be integrated into teacher training programs, several participants countered that teacher preparation programs are already too full of course and credit requirements and any amount of addition from these standards would likely have to increase the pre-service teachers' program length. Participants added that teacher shortages already exist and that any additions to training time would only hurt recruitment further.

Another topic of discussion concerning relevance was the utility of the standards as they exist relative to focusing on teacher candidates' preparation experiences. Specifically, several participants noted that a major step forward in improving online teacher preparation would be a widening of opportunities for teachers in preparation to have online learning practicum experiences. Participants noted that such opportunities do not always exist, and that even when they do exist, they are not necessarily required or even counted toward licensure requirements. Thus, participants felt that such experience are currently viewed as an elective but unnecessary experience. Participants suggested that this step may need to be a higher priority than the integration of currently existing online teaching standards into preparation programs, as no attention is paid to such experiences in existing standards. Thus, updating teaching standards to make sure that future standards include requirements that teachers have preparation experiences in the online environment is key.

Regardless of whether participants agreed that existing teaching standards needed to be updated or implemented further in teacher preparation programs, the spirit of the standards, to ensure teachers have requisite skills, was an ever-present focus of conversation. All of the group members were in agreement that the online environment places different, and some ways more challenging, instructional requirements on instructors and persons in supporting roles (e.g., parents, administrators, and related services). Many ideas were offered on needed competencies of quality teachers in the online context. More pointedly, much conversation centered on what online teachers need to be able to do in addition to, or else somehow different from, what traditional classroom teachers are required to do.

Additional Skills Online Teachers Need

When asked what skills online teachers need, participants offered many suggestions which can easily be viewed as practices that all teachers need (i.e., not specific to online teachers). These skills include modeling, scaffolding, and collecting data on students, among others. An important point to consider, however, is that although all teachers need these skills, how these skills look or are expressed in a traditional classroom can differ greatly from an online teaching environment. Participants shared their thoughts and elaborated on this point.

Modeling. Modeling in a face-to-face classroom typically requires a teacher to physically model a skill (e.g., use of learning strategy) themselves. A blended environment still allows for this approach. As for a fully online environment, however, a teacher's options are quite

different since the students are not physically present or might be viewing the modeling in an asynchronous environment and thus have more limited interaction or feedback exchanges. While we have a strong research base for effective modeling in the classroom environment, we don't have the information on how modeling a strategy or procedure changes in the fully online setting and possibly the blended setting.

Individualizing instruction. Similarly, scaffolding/differentiation may look different in a fully online setting. Particularly, some participants discussed the idea that the task of differentiating among students in a traditional classroom is undertaken solely by teachers; whereas, the online learning environment itself has the potential to aid with differentiation. Participants talked about such technology tools as 'breakout rooms', which they saw as a useful differentiation tool. One participant mused about online learning's promise of personalized learning: if personalization is the goal for all students, even general education students, does that mean that all teachers should be trained similarly in how we train special educators? This point was most interesting to the participants: if we are expecting teachers in the online environment to personalize (scaffold) learning, it seems logical that they should receive training in this instructional practice. Participants also discussed the importance of supporting students' behavioral and social-emotional needs; the workgroup indicated that this area was noticeably absent from the existing online teaching standards.

Assessment skills. The ability to collect good learning and achievement data on students is another skill all teachers need, but that may look different in an online or blended setting. Participants noted the importance of data for such activities as formative assessment/explicit feedback and finding which students need additional support. However, participants talked about an added need to be especially data savvy in the online environment. For instance, how does a teacher embed formative assessments into their online lessons to maximize the collection of useful information? Participants also talked about the other available student data that normally wouldn't exist in a traditional environment, such as information on when students are engaged with the online content, the number of clicks, length of time on a webpage, and response rate. While participants were not sure whether these data points would necessarily be informative about student learning, the need for an online teacher to understand data was discussed to be greater if only due to the greater access to data itself. The authors of this report go so far as to not only agree, but to wonder whether the way online teachers get to know their students is more through data than it is via interactions with the students. This observation only furthers the need for a data savvy teaching field.

Classroom management. Participants also talked about classroom management as a skill that manifests differently in the online setting. Participants noted that in order to manage and engage students with the curriculum, online teachers likely need better knowledge of their students (likely through data), and better knowledge of accessibility (i.e., how to best serve student's online education interface needs). This needed skill complements the previous discussion on data competency. Discussants noted that it can be more difficult to know which students are actually engaged with the content and which aren't. Thus, engaging students

requires the skill to recognize disengagement, the data that indicates engagement and disengagement, and then the skills to best reengage students.

Curricular access. Participants talked at length about the idea of accessibility for students with disabilities. Accessibility for students with disabilities takes on a role in any technology-enhanced classroom, but the online environment presents new challenges. Participants indicated that teachers should have a basic understanding of accessibility and why it matters, as well as knowing who to contact if they cannot address a student's learning and performance needs. Participants also discussed the need for teachers to have a keen knowledge of what sort of accessibility difficulties may arise for students with disabilities (e.g., difficulty with written text for students with reading disabilities).

Summary of skills. As the above examples illustrate, online learning presents a scenario in which teachers may need to have a different skillset to achieve similar outcomes to their traditional counterparts, even when the intended outcome of using said skill remains the same. Other instances in which participants noted a skill all teachers should have, but that might take a different form in a blended or an online setting, were peer-to-peer and teacher-to-student engagement, explicit instruction, modeling, ensuring integrity, group instruction, and safety (e.g., bullying prevention). In addition to these more ubiquitous teacher skills, participants discussed several additional teacher skills that do not have a direct corollary in traditional schools, and are generally or entirely absent from existing standards. One such skill is communicating with parents.

Parent communication skills. While traditional teachers certainly have some responsibility to communicate with parents, the scale of that communication is incomparable with that of the online teacher. The workgroup members who are online teachers highlighted the importance of parent involvement in a fully online learning, as much more responsibility rests with them than in a traditional setting. The online teacher participants discussed the importance of fostering good communication with their students' parents, including helping them understand what is expected of them to support their child's learning, helping teach them how to best help their child (some called this 'parent training'), and general collaboration with the parents (e.g., instructional scheduling, independent work, and completing assessments in a timely manner). Some participants noted that knowing how much a parent is engaged with their child is difficult to determine, and sometimes even hard to discern if the child or the parent is completing the schoolwork. Good communication is viewed as one remedy for these issues.

Technology skills. Another skill not found in current teaching standards is a general need for technology skills. Participants emphasized that online teachers need to not only be able to work with their own technology, but be savvy enough to be able to support parents and students with their technology needs during instruction; including troubleshooting technology issues that might arise with adaptive devices to support students' interface with the computer. Participants felt that the greater knowledge of technology a teacher has the better able they will be to differentiate instruction. In this vein, participants noted that teachers should not only

be aware of current technologies and technological resources, but also be aware of how to procure more. In other words, teachers need to be adept at looking for and identifying new supplemental technology resources for teaching their students with disabilities.

Current Status, Future Goals, and the Basis of Change to Online Teacher Preparation

Participants shared their respective experiences with the status of online special educator pre-service and professional development. Participants were clear that state departments of education and agencies are currently conducting themselves differently than one another. Most participants representing state agencies in some way indicated that no special requirements existed for online special education teachers beyond meeting traditional education certification requirements. Two higher education faculty members indicated that in their respective states, endorsements for online teaching are available. These endorsements are at the graduate level, however, leaving no such endorsement for the bachelor's level educator. One state department member shared that in her state, teachers of online education are required to pass at least one course on online pedagogy. Another participant shared that in her experience working with one particular state, the state allowed graduate students to do practicums with their large statewide virtual school. However, these experiences were not part of the standard educator curriculum, and were considered optional. In other words, online learning was not seen as content or skills that teachers had to know.

When asked what the primary drivers of changes to pre-service initiatives/training are/could be, participants had varying views. One higher education participant asserted that in her state the state department provides initiatives concerning online learning. Other participants disagreed with the notion that the state department had the ability to unilaterally accomplish such tasks. One participant contended that, in her experience with online learning policy, more of a 'feedback loop' existed between researchers and policy developers. In this loop, research on what works leads to new or altered policy and certification requirements, which leads to more research, which leads to new policy. Another participant, speaking more generally about education, contended that true change does not come from policy, but instead is developed on the 'periphery' of practice. These peripheral practices are picked up by the mainstream if they are viewed as successful and eventually become policy.

In discussing the preparation of online teachers, the participants were clear that even among themselves, who were all highly qualified, those participants who did not work with online education directly were surprised by online learning's scale and the challenges it presents for the preparation of highly qualified special educators. This view was, perhaps, best exemplified by one higher education participant who's concluding comment was that the conversation had been eye opening, and that she will go on to talk with her colleagues about the challenges facing special educator preparation in terms of online learning and to push for a certification in her state. Others shared in the surprise, and were thankful to have had the opportunity to meet with and talk with the researchers and online teachers in the room. While the task of preparing a highly-qualified teacher base is still largely ahead of us, many

participants were optimistic about the promise online education holds. These notions relate directly to the final point of discussion featured at this workgroup: next steps.

Next Steps

Throughout the workgroup, and again at the end of our meeting, participants were encouraged to share ideas about what next steps would be most helpful to develop online teaching standards to maximize the benefits for students with disabilities. The recommendations we received generally fell into five broad categories.

The most elemental of these topics was a desire for research to be conducted on effective online curriculum for students with disabilities. These suggestions included conducting research on what good preventative online curriculum looks like and to determine what students would experience difficulty and the supports needed to intervene. Also, participants suggested research exploring teachers' understandings of curriculum and how it intersects with their ability to differentiate online. More broadly, several participants wanted to know what the framework for effective online learning environments look like. The question of effectiveness leads into another of the five broad categories: what variables relate to the success of students with disabilities in an online environment (e.g. blended, supplemental or fully online setting)?

Participants were interested in research exploring variables that lead to the success of students with disabilities. Participants had three data-analytic suggestions. First, looking at outlying students with disabilities, i.e., abnormally high or low achievers, to help determine what distinguishes the two extremes. Second, looking at the impact of the amount of time students spend in online activities (e.g., academic, social, and recreational) compared to offline. Third, using data mining techniques to find variables linked to student engagement. Another suggestion was exploratory work investigating what students with specific types of disabilities succeed most readily online, and which students struggle. Participants were also interested in exploring the human capital required to support students with disabilities online (i.e., the staff, parents, peers, and other family members). A third broad category of discussion ties directly into this human capitol discussion, in terms of building that capital.

Participants shared suggestions involving capacity building (i.e., the building of a sufficient and effective online teaching workforce). These suggestions included research on effective professional development and determining what course of action exists for IHEs to focus more on online learning for both general and special educators. Participants also indicated a desire to assess existing teacher understandings of and attitudes toward online learning: some participants had shared earlier that perhaps online learning, and thus its teachers, are not held in high regard by traditional educators. Participants also wanted to see a comparison of online learning teachers who had previous training or experience in online learning compared to an online teacher new to the environment, and whether this experiential difference impacted achievement gains for students with disabilities. Participants were also interested in specific practices undertaken by teachers and others in online environment, which leads to our fourth broad discussion topic.

Participants desired more research on effective practices and interventions for students with disabilities online. One idea was to conduct research on how teachers effectively work with students from different disability categories, skill levels, and other personal or social factors (e.g., age, family constellation, online access, cultural and language differences, and curricular focus). Another proposal was to explore what effective tier two and tier three interventions look like in an online environment. This discussion lead to a question of how online teaching practices differ from the traditional school, and a crosswalk study was suggested to help determine what, if anything, special educators in online settings need to know that differs from their brick-and-mortar counterparts. A final idea on this topic was a desire for the creation of video models for teacher preparation. Two main suggestions concerning these videos were: 1) in the style of the IRIS Center (IRIS, 2016), and 2) video models of exemplary practice with students from varied disability categories The fifth and final broad discussion topic concerned how participants might go about advocating for policy changes.

Participants had a few suggestions on how they and we might go about affecting and improving policy concerning online learning and students with disabilities. Several participants indicated that they would send messages to their state licensing boards and encouraged others to do the same. One participant, who represented a research organization, indicated that she would be happy to take materials directly to the next legislative session.

As the COLSD staff review this forum's finding, conducting a utility measurement of the above list of next steps is suggested as an alternative for judging the priority that should be given to the varied activities. This measurement would involve varied stakeholder groups rating each suggestion, either within or between categories, against specified dimensions (e.g., relevance, ease of implementation, immediacy of need, practicality, social impact, and timeliness) to determine what the most pertinent next steps are for this area of research.

Conclusions

The purpose of this workgroup was to discuss online teacher competency requirements and related teacher standards as they relate to special educators. The discussion generally centered around four main topics: relevance of standards, additional skills needed, what has been or is being done to prepare teachers, and what next steps are necessary.

The relevance of online teaching standards was questioned, as training program length and other concerns were weighed against the benefits of such standards. Regardless, participants were adamant that, whether through standards or another vehicle, teachers do indeed need to be better prepared for online learning. The additional skills teachers need, as indicated by the workgroup, range in terms of the online setting (e.g., blended, supplemental, and fully online) from better general technology skills to better communication skills, especially with parents/families. In terms of what is already being done, workgroup members shared that, in their experience, preparation for online teaching was usually at the graduate, and not the undergraduate level. Generally, participants think that currently a lack of awareness exists on the part of IHEs in terms of the scale of online learning and its workforce needs. Finally, as for the necessary next steps, participants shared that contacting state licensing boards and talking

to legislators would be necessary. Other, more research focused suggestions ranged from data-analytics on student success variables to the creation of best-practice video models.

Overall, the workgroup consisted of engaged participants who spanned a wide array of stakeholder groups. The suggestions and the discussion itself are enlightening as they tell the story of how real-world stakeholders are responding to the integration of online learning into students' experiences. The suggestions made by stakeholders represent a varied research agenda, but all touch on important questions. It may be best to conduct a utility measurement to put this list of suggested next steps in order of pertinence. Whatever the next steps taken by researchers, IHE faculty in teacher preparation, state department staff, vendors, and other agencies, the participants were in agreement that much remains to be learned about teaching students with disabilities in an online setting, and thus a lot to learn about how to best prepare online special educators.

Appendix 1: Survey and Interview Results regarding Online Teacher Standards

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November 22, 2016

Introduction

The purpose of this ongoing research project is to understand the state of online teaching standards and certification requirements with regard to teaching students with disabilities, and also to provide guidance on how to improve said standards and requirements. At the outset of this project, we wanted to know what the current state of the field was in terms of attention paid in existing teaching standards to students with disabilities who engage in online learning. To this end, we selected five well-known teaching standards to review. The standards chosen were the Council for Exceptional Children (CEC) Initial Level Special Educator Preparation Standards, the International Association for K-12 Online Learning (iNACOL) National Standards for Quality Online Teaching, the iNACOL Blended Learning Teacher Competency Framework, the International Society for Technology in Education (ISTE) Standards: Teachers, and the Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards.

Keyword Search

A keyword search was used to search through all five of the organizations' standards. The purpose of this keyword search was to find all standards that devoted language to online learning and/or students with disabilities. COLSD staff generated the keywords based on our expertise, and we believed these keywords were the most likely words that would relate to two distinct search categories. The two groups of keywords used for this search were: 1) online-related words, and 2) disability-related words. The specific keywords are listed below. Because of the respective foci of some of the standards documents, some keywords were omitted in the search. Specifically, the disability-related keywords were not used with the CEC standards (as virtually all standards in said document were disability-related). Likewise, the online-related keywords were not used in the two iNACOL standards for the same reason.

Disability-related search keywords

Disability/Disabilities
Assistive technology
Needs
Accessibility/Access
Individualized
Diversity/Diverse
Equity
IEP/504

<u>Online-related search keywords</u>

Online
Blended
Virtual
Technology
Assistive technology
Instructional technology
Personalized
Digital
UDL/Universal Design

Each standard that contained one of these words was identified and a list was created. This list contained 24 standards, and was analyzed by the current authors via discussion about the importance and relevance of each standard for students with disabilities. Some items were removed because they were deemed to be irrelevant to the current topic (e.g., may have contained a keyword but, upon inspection, did not actually pertain to online learning or students with disabilities, [e.g., may have focused only on assistive technology]). The resulting list contained 19 standards: 10 from the iNACOL teaching standards, three from InTASC, three from ISTE, and three from CEC. Following the keyword search only one term was found to be relevant to students with disabilities in the iNACOL blended standards, and upon discussion, the staff decided that it was not relevant. To save space in this document, the standards that were selected in this keyword search are included in the table at the end of this report, which also contains the ratings from the survey (discussed below).

Survey to Rate Standards

We designed a survey to gather participant feedback on the 19 standards. This survey was designed to allow participants to rate each standard on five dimensions: *relevance, specificity, difficulty, frequency,* and *uniqueness*. The *relevance* dimension was defined as the degree to which the standard applied to the online instruction of students with disabilities. The *specificity* dimension was defined as how specific the standard is: i.e., whether the standard was specific enough to be understood. *Difficulty* was defined as how challenging it would be for a teacher to apply the standard. *Frequency* of application was defined as the frequency a teacher would apply the standard in their instruction of students. *Uniqueness* to students with disabilities was the degree to which the standard applied solely to students with disabilities. Participants rated these five dimensions on a four-point scale:1-Very, 2-Some, 3-Little, 4-Not. A fifth, 'NA', was included as a response if participants chose not to answer. All participants were given the opportunity to rate each of the 19 standards.

Survey Participants

Participants were recruited from the lists of contributors to the standards we were reviewing. For two of the four standards (i.e., iNACOL and InTASC), lists of contacts were provided in the publically available text; most of these contacts had publically available e-mail

addresses, which were used as the point of contact. CEC contacts were sourced by contacting the organization directly and requesting contact information for standards contributors. We contacted ISTE, requesting contact information, but did not receive a reply.

Two additional categories of participants were recruited in addition to standards developers. The first of these categories were higher education experts. This category was defined as faculty of higher education facilities in which pre-service of online teachers occurs. The second additional category were online learning researchers. This category consisted of researchers who have published extensively about k-12 online learning.

Sixty-four potential participants were contacted, 12 responded by completed the survey. Four of the participants were from the higher education category, five were from the iNACOL developer category, two were online researchers, and one was from the InTASC developer category. We believe that the timing of the survey during the summer was a significant hindrance to broader participation.

Survey Results

Due to the low response rate, median scores were used as the level of analysis rather than mean scores. In light of the original metric, any median score above a 2 for all dimensions except *difficulty* was considered to be problematic (i.e., in which the average rating for a given dimension on a given standard was that the dimension applied 'little' or not at all). Similarly, a median score below a 3 for *difficulty* was considered to be problematic; thus, a difficulty rating on a given standard in which the median rating was at least 'some' difficulty of implementation.

In total, eight standards were rated to be problematic in terms of uniqueness to students with disabilities. Nearly all of the standards were rated to be problematic in terms of *difficulty* (i.e., 18 of the 19 standards). These ratings on the specific standards are included in the appended table.

Interviews to Assess the Validity of the Survey Results

Individual interviews were conducted with 10 participants. The primary goals of the interviews were to obtain feedback about the validity of the survey results, as well as obtain suggestions on next steps and new directions for further research. Participants were asked seven questions, and interview times ranged from 12 minutes to 34 minutes. The mean time was 22 minutes.

During analysis, we discovered that participant answers to our interview questions often ran across more than one question: thus, the results below are presented with a more general question language that encapsulated two or more of the original seven interview questions. This organizational approach led to five topics that participants addressed, rather than the original seven.

Topic One: Do you agree with the survey results; and were there any results that surprised you?

Overall, participants indicated that they agreed with the results. However, several participants indicated that they thought that some of the standards were more difficult to implement than the ratings indicated. As one participant put it,

"Actually, I would say no to that simply because I think if it was an accurate representation of my views and the views of my colleagues I think my colleagues and I would all say they should be saying that things are a lot more difficult."

While several other participants indicated that they thought the standards should be less difficult for experienced teachers to implement. One participant said,

"If you were an online teacher and you did find that it was difficult I would question why you're an online teacher."

While a second participant indicated,

"So if I was a veteran special education teacher then the difficulty should not be there. Unless I'm missing some pretty serious skillsets. And then if I'm a brand new teacher, the difficulty would be completely different."

Participants also shared general comments on the validity of the standards themselves. In this regard, several participants indicated that the standards are not currently being used in professional development or in practice, and that an increase in both was desirable. Participants also noted that the standards are not very unique to students with disabilities. As one participant put it:

"I'm like well why would it be unique if it says all students? Why would it be unique because it says 'diverse' students? So in that sense I had difficulty with the unique students with disabilities standard because it seems like a lot of these could be used for all kids."

Topic Two: Were the results presented clearly and in an intelligible way?

The consensus from participants was that the results were presented clearly. Several suggestions for improvement, however, were offered. Several participants made similar suggestions, such as providing the results in narrative format rather than just the table, and a more detailed explanation of the scale.

Topic Three: Were the dimensions rated on the survey the best possible, and what dimensions might have been added or changed?

Overall, participants indicated that the dimensions were pretty comprehensive. However, several participants indicated that the *difficulty* dimension was hard to interpret.

Other comments included wanting a way for survey respondents to leave comments on each standard, and one participant indicated that the *frequency* dimension was hard to interpret.

> "[W]hen I was looking at each question I was like ok each of these components really does address it. Like they each encompass the whole part of that question. So I think they were great."

Topic Four: What are the current major influences on preparation for online teachers?

Most participants indicated that the existing online standards are not currently used in preparing teachers. Only a few participants indicated that some form of preparation exists to teach online, but one of these participants also indicated that no such training exists to prepare online teachers to teach students with disabilities. Many indicated that the most common form of preparation for teaching online comes from other teachers and staff, as one teacher put it:

> "[T]here's not a lot of professional development… a lot is learned by doing it and talking with others who are doing it."

Topic Five: Next Steps. How might the results of this survey help change teaching standards, and what recommendations would you make for further research?

Many participants expressed interest in standards being rewritten to be more inclusive of students with disabilities. As one participant put it:

> "I think that would be the main thing; to make these standards, the language, very specific to students with disabilities and to try and capture some of the diversity of that population to remind people that we're just talking about a continuum of disabilities. Because I think that's what's going to be most helpful to the field and more helpful to the people thinking about standards."

Beyond language dedicated to students with disabilities in general, participants also indicated wanting more language dedicated to specific disability categories, at least in so much as to make mention of the continuum of special needs. For example, one participant said:

> "I think probably a continuum of severity would be helpful. And I'm not even saying so much separate standards but that however these are presented that it does speak to that range, and if you're trying to help people operationalize the standards that whatever language is used or examples are given reflect that diversity."

In addition to the focus of the standards' text, several participants indicated wanting guidance documents to help improve instruction of students with disabilities who learn online:

> "I think it would be really helpful for those people that have that knowledge to make and create resources for us to use. I mean that's what I would love to have because I could spend a lot of time trying to figure out the details of what it would take to teach these standards. I really need guidance to be honest with you."

One last area that was talked about by multiple participants was some sort of indicator of teacher progression. That is, how an online teacher is expected to progress in their practice.

Table of survey responses

The five dimensions used to rate each standard:

Relevance: We mean the degree to which this standard applies to the online instruction of students with disabilities. Does this standard make a difference to instruction? Is this standard applicable to teachers' instruction?

Specificity: We mean the uniqueness or particularity of this standard as opposed to its generality. Is this standard specific enough for knowing what the standard's focus and knowledgeable persons would share that understanding?

Difficulty: We mean how challenging it would be for a teacher to apply this standard. Would this standard be difficult to apply?

Frequency of application: We mean the frequency with which this standard has application in the instruction of students with disabilities. Do teachers apply this standard frequently with their students?

Uniqueness to students with disabilities: We mean the degree to which this standard applies solely to students with disabilities or to students in general. Do teachers apply this standard only to instructing students with disabilities?

Participants rated standards on the degree to which a given dimension applied to the standard on a four-point continuum: 1= VERY much applies, 2 = applies SOME, 3 = applies LITTLE or 4 = Does NOT apply.

For all dimensions except Difficulty, a lower score was desirable. For difficulty, a higher score was desirable (e.g., a score of 4 would indicate that a standard was <u>Not</u> difficult for a teacher to use).

Results: Problematic Scores are Highlighted

			Number of Responses	Median	Minimum	Maximum	Std. Deviation
#1	The online teacher knows and understands legal mandates stipulated by the Americans with Disabilities Act (ADA), the Individuals with Disabilities Education Act (IDEA), the Assistive Technology Act, and Section 508 or other	Relevance	11	1.00	1	1	0.000
		Specificity	11	1.00	1	2	.302
		Difficulty	11	3.00	1	4	.820
		Frequency Applied	11	1.00	1	3	.820

	similar guidelines/ requirements for accessibility.	Uniqueness to SWD	11	1.00	1	2	.405
#2	The online teacher is able to monitor student progress and apply activities and tools that are relevant to the needs of all students, including those with learning or physical disabilities, in collaboration with appropriate staff or resources.	Relevance	12	1.00	1	2	.289
		Specificity	12	1.00	1	2	.515
		Difficulty	12	2.50	1	4	.900
		Frequency Applied	12	2.00	1	2	.515
		Uniqueness to SWD	12	2.00	1	4	.965
#3	The online teacher knows and understands how adaptive/assistive technologies are used to help people who have disabilities gain access to information that might otherwise be inaccessible.	Relevance	12	1.00	1	1	0.000
		Specificity	12	1.00	1	2	.515
		Difficulty	12	2.00	1	4	.739
		Frequency Applied	12	2.00	1	3	.669
		Uniqueness to SWD	12	1.00	1	4	.996
#4	The online teacher is able to apply adaptive and assistive technologies in the online classroom where appropriate in the instruction to meet student needs	Relevance	12	1.00	1	2	.289
		Specificity	12	1.00	1	3	.793
		Difficulty	12	2.00	1	3	.622
		Frequency Applied	12	2.00	1	3	.739
		Uniqueness to SWD	12	1.00	1	4	.905

#5	The online teacher knows and understands appropriate tools and technologies to make accommodations to meet student needs.	Relevance	12	1.00	1	1	0.000
		Specificity	12	1.00	1	4	.985
		Difficulty	12	2.00	1	3	.669
		Frequency Applied	12	1.00	1	2	.515
		Uniqueness to SWD	12	2.00	1	4	1.311
#6	The online teacher is able to use appropriate tools and technologies to make accommodations to meet student needs.	Relevance	12	1.00	1	2	.289
		Specificity	12	2.00	1	4	1.044
		Difficulty	12	2.50	1	4	.900
		Frequency Applied	12	2.00	1	3	.651
		Uniqueness to SWD	12	2.00	1	4	1.155
#7	The online teacher knows and understands that students have varied talents and skills and make appropriate accommodations designed to include all students.	Relevance	12	1.00	1	3	.651
		Specificity	12	2.00	1	4	1.128
		Difficulty	12	2.00	1	4	.905
		Frequency Applied	12	2.00	1	2	.515
		Uniqueness to SWD	12	3.00	1	4	1.193
#8	The online teacher is able to address learning	Relevance	12	1.00	1	2	.389

	styles, needs for accommodations, and create multiple paths to address diverse learning styles and abilities.	Specificity	12	2.00	1	3	.651
		Difficulty	12	2.00	1	4	.953
		Frequency Applied	12	2.00	1	3	.793
		Uniqueness to SWD	12	2.00	1	4	1.055
#9	The online teacher is able to demonstrate awareness of different learning preferences, diversity, and universal design principles.	Relevance	12	1.00	1	2	.452
		Specificity	12	2.00	1	4	.937
		Difficulty	12	2.00	1	3	.718
		Frequency Applied	12	2.00	1	3	.622
		Uniqueness to SWD	12	3.00	1	4	1.193
#10	The online teacher knows and understands techniques to plan individualized instruction incorporating student data.	Relevance	12	1.00	1	2	.289
		Specificity	12	1.00	1	2	.492
		Difficulty	12	2.00	1	4	.900
		Frequency Applied	12	2.00	1	4	.996
		Uniqueness to SWD	12	3.00	1	4	1.231
#11	The teacher uses supplementary resources and technologies effectively to ensure accessibility	Relevance	12	1.00	1	2	.289
		Specificity	12	1.50	1	4	.965

	and relevance for all learners.	Difficulty	12	2.50	1	4	.798
		Frequency Applied	12	2.00	1	2	.515
		Uniqueness to SWD	12	2.00	1	4	1.165
#12	The teacher continually seeks appropriate ways to employ technology to support assessment practice both to engage learners more fully and to assess and address learner needs.	Relevance	12	1.00	1	2	.452
		Specificity	12	2.00	1	3	.651
		Difficulty	12	2.00	1	4	1.115
		Frequency Applied	12	2.00	1	3	.793
		Uniqueness to SWD	12	2.50	1	4	1.240
#13	The teacher knows a range of evidence-based instructional strategies, resources, and technological tools and how to use them effectively to plan instruction that meets diverse learning needs.	Relevance	12	1.00	1	2	.289
		Specificity	12	2.00	1	2	.492
		Difficulty	12	2.00	1	4	.866
		Frequency Applied	12	1.50	1	2	.522
		Uniqueness to SWD	12	3.00	1	4	1.193
#14	Beginning special educators use available technologies routinely to support their assessments.	Relevance	12	1.00	1	2	.452
		Specificity	12	2.00	1	4	.996
		Difficulty	12	2.00	1	4	.793

	Frequency Applied	12	2.00	1	2	.452
	Uniqueness to SWD	12	2.00	1	4	1.165
#15 Beginning special education professionals use technologies to support instructional assessment, planning, and delivery for individuals with exceptionalities.	Relevance	12	1.00	1	2	.289
	Specificity	12	2.00	1	3	.622
	Difficulty	12	2.00	1	3	.669
	Frequency Applied	11	2.00	1	3	.674
	Uniqueness to SWD	12	2.00	1	4	1.084
#16 Beginning special educators use technologies routinely to support all phases of instruction planning.	Relevance	12	1.00	1	3	.674
	Specificity	12	2.00	1	4	.905
	Difficulty	12	2.00	1	3	.835
	Frequency Applied	12	2.00	1	3	.739
	Uniqueness to SWD	12	2.00	1	4	1.311
#17 Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own	Relevance	12	1.00	1	2	.389
	Specificity	12	2.00	1	4	.996
	Difficulty	12	1.50	1	3	.866
	Frequency Applied	12	2.00	1	3	.718

	learning, and assessing their own progress.	Uniqueness to SWD	12	3.00	1	4	1.084
#18	Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.	Relevance	12	1.00	1	2	.289
		Specificity	12	1.50	1	4	.965
		Difficulty	12	2.00	1	3	.900
		Frequency Applied	12	1.50	1	3	.669
		Uniqueness to SWD	12	3.00	1	4	1.231
#19	Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.	Relevance	12	1.00	1	2	.289
		Specificity	12	2.00	1	4	.900
		Difficulty	12	2.00	1	3	.603
		Frequency Applied	12	2.00	1	4	.953
		Uniqueness to SWD	12	2.50	1	4	1.240

Appendix 2: Workgroup Agenda

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OSEP and COLSD Forum

Teacher Standards and Certification Workgroup for

Online Instruction

December 7 – 8, 2016 Agenda

Meeting Location:

National Association of State Directors of Special Education

225 Reinekers Lane, Suite 420

Alexandria, VA 22314

703-519-3576 Office phone

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Day One, Wednesday, December 7th

8:30 – 4:30

8:30   Introductions and Welcome

Welcome: Bill East (NASDSE) and Celia Rosenquist (OSEP)

Participant introductions: Affiliation and role with teacher standards

Overview:

a.   Review of our agenda

b.   What got us here? (A brief history)

c.   Our intended outcomes

d.   Explanation of how we hope this discussion proceeds

    i.   Hearing your perspectives

    ii.   Consensus desired, but not required

    iii.   Large group and small group activities

    iv.   Facilitators and note-takers; locations; discussion process

9:00   Orientation activity: Daryl Mellard (KU) (Large group)

We've compiled brief video episodes of students and instructors working in the online environment. Our purpose in sharing the clips is to represent segments of the online learning environment that students and instructors experience.

Note the variety of activities and interaction patterns.

Handout: Provides summary points of each film clip

a. Your thoughts about these segments?

b. What skills do the instructors need in these scenarios?

c. How is the online instruction different from the classroom setting?

9:35 Discussion topic #1: Survey and interviews (Daryl and Jesse) (Large group)

a. Brief presentation of results

b. Do you agree with the interviewees reports on the validity of the survey?

c. How did the survey results match your expectations? Surprise you?

d. Is the lack of language dedicated to students with disabilities surprising?

e. What do the results of the survey/interviews tell us that we did not know before?

10:15 Break (Check your email)

10:30 Discussion topic #2: Existing professional standards (Sean) (Large group)

Standards for teacher preparation in online environments have existed since 2003. Our research indicates that Institutions of Higher Education (IHEs) and State Education Associations (SEAs), and practitioners give little attention to existing teacher standards for online education (e.g., iNACOL, ISTE). Also, existing standards appear incomplete: CEC, provide no mention of online education settings, though their focus is on students with disabilities. Alternatively, iNACOL standards provide little mention of students with disabilities, though their emphasis is on online education.

iNACOL = International Association for k-12 Online Learning

ISTE = International Society for Technology in Education

CEC = Council for Exceptional Children

a. What're your views on the relevance of such standards for shaping practice? IHE preparation?

b. What has limited their adoption and implementation?

c. What information is needed for revision to existing standards (e.g., iNACOL, CEC) to reflect instruction in the online environments?

d. What's the impetus for organizations to revise standards to incorporate students with disabilities in the online setting?

11:30 Discussion topic #3: Needed teacher competencies (Small group)

   What teacher competencies do you consider unique to teachers working in the *blended* and *fully online* environments for students with disabilities and their families?

   We might think of domains from existing standards (e.g., iNACOL) or other frameworks (e.g., Kane, Kerr & Pianta, 2014): content knowledge, content assessments, learner/classroom management, student engagement, connecting with students, time management, student discourse, strategy use, and instructional pedagogy

12:30 Working Lunch

   Lunch topic: Continuation of topic #3

   Report out (10 minutes/group) (Sean)

1:30 Discussion topic #4: SEA focus (Small group)

   What's the impetus for state departments to include online instruction competencies for teacher certification? What are your recommendations for encouraging state departments of education to address online instructional competencies for students with disabilities in teacher certification?

2:00 Discussion topic #5: What are the checks that SEAs use to ensure teacher competence for licensure to teach students with disabilities in online settings?

2:30 Report out on #4 and #5

3:00 Break

3:15 Discussion topic #6: State initiatives in teacher preparation and certification in online instruction (Sean) (Large group)

   Nine states have addressed the qualifications necessary for teachers to demonstrate before they can take positions in online schools and provide fully online, blended, or supplemental instruction over the Internet: Georgia, Hawaii, Idaho, Louisiana, Michigan, Pennsylvania, South Carolina, South Dakota, and Vermont (McAllister, 2016). The states have not addressed instruction for students with disabilities.

a. What other states are you aware of that are working to include online instructional competencies for teacher certification?

b. Is instruction of students with disabilities addressed?

c. How are they approaching the task?

4:00 Review agenda for Thursday (Daryl)

Suggestions for improving our format?

Reminders: Complete reimbursement forms

Eat breakfast! And check out.

End Day One: Supper plans?

Bill's dining recommendations: pasta, fish, easy walking distance, trolley ride, etc.

Day Two, Thursday, December 8th

8:30 – 2:00

8:30 Review of Wednesday and today's plans

Your over-night thoughts? Reactions?

8:45 Discussion topic #7: Landscape of teacher preparation (Sean) (Large group)

1. What do you see as the landscape of teacher preparation in general and then for teacher candidates for students with disabilities?

2. What are the primary drivers in teacher preservice initiatives and current directions?

9:45 Discussion topic #8: Teacher preparation in IHE (Jesse) (Large group)

1. What are examples of how teacher preparation is changing to apply to instruction in *blended* and *fully* online learning environments?

   a. Blended

   b. Fully

2. What are the specific incidents that are directing teachers' professional development and the shift in emphasis in knowledge (e.g., pedagogy, technology tools, management, learner engagement and motivation)?

10:30 Break

10:45 Discussion Topic #9: Preparatory activities (Small group)

What are preparation activities that you imagine as most helpful to preparing teachers for working in the online environment, especially in a blended setting and in a fully online environment? (Small group)

11:30 Discussion Topic #10: Looking forward

What are feasible and significant next steps that could support improved teacher preparation and practice for online settings (e.g., virtual school, blended programs, and supplemental courses)?

12:15 Report out on topics #9 and #10

12:45 Lunch

Discussion topic #11: What guidance would be helpful for SEAs, providers, and IHEs regarding online learning and teacher preparation? (Daryl) (Large group)

The guidance might be directed toward policy, regulations, professional development, or other instruments that improve practice and outcomes.

   a. SEAs

   b. Providers

   c. IHEs

1:30 Close out

   a. What's next in our analysis and syntheses?

   b. Your closing comments

   c. Reimbursement forms and process

   d. Thank you and safe travels

Contact information at NASDSE:

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Bill East bill.east@nasdse.org (703) 519-3576

Appendix 3: Workgroup Participant List/Affiliations

Name	Affiliation 1	Affiliation 2
Invitees		
Bonnie Billingsley	Higher education	CEC
Jo Marie Bolick	Online Teacher	
Mary Brownell	Higher education	Researcher
Victoria Chamberlain	Department of education	InTASC
Lisa Dieker	Higher education	Researcher
Kathryn Kennedy	Researcher	iNACOL
Kelli Kercher	LEA	CEC
James McLeskey	Higher education	CEC
Gwen Nagel	Department of education	InTASC
Alba Ortiz	Higher education	CEC
Kerry Rice	Higher education	iNACOL
Alison Thomas	Online Teacher	
Sara M Flanagan	Higher education	CEC
COLSD and OSEP Representatives		
Celia Rosenquist	OSEP	
Bill East	COLSD	NASDSE
Daryl Mellard	COLSD	KU
Jesse Pace	COLSD	KU
Sean Smith	COLSD	KU

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