Preparing Teachers to Educate Students with Learning Disabilities

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Policy Analysis for California Education

Executive Summary

As a result of a half century of state and federal legislative efforts to guarantee free and appropriate public education for students with learning disabilities (SWLDs) and multiple affirmations of state responsibilities under these statutes by state and federal courts, more than two thirds (68 percent) of SWLDs in public schools spent the majority of their instructional time in general education classrooms in 2015—up from a mere 11 percent three decades earlier. With such significant changes afoot, more attention is needed to supports for teachers—particularly new teachers—leading these classrooms.

There have in addition been rapid policy adoptions of teaching performance assessments to evaluate pre-service teachers at the end of their teacher preparation programs (TPPs). From 2008 in California, all pre-service teachers must pass one of three such assessments to receive their teaching credential. This raises the question as to whether and how new teachers are being prepared to address the increasingly diverse learning needs of their students in inclusive classrooms.

We surveyed graduating pre-service teachers near the end of their TPPs in the summers of 2017 and 2018. Pre-service teachers generally report feeling ready to support inclusive classrooms and use effective instructional practices to teach SWLDs. To better understand differences in responses, we identified several themes related to what aspects of their TPPs new teachers found most helpful in this regard, for example:

- Pre-service teachers who viewed their TPPs as coherent (i.e., as having a clear vision of teaching and learning) were more likely to feel ready to support inclusive classrooms and use effective instructional practices to educate SWLDs.

- Pre-service teachers who had stronger support from university supervisors were more likely to perceive themselves as ready to use effective instructional practices to educate SWLDs.

However, our results suggest that these program factors were perceived as useful only by pre-service teachers pursuing an elementary teaching credential: those pursuing secondary credentials reported no connections between perceptions of preparation in TPPs and feelings of readiness to support inclusive classrooms or teach SWLDs.

Our studies represent the next critical step in understanding key issues in developing the teaching workforce to educate students with disabilities, particularly SWLDs. Policy decisions surrounding successful teacher preparation will need to understand how TPPs affect teachers' ability to address all child populations; we cannot exclude students with disabilities from this consideration.

Overview

Purpose

Little is known about whether and how rising cohorts of new teachers are being prepared to educate students with learning disabilities (SWLDs) in general education classrooms. The inclusion of SWLDs in such classrooms has become a major aim of federal policy and the focus of state and local officials owing to federal laws like the Individuals with Disabilities Education Act (IDEA), No Child Left Behind (NCLB), and Every Student Succeeds Act (ESSA). As a result of these policies, teachers in general education classrooms bear a greater responsibility for educating SWLDs than ever before. In turn, pre-service teacher preparation programs (TPPs) face increased responsibility to ensure *all* pre-service teachers (not only those preparing to become special education teachers) receive adequate preparation to educate *all* students, including those with and without learning disabilities (Stayton & McCollum, 2002). This new responsibility coincides with a larger national effort to improve the quality and rigor of teacher preparation by making credentialing or licensure contingent on passing edTPA—a rigorous teacher performance assessment designed to assess a pre-service teacher's "readiness to teach." Currently implemented by 700 to 900 teacher education programs in 40 to 41 states, edTPA can serve as a major gatekeeper for entry into the teaching profession. Its compatibility with broader teacher training goals—like those concerning SWLDs—will become a crucial determinant of whether those goals can be achieved.

Policy Context

As a result of two major federal laws—the Individuals with Disabilities Education Act (IDEA, 1997, 2004) and No Child Left Behind (NCLB, 2001)—there has been an increase in the incorporation of students with disabilities in the general education classroom. Specifically, IDEA introduced important changes in the expectations for students with disabilities, namely that this group is expected to learn and master the same content as other students in the same classroom (Karger & Hitchcock, 2003; Yell et al., 2006). In 2001, NCLB incorporated these expectations for students with disabilities into accountability standards for schools: schools were required to assess the academic performance of students with disabilities and were expected to make modifications for improving these students' achievement outcomes. Taken together, these changes are often referred to as *inclusion*—students with disabilities are educated in general education classrooms to the maximum extent possible, conditional on a students' Individualized Education Program (IEP).

These statistics reflect a dramatic shift in classroom composition that brings new challenges for school performance. For instance, at the national level, in a recent 'Dear Colleague' letter the U.S. Department of Education drew attention to the specific learning

disability (LD) of dyslexia, urging states and local school districts to no longer be "reluctant to reference or use dyslexia in evaluations, eligibility determinations, or the developing of the individualized education program" (Yudin, 2015). California holds schools accountable for ensuring that students with disabilities are making adequate progress—this is evidenced by the type of data available on the California School Dashboard. For instance, on the "Student Group Report" for any given school in California on the Dashboard, the progress for students with disabilities in key areas (test performance, chronic absenteeism, suspensions, graduation, college/career readiness) is displayed prominently alongside all other groups of students (i.e., language, race/ethnicity, and so forth) in the state (Gee, 2020).

Moreover, the Dashboard presents detail on the percentage of students by key groups who participated in state exams. The data on the Dashboard clearly show that students with disabilities are being tested in English and Math at the same rate as those in other important demographic groups, including English learners, foster youth, socioeconomically disadvantaged students, and racial/ethnic minorities. In other words, almost 100 percent of students with disabilities in public schools in California are being tested in key subject areas each year. Reflective of the national movement in policy over the past two decades, the academic progress and performance of students with disabilities is no longer being left behind. Such attention both nationally and in California has placed pressure on schools to identify appropriately students with disabilities to ensure that their educational needs are being met and that their performance is on track.

Students with learning disabilities (SWLDs) make up the largest proportion of students with disabilities who have been part of these inclusion practices—that is, being moved into the general education classroom and taught by general education teachers (McLeskey et al., 2012). A learning disability may include perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia (IDEA, 2004). In 1989, only 11 percent of public school SWLDs spent the majority of their school day (over 80 percent of total instructional time) in a general education classroom (U.S. Department of Education, 2016). By 2015, that figure jumped to 68 percent (U.S. Department of Education, 2016). Hence, of all student groups with disabilities, SWLDs have experienced the biggest change from being taught primarily by a special education teacher to being taught primarily by a general education teacher. Given the monumental change particularly experienced by this group, the focus of our work has been on SWLDs.

A Focus on Teachers

As a result of policies promoting the shift of more SWLDs into general education classrooms, teachers in these classrooms bear a greater responsibility for educating SWLDs now more than ever before in our state's history. In turn, pre-service teacher preparation programs (TPPs)—an often overlooked component of the U.S. education

system in regards to inclusion policy—face increased responsibility to ensure that all general education teachers (not only those preparing to become special education teachers) receive adequate preparation to educate *all* students, including those with and without learning disabilities (Stayton & McCollum, 2002). This new responsibility coincides with a larger effort to improve the quality and rigor of teacher preparation by making credentialing or licensure contingent on passing teaching performance assessments, such as edTPA—a rigorous teacher performance assessment designed to assess a pre-service teacher's "readiness to teach." Currently implemented by 900 teacher education programs in 41 states, edTPA can serve as a major gatekeeper for entry into the teaching profession. Its compatibility with broader teacher training goals—like those concerning SWLDs—will become a crucial determinant of whether those goals can be achieved.

As an example of how this plays out in California, the credentialing board has recently sought to align teaching performance assessments to better prepare general education pre-service teachers for instructing SWLDs. For each assessment, including edTPA and its California variant (CalTPA), the board has set "an expectation that both tasks and rubrics have a focus on teaching students with disabilities placed in the general education classroom" (Sandy, 2016). Though the board has established this expectation, it is unclear the extent to which preparation for the state's performance assessment has furthered the goal of preparing general education pre-service teachers to address the educational needs of SWLDs.

The challenge arises when we look into the classroom—as in fact we see historically, students with disabilities have not been supported in traditional types of classrooms (Moon et al., 2012). While this gives us pause, it should also provide us with motivation: perhaps teacher training could ultimately serve as an intervention point for addressing policy and practice; that is, perhaps the way to address the needs of SWLDs in general education classrooms begins before teachers are full-time teachers. If new general education teachers' training and eventual instructional practices could be changed with regard to educating SWLDs, the number of students succeeding in general education classroom settings might increase over time (Isaacson et al., 2011).

Currently, however, not much attention has been paid to whether general education teachers are being prepared (or feel prepared) to address the needs of SWLDs. For teachers to be "classroom ready" on day one, general education teachers need to be prepared to shift and align instructional practices and content delivery methods to meet the needs of each student (Kauffman et al., 2005). It is fairly well established that traditional general teaching practices that work for students without disabilities do not necessarily align with those that support success for SWLDs (Berninger & Wolf, 2009; Swanson et al., 2013). Therefore, in inclusive classrooms, more knowledge is needed to understand how general education teachers are prepared to teach SWLDs and what type of teaching preparation is required to ensure that students' needs are being met.

Pre-service Preparation to Teach SWLDs in General Education

Components of Teacher Preparation

Traditional TPPs are complicated endeavors designed to meet a variety of goals, including developing pedagogical skills and a sense of professionalism; fulfilling state coursework and accreditation requirements; and preparing pre-service teachers to meet state licensure requirements, usually involving standardized assessments and minimum student teaching thresholds. Though the order and mix vary by program, most TPPs seek to reach these goals through a combination of course work, field experiences, and examinations or capstones. Whether and how these different TPP components matter for teacher effectiveness and whether programs, as a whole, differ in their effectiveness has been the subject of scholarly debate (cf. Boyd et al., 2009; Goldhaber et al., 2013; Henry et al., 2013; Koedel et al., 2015; Ronfeldt & Reininger, 2012).

Our interest has been to contribute to and extend this work by collecting more detailed data regarding pre-service teachers' experiences in TPPs. Specifically, we are interested in exploring if or which of these TPP components pre-service teachers believe to be most helpful to lead inclusive classrooms and educate SWLDs. Students with disabilities require unique attention from teachers (Downing et al., 1997; Greene et al., 2002; Horne & Timmons, 2009; Lazear, 2001). Therefore, when supporting the needs of SWLDs, general education teachers might plan differently than they would in other classrooms—all in the quest to facilitate the connection between policy efforts and practice dedicated to supporting inclusion and positive learning outcomes for students. As such, we discuss various TPP components and how they might relate to readiness to educate SWLDs.

Coursework. Often pre-service teachers will complete some coursework prior to beginning their fieldwork in the classroom and will continue taking courses until the end of their programs. While exact course requirements vary among programs, all pre-service teachers are expected to have completed courses that cover subject-matter content knowledge, pedagogy, educational foundations, and technology (Preston, 2017). While research is mixed regarding the impact of pre-service coursework on student outcomes (Allen, 2003; Harris & Sass, 2011; Henry et al., 2013), prior work shows a positive relationship between coursework and perceptions of preparedness, such as supporting cultural and linguistic diversity (Whitaker & Valtierra, 2018), subject-matter efficacy (King & Wiseman, 2001), and knowledge of classroom management strategies (O'Neill & Stephenson, 2012). The issues of inclusion and educating SWLDs could permeate much if not all TPP coursework. The extent to which instructors embed discussion in courses about best practices for educating SWLDs—or strategies to manage the challenges associated with diverse learning and behavioral needs in

inclusive classrooms—could conceivably impact whether teachers feel prepared to address diverse learning needs.

Field experiences. Pre-service teachers supplement the knowledge received in their coursework with field-based experiences. Observing full-time teachers, assisting in classrooms, and student teaching are the experiences in which pre-service teachers try new instructional strategies, cater to diverse learning needs, and acclimate to the schooling context. Pre-service teachers consistently rate student teaching as being the most helpful aspect of their preparation (Guyton & McIntyre, 1990; NCATE, 2010; Van Zandt, 1998), but research is mixed regarding the actual benefit of student teaching (Ng et al., 2010; Valencia et al., 2009; Youngs & Qian, 2013). Throughout their field placements, pre-service teachers are observed by university supervisors, who tend to be former teachers and also teach methods coursework in TPPs. Cohen et al. (2018) note that field experiences can vary substantially for pre-service teachers, as fieldwork involves messaging and mentorship from cooperating teachers as well as university supervisors. Variation in the quality and differences in views of teaching paired with variation in the compositions of classrooms among teachers links with teachers' perceptions of their training and future in-service practices (Ronfeldt, 2012, 2015; Ronfeldt & Reininger, 2012). The first concrete instance where pre-service teachers address practical challenges related to teaching in classrooms with SWLDs may be in their TPP field experience component. How they handle that experience (or how they are instructed to handle that experience by cooperating teachers, supervisors, and faculty instructors) is likely to have an influence on pre-service teachers' views of their responsibility and efficacy to support inclusion and teach SWLDs.

Next generation licensure examinations: TPAs. Teacher licensure examinations have been a part of American education since the 19th century. Critics both inside and outside TPPs have argued that most licensure examinations consist of standardized tests that bear little resemblance to classroom teaching. Recently, teaching performance assessments (TPAs) have gained widespread attention as a more authentic way to measure whether pre-service teachers are ready for the job. These efforts have been further amplified by the growing interest of state and federal policy in tying teacher performance to the TPPs that trained them (Superfine et al., 2012). Of the performance assessments currently in use, edTPA has garnered the most significant support and traction nationwide. edTPA is in use in nearly 900 TPPs in 41 states (AACTE, n.d.-a). As a licensure examination, edTPA is designed to pull together the various discrete elements of TPPs into a single assessment. edTPA's rubrics involve planning, instruction, and assessment knowledge and practices of pre-service teachers; its purpose is to "measure and support the skills and knowledge that all teachers need from Day 1 in the classroom" (AACTE, n.d.-b). To do so, the assessment requires that pre-service teachers upload samples of unedited video of their teaching of lesson plans as well as artifacts collected from students during teachers' field experiences. edTPA also requires pre-service teachers to reflect on their filmed

practice and their students' work, drawing from coursework and feedback from university supervisors. Following the upload of video, artifacts, and reflections, external evaluators score pre-service teachers in accordance with edTPA's rubrics. In several of these, pre-service teachers are asked to reflect on aspects of their teaching that cater to individual differences among their students. Because appealing to diverse learning needs is part of the edTPA, the assessment could be helping pre-service teachers educate SWLDs, yet little research has examined this phenomenon.

Summary of Our Studies on Pre-service Preparation to Support SWLDs

Our work addresses a gap in both research and policy by exploring new teachers' perceived connections of different TPP components and teachers' perceived readiness to educate SWLDs in general education classrooms. To do so, we conducted two studies: a pilot study at one campus followed by a statewide examination of each TPP in the University of California (UC) system.

Research Questions

Our studies were the first to address general education pre-service teachers' perceptions towards their soon-to-be instructional practices for SWLDs in the context of their TPPs. The studies were designed to answer the following questions:

1. Do pre-service teachers perceive themselves as ready to educate SWLDs in general education classrooms?
2. At the time of graduation, do pre-service teachers' perceptions of various qualities of their training (e.g., coursework, fieldwork, edTPA) link to their perceptions of readiness to educate SWLDs in general education classrooms?
3. Do these related perceptions differ between elementary and secondary pre-service teachers?

Study Sites

To answer these questions, we surveyed 69 pre-service teachers at the end of their preparation at one UC TPP in the summer of 2017. We then surveyed eight UC TPPs in the summer of 2018. Each year, the UC TPPs prepare, on average, 700 to 900 pre-service teachers to teach in general education, which is a small percentage compared to the total number of teachers being prepared each year in California. In the 2017–18 fiscal year, 23,766 pre-service teachers were enrolled in TPPs across the state. That said, pre-service teachers graduating from UC TPPs are similar demographically to pre-service teacher

graduates in other California TPPs. This similarity is shown in Table 1, which compares the pre-service teacher demographics in our study with what the California Commission on Teacher Credentialing reports statewide.

Table 1. Pre-service teacher demographics

	Study Sample Percentage	California Percentage*
Male	22	29
Female	78	71
Black	1	5
Hispanic	23	29
White	59	46
Asian	18	7
Other	14	9
Total Number of Pre-Service Teachers	473	23,766

* Data provided by the California Commission on Teacher Credentialing Annual Report Card 2017–18.
https://www.ctc.ca.gov/docs/default-source/commission/reports/titleii-2017-2018-annualrprt.pdf?sfvrsn=2

Though somewhat similar demographically, pre-service teachers in the UC TPPs differ compared to other California pre-service teachers in two primary ways. First, UC TPPs enroll pre-service teachers who have completed a bachelor's degree, and most teachers receive a master's degree in education in addition to a teaching credential after completing program requirements. Second, UC TPPs require prospective pre-service teachers to have a minimum undergraduate GPA of 3.0 or to request a waiver of this requirement prior to enrollment.

All teachers preparing to teach in general education are required to pass one of the teaching performance assessments—edTPA, CalTPA, or PACT—to receive a teaching credential from the California Commission on Teacher Credentialing following the completion of their program. The eight TPPs included in this study share many similarities. All programs engage pre-service teachers in coursework prior to placing them in cooperating schools. Other program requirements include at least three quarters of coursework (totaling a minimum of 13 months of full-time course requirements for graduation) and at least two semesters of student teaching.

To evaluate how perceptions of pre-service preparation related to perceptions of having sufficient knowledge of disability policy and procedures as well as abilities to educate SWLD, we asked pre-service teachers about their experiences in preparing for edTPA or CalTPA. In particular, we asked whether they believed the assessment was

helpful with regards to becoming a classroom teacher and whether the assessment aligned with other aspects of their preparation. We also asked whether they felt supported by their university supervisors, whether they believed their program was coherent (i.e., unified in its goals, mission, and expectations), and whether they felt their placement experience matched their expectations. We asked about their background characteristics (e.g., race/ethnicity, gender, undergraduate GPA, K–12 schooling history) so that we could control for these factors and avoid biasing any identified relationship between our measured perceptions of their preparation.

There are a few noteworthy differences between how we designed the pilot versus statewide studies. First, because the number of pre-service teachers involved in the pilot study was much smaller than the number involved in the larger statewide study, we asked fewer questions. With a larger population to survey, the statewide study asked more questions about feelings of preparedness to use specific instructional practices to educate SWLDs. This gave us a deeper look into surveyed teachers' perceived readiness. Second, the TPP we surveyed in our pilot study adopted edTPA two years before some of the TPPs included in the statewide study. This is important in considering what factors related to edTPA might emerge.

Findings

In each study, we found that pre-service teachers tended to report feeling ready to provide general support in inclusive classrooms as well as to use effective instructional practices for their SWLDs. We illustrate responses to some of the survey questions included in the statewide study in the figures below. Figure 1 shows responses to questions with respect to practices that teachers commonly use in inclusive classrooms. Figure 2 shows responses to questions regarding readiness to use specific instructional practices for educating SWLDs. For each question, pre-service teachers had the option to respond with Strongly Disagree, Disagree, Agree, or Strongly Agree with regards to whether they felt prepared to engage in each practice. Shown across both charts, approximately 50 percent of respondents indicated that they "Agree" with the different statements referring to their preparedness to provide general support in inclusive classrooms as well as to use instructional practices to educate SWLDs. The least common response (~5 percent) was to "Strongly Disagree" with these statements. The remaining responses were split between "Strongly Agree" and "Disagree." Taken together, these responses appear to signal that most pre-service teachers in the sample felt prepared to support inclusive classrooms and teach SWLDs.

While pre-service teachers tended to report feeling prepared to support inclusive classrooms and educate SWLDs, there were clear differences with respect to what program factors related to these feelings of readiness. In both studies, we found similar

factors that emerged as being important for teachers' perceptions of their readiness to support inclusion and educate SWLDs. First, teachers who perceived their TPPs as more coherent tended to perceive themselves as capable of providing general support to inclusive classrooms, such as: (a) having knowledge of special education policies and procedures based on federal law, (b) having the ability to use IEPs to support learning for students, and (c) being familiar with other practices (not necessarily specific to teaching SWLDs) associated with leading inclusive classrooms. Examples of perceived program coherence include hearing similar views about teaching and learning across courses and believing the program articulates a clear vision of teaching and learning.

A couple of unique but interrelated findings emerged between the two studies. In the statewide study, teachers who believed that their programs were coherent and perceived themselves as having stronger support from their university supervisors tended to report feeling better prepared to use effective instructional practices to educate SWLDs. Examples of these instructional practices included the use of multiple forms of engagement, mixed achievement groups, and learning tools such as reading guides and audiovisual devices. We asked these questions for the first time in the statewide study. In the pilot study, we found that pre-service teachers who felt that edTPA was useful in preparing them also felt that it was helpful in preparing them to teach SWLDs, including lesson planning, IEP support, and designing assessments. Note that, as mentioned above, this TPP had been using edTPA for three years prior to our study.

Figure 1. Preparedness to provide general support in inclusive classrooms from 2018 survey in UC teacher preparation programs
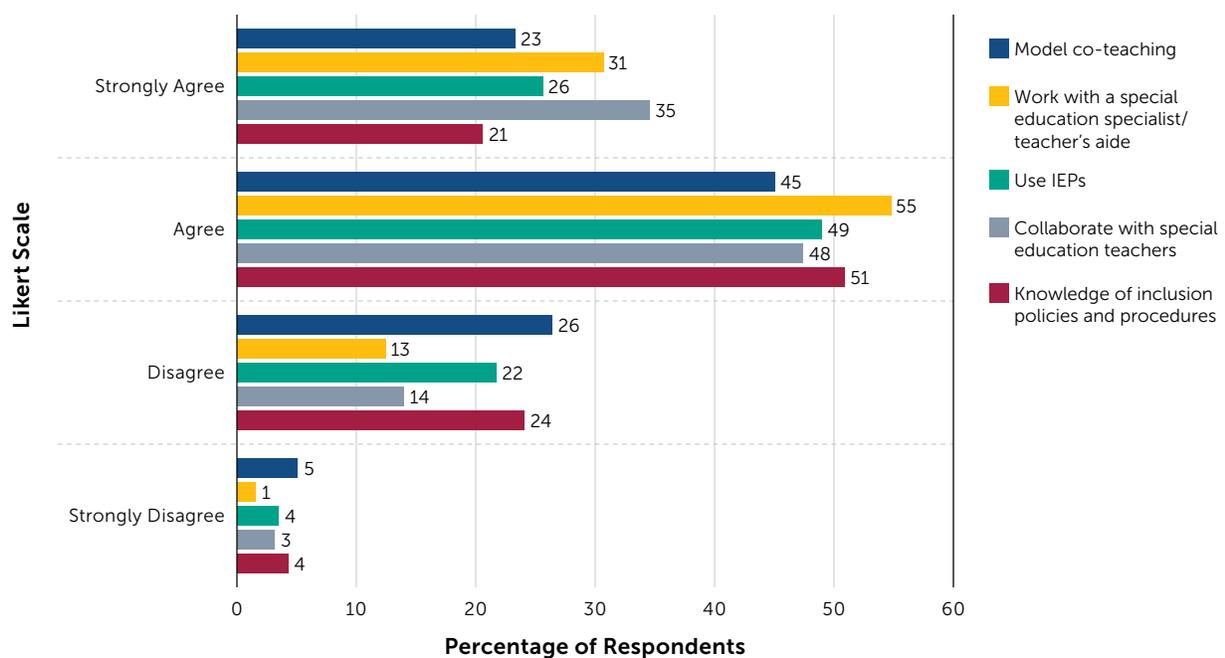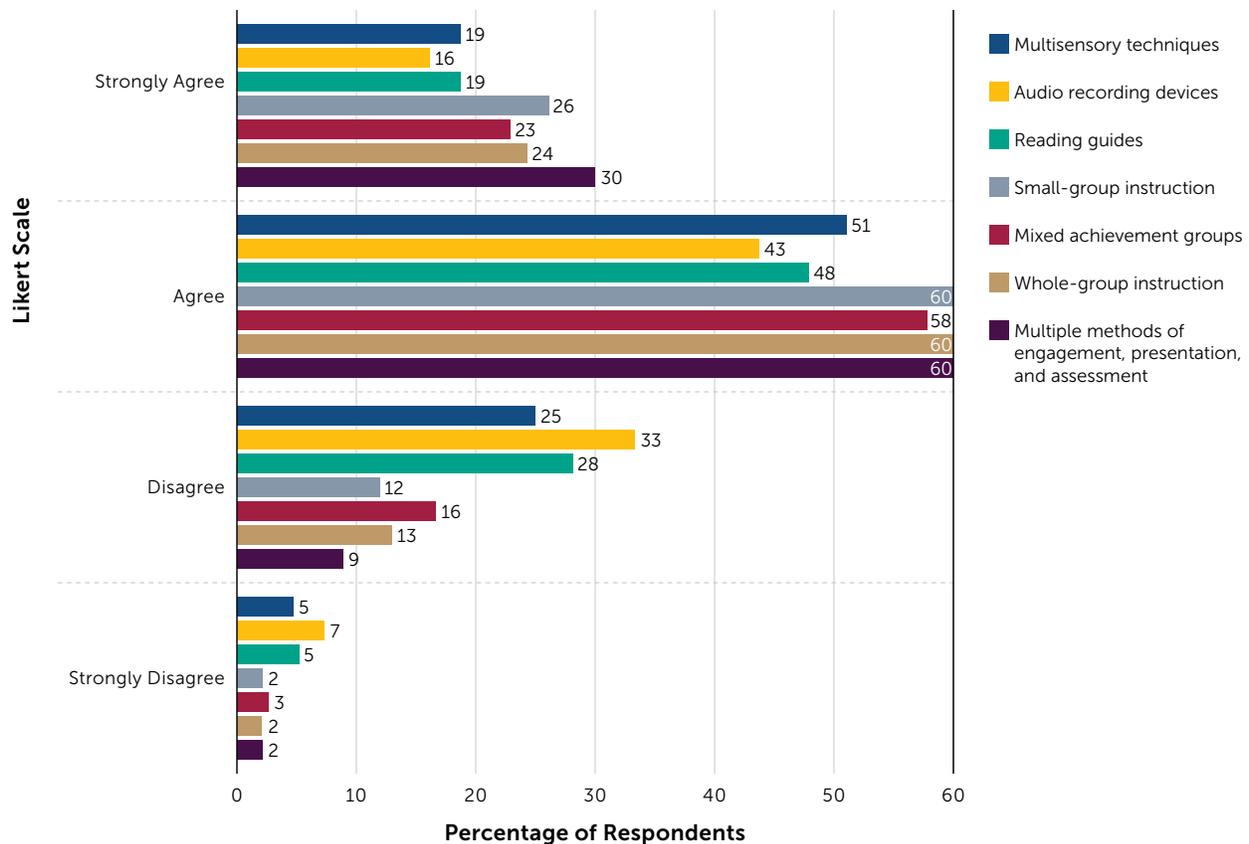
Figure 2. Preparedness to use instructional practices for SWLDs from 2018 survey in UC teacher preparation programs

Finally, we learned from both studies that every program factor that related to readiness to support SWLDs was specific to pre-service teachers receiving an elementary teaching credential and not pre-service teachers receiving a secondary teaching credential. In the statewide study, program coherence and university supervisor support were factors that helped pre-service teachers pursuing elementary teaching credentials feel prepared to provide support in inclusive classrooms and educate SWLDs. Based on responses from pre-service teachers pursuing secondary teaching credentials, these factors did not relate to their perceived readiness to provide general support or educate SWLDs.

Implications

Program Coherence

In both studies, perceptions of program coherence were linked to perceptions of readiness to provide support to inclusive classrooms; in the largest study, perceptions

of program coherence related to perceptions of readiness to use instructional strategies to support the learning needs of SWLDs. Coherence has received little attention in educational research on the importance of various factors in preparation programs, but the few extant studies point to the viability of coherence as both a malleable and effective factor in preparing pre-service teachers to be successful in the teaching profession (Boyd et al., 2009; Fitchett et al., 2018; Grossman et al., 2008). Part of the reason coherence has received little attention is the lack of clear definition of this particular factor. Among the various definitions and attempts to operationalize coherence in prior research, the term generally refers to "the alignment of ideas and learning opportunities" (Grossman et al., 2008, p. 274). This alignment could exist structurally throughout TPPs by having similar activities and messages articulated across courses, activities, field placements, and learning assessments; and/or this alignment could exist conceptually in terms of the visions and shared views among faculty, university supervisors, and cooperating teachers who all mentor pre-service teachers (Hammerness, 2006).

Given our findings, pre-service teachers may feel better prepared to support SWLDs when they perceive their programs as more coherent because the strategies pre-service teachers learn for balancing different needs in a classroom as well as the specific tools and practices they learn to use are then consistent throughout their journey to becoming full-time teachers. As mentioned above, there are separate components of preparation integrated into a TPP, but these components ideally complement one another (e.g., concepts in coursework are applied in fieldwork). If such consistency across components does not exist, perhaps it is no surprise that some pre-service teachers graduate feeling uncertain about their abilities to support SWLDs and, more generally, to teach in inclusive classrooms. This logic is in line with prior research discussing the importance of program coherence and the need for greater attention to this aspect of TPPs (Boyd et al., 2009; Grossman et al., 2008).

Elementary versus Secondary

Given that our findings primarily applied to pre-service teachers receiving elementary teaching credentials, it is vital that teacher educators and policymakers discuss how TPPs are or are not preparing secondary teachers to support SWLDs in general education. This consistent finding across both studies is perhaps unsurprising given that elementary teachers, for the most part, spend substantially more time with the same (and fewer) students each day. These teachers, both pre-service and in-service, may be more efficacious with regard to supporting SWLDs simply because they have more time to spend with these students and to address their individual learning needs throughout the year. In contrast, secondary teachers might have hundreds of students and not have the same time or opportunities to address as many learning differences among their students. This challenge, though, cannot be ignored and deserves greater attention in the

preparation process. Researchers, practitioners, and policymakers alike must investigate this pressing issue facing secondary inclusive classrooms.

Policy Recommendations

Our research is situated where policy meets practice in addressing how TPPs are preparing new general education teachers to address the needs of SWLDs in general education classrooms. As state policymakers continue to require that programs' rubrics for teacher preparation consist of the new policy goals for inclusive instruction and classroom settings, and utilize teacher performance assessments like edTPA to measure whether teaching candidates have been adequately prepared to fulfill such goals, our project helps understand the outcomes of these changes. While state policymakers have dedicated many resources to reforming TPPs to better prepare the teaching workforce, there is little understanding of whether teachers feel that engaging with performance assessments is beneficial to addressing the needs of SWLDs.

There are two key policy implications from our work.

- First, examining the overlooked mechanism between inclusion policies and their implementation in the classroom is vital for ensuring that SWLDs succeed in school. The intention of IDEA is to provide all students—regardless of ability level—equal opportunity to learn, and this intention relies on the adequate preparation of the teaching workforce to afford both students with and without disabilities equal access to learning. Considering that students with disabilities are often stigmatized as being less likely to succeed in some subjects (Moon et al., 2012), our work can inform policymakers and practitioners about whether pre-service teachers are indeed leaving their programs prepared to ensure a high quality education for SWLDs.

- Second, this project has important implications for future implementations of teacher performance assessments and policy changes regarding pre-service teachers' preparation and in-service instruction. As state policymakers continue to align teacher preparation with these teacher performance assessments and simultaneously prioritize inclusion of SWLDs, our evaluation of early adopters can provide essential information to future (and current) pre-service programs to avoid common pitfalls. Further, by focusing on general education pre-service teachers, our analysis sheds light on how teachers' perceptions of their preparation align with these more general policy expectations of inclusion.

Specific to our findings, we recommend that policymakers and teacher educators consider the extent to which policies or changes to TPPs may alter—for better or for worse—program coherence. We believe coherence is particularly relevant to examine in the context of the implementation of edTPA. Serving as both a hot-button policy issue and the motivation for the present study, edTPA continues to be adopted across the U.S. and states have begun to incorporate the assessment into accountability metrics for TPPs and pre-service teachers (Darling-Hammond & Hyler, 2013). Moreover, edTPA undoubtedly provides a comprehensive vision of curriculum, assessment, and practice incorporated in TPPs (Au, 2013; Dover et al., 2015) and, as such, arguably touches every component of teacher education. Therefore, understanding if and how edTPA is successful providing a vision stretching across program components is certainly a question of interest to policymakers and teacher educators. There are numerous other policy or program-level changes that could be examined with regard to fostering better program coherence.

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