Enriching Doctoral-Level Preparation Programs through a Nationwide Consortium Model: The National Leadership Consortium in Sensory Disabilities

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Abstract: The National Leadership Consortium in Sensory Disabilities (NLCSD) trained doctoral scholars at universities across the United States to increase the number and quality of professionals specializing in educating children with sensory disabilities. NLCSD produced 40 new doctorates and created a community of learners comprised of scholars, faculty, and leaders in policy and advocacy.

Leadership in the education of children and youths with disabilities takes many forms: advocacy, policy, education, and research, to name a few. One key leadership area is personnel preparation. Special education faculty at institutions of higher education fulfill two essential functions: producing research that informs the instruction of children with disabilities and preparing highly qualified teachers of children with disabilities (Smith, Montrosse, Robb, Tyler, & Young, 2011). These teachers, in turn, utilize the research-based methods of instruction they were taught in their institutions of higher education, thus improving outcomes for children with disabilities. This article will describe one effort to increase leadership capacity in the field of sensory disabilities (that is, for professionals who work with individuals who are blind or have low vision, deaf or hard of hearing, and deafblind).

Faculty in low-incidence disability areas face challenges on many fronts. When it comes to conducting research, the study of children who are deaf or hard of hearing, deafblind, or visually impaired (that is, those who are blind or have low vision) has historically been underfunded and understaffed (Council for Exceptional Children, 2013). There are complexities of engaging in research with low-incidence populations—small sample sizes, geographic distance between participants, lack of sufficient comparison groups, and heterogeneous characteristics of the participant pools. These barriers to conducting research are complicated by the fact that special education faculty often face multiple responsibilities that leave little time to engage in research (Ambrose-Zaken & Bozeman, 2010; Ferrell, 2007; Schirmer, 2008).

Moreover, the high cost of low-incidence undergraduate and graduate

programs has significant implications for their resource allocation; many low-incidence programs are staffed by only one or a small number of faculty members, and many faculty have insufficient formalized time dedicated to research (Ambrose-Zaken & Bozeman, 2010; Benedict, Johnson, & Antia, 2011). One-person programs may affect program vitality and innovation (Sindelar & Rosenberg, 2003). Research may suffer without vigorous debate and immersion in theory and practice. An additional challenge is that upwards of half of the faculty in sensory disabilities reported their intention to retire from their positions, leaving gaps in programs that must be filled by university-trained educators (Ambrose-Zaken & Bozeman, 2010; Benedict et al., 2011; Smith et al., 2011).

Given the critical need for appropriately trained faculty, and the challenges faced by those in small institute-of-higher-education programs, one low-incidence area—the field of visual impairment—identified doctoral training as a distinct priority that required focused efforts to develop new ways to obtain and use resources (Huebner, Smith, Wormsley, & Ferrell, 2004), both financial and human.

The pursuit of a doctoral degree is not for the faint of heart, since recent statistics show, for example, the completion rate of doctoral students in the United States studying social sciences was reported to be at about 56% after 10 years (Sowell, 2008). For doctoral students who received funding through leadership projects of the Office of Special Education Programs (OSEP), U.S. Department of Education, the completion rate is substantially better, at about 70% (Smith et al., 2011). However, the length of time needed to complete a doctoral degree is still quite startling: for example, the average time for doctoral degree completion in education is almost 12 years (National Science Foundation, 2012). The Special Education Faculty Needs Assessment report examined characteristics and outcomes of doctoral students in special education programs (Smith et al., 2011). It found that "a one-year increase in time between enrollment and completion decreases the odds of becoming a faculty member by 2.3 times and that having a teaching assistantship, a research assistantship, and traineeship, or a fellowship . . . increases the odds of becoming a faculty member almost two times" (p. 4). Another study reported that 80% of scholars who completed doctoral programs in all areas of study indicated that financial assistance is a main factor leading to degree completion (Council of Graduate Schools, 2007). Interestingly, that study also found that teaching and research assistantships (two of the most common methods in which financial assistance is provided) are perceived by scholars as actually lengthening the amount of time required to complete degrees, perhaps by placing an additional work burden on them. Clearly, there is a balance to be struck between providing adequate funding and ensuring that the student graduates in a reasonable time frame.

In addition to financial support, another element that appears to drive success in a doctoral program is the presence (or absence) of colleagues in the same program. For example, Burnett (1999) surveyed doctoral students in a Collaborative Cohort Model and an Apprentice Master Model. Students in a Collaborative Cohort Model had regular cohort meetings

and had continuous opportunities to give and receive feedback on their proposals and dissertations. An Apprentice Master Model can be characterized by an asymmetrical relationship between faculty and student comprised of one-way communication, often in isolation from other doctoral students or faculty. Students in the Collaborative Cohort Model reported feeling less isolated and more supported during challenging tasks. They also reported increased learning about topics and research methods that were outside of their knowledge base, which enhanced the quality of their work. Walker, Golde, Jones, Bueschel, and Hutchings (2008) proposed that new forms of apprenticeships in doctoral programs, including multiple mentors, non-hierarchical mentoring, and cascading mentoring, can be considered a student's "intellectual community" and can lead to "more purposeful, multigenerational forms of mentoring and advising with greater collective responsibility for the student experience" (p. 6).

To summarize, the field of visual impairment recognized a need to increase the numbers of students who were trained at a doctoral level in order to alleviate shortages in faculty and research output. However, they also realized that there were distinct challenges to training doctoral candidates in special education—securing adequate financial support and learning within a cohort or community. Thus, it was determined that creative means were necessary to recruit, train, and efficiently graduate doctoral scholars in a low-incidence area. In 2004, Salus University (formerly the Pennsylvania College of Optometry) submitted an unsolicited proposal to OSEP to fund the National Center for Leadership in Visual Impairment (NCLVI). The aim of NCLVI was to produce doctoral-level scholars in visual impairment and blindness to fill the critical shortage of leadership personnel in higher education, research, administration, and policy. NCLVI proposed to develop a collaborative model for producing leadership through the establishment of a national consortium of institutions of higher education. The success of NCLVI led OSEP to develop a request for proposals for another consortium that expanded the scope to include not only institutions of higher education with doctoral programs in visual impairment but also deafness and hard of hearing and deafblindness. In 2009, Salus University received funding for the National Leadership Consortium in Sensory Disabilities (NLCSD1) and was funded again in 2014 (NLCSD2). (For the tease of discussion, "NLCSD" will be used to describe all three consortia in sensory disabilities. When it is essential to distinguish between projects, "NCLVI," "NLCSD1," and "NLCSD2" will be used.) In direct response to the success of these models, in 2014, OSEP funded an additional consortium, the National Center for Leadership in Intensive Intervention, to prepare scholars to become experts in the area of intensive intervention for students who have persistent and severe academic and behavioral difficulties (National Center for Leadership in Intensive Intervention, n.d.).

The NLCSD project was developed to address the need for personnel to conduct research and train new personnel in sensory disabilities. At the time in which Salus received funding for NCLVI, the number of new doctoral-trained scholars in the field of sensory disabilities was extremely low (Huebner et al., 2004). In

2002, the last data collected prior to the beginning of the consortia, there were 15 universities that offered doctoral programs in visual impairment. Of those, nine were active with at least one student (Huebner et al., 2004). Moreover, only one of the universities had been successful in obtaining federal funding to support doctoral preparation (for example, a 325D grant from OSEP) (Huebner et al., 2004). Thus, one of the primary motivating factors for developing the project was to create a unique funding mechanism to support low-enrollment programs in low-incidence fields that struggled to compete on an equal footing for funds against high-enrollment programs in high-incidence areas.

The consortia were conceptualized to ameliorate the unmet need for highly trained personnel to support the education of children with sensory disabilities. The mission of NLCSD has been to increase, through specialized doctoral training, both the *number* and *quality* of leadership personnel competent in teacher training and research in order to improve early intervention and educational services for infants, children, and youths who have sensory disabilities, including those with multiple disabilities. To this end, the aim of the NLCSD was to retain and graduate scholars in sensory disabilities in a timely manner. In order to accomplish this, the project took a two-pronged approach: provide scholar funding; and create a community of learners trained to conduct empirical research with infants, children, and youths with sensory disabilities and their families. NLCSD provided tuition, a living stipend, and other funding supports to lessen the financial burden of scholars. The consortium recruited students from a wide range of networks in an effort to attract diverse applicants (for example, cultural, linguistic, demographic, and professional experience).

Given that the majority of doctoral-level training programs in sensory disabilities were comprised of only one student, it was clear that only providing funding would not be sufficient to train future leaders in the field who must collaborate, engage, and share with others in order to move the fields forward. Instead, NLCSD implemented a cohort model to support students at their home universities and to strengthen their learning and collaborative opportunities within the fields of sensory disabilities. The project created a unique community of learning through a cohort that focused on developing strong scholars through collaborative networks. A possible significant benefit of creating a cohort for scholars who would not otherwise have one is improved retention in the program and completion of the degree. For instance, the NCLVI project had an 81% completion rate while the NLCSD1 had a completion rate of 82%. This is incredibly high compared to the typical completion rates in social sciences of approximately 56% (Sowell, 2008).

In order to decrease the factors that may lead to isolation and possibly failure to complete their doctoral programs, NLCSD focused on creating a "collaborative community" that concentrated on increasing professional social interaction (Ali & Kohun, 2007). NLCSD recognized that doctoral students in low-incidence special education programs could benefit from not only the traditional advisor-advisee relationship, but also from connections and collaborations with other faculty members and professionals in the field of study and related fields (Walker et al.,

Table 1
Stakeholder groups.

Variable	NCLVI	NLCSD1	NLCSD2
Sensory disability fields studied by scholars			
BVI	X	X	X
DB		X	X
DHH		X	X
Consortium IHEs	14 IHEs	31 programs; 23 IHEs	28 programs; 21 IHEs
PAC	14 organizations	25 organizations	26 organizations
Mentors	–	–	36
OSEP	1 project officer	1 project officer	1 project officer
Management team	X	X	X

Note: BVI = blindness and visual impairment; DB = deafblindness; DHH = deafness and hard of hearing; IHEs = institutes of higher education; OSEP = Office of Special Education; PAC = public advisory council; X = was included in the grant cycle.

2008). Thus, to complement the cohort model, NLCSD created a consortium of faculty members, public policy advocates, and past scholars who had completed their programs in order to provide opportunities for diverse mentorship experiences.

Stakeholders

NCLVI (2004 to 2009), NLCSD1 (2010 to 2015), and NLCSD2 (2014 to 2019) were cooperative agreements developed by Salus University and the project's management team with OSEP. The six major stakeholder groups that formed the NLCSD community were composed of participating consortium universities, the doctoral scholars, public advisory council representatives, mentors, OSEP, the project's federal funding source, and the project's management team (see Table 1).

Consortium universities who had active doctoral programs in one or more of the sensory disability areas were invited to participate. For NCLVI, only universities with programs in visual impairment were invited; for NLCSD1 and NLCSD2, programs in deafblindness and deafness and hard of hearing were invited. Consortium universities ranged in size, geographic location, Carnegie classification, and funding source (public and private). The consortium university faculty members met face-to-face to establish guidelines for recruiting scholars and the application process. Subsequent to this meeting, a committee of faculty representatives from each disability area worked to create the application, to review applications, and to select scholars. In order to be eligible for the NLCSD fellowship, applicants needed to be first-time doctoral students who were accepted into a participating consortium university and were eligible for funding by the U.S. Department of Education.

In addition to the consortium university partners, a public advisory council was created. This consisted of national agencies, organizations, and projects that represented parent and consumer groups; technical assistance providers; service providers; and advocacy and policy organizations. The council functioned to provide support, resources, and advice by sharing the perspectives of the strengths and needs of the sensory disability communities to the scholars.

NLCSD2 saw the advent of a new stakeholder group: the mentors. Mentors had completed the NCLVI or NLCSD1 programs and, thus, had unique perspectives as individuals who had completed doctoral programs while being part of similar projects. For NLCSD2, a mentor was paired with a new scholar. The purpose of the mentorship program was to provide support to the scholars as they transitioned from their professional careers to doctoral students and researchers; to provide the scholars with useful guidance, information, and positive psychosocial emotional supports as they moved through their doctoral programs; and to develop a community of practice that included both new scholars and past scholars. Although the mentoring program was primarily focused on providing supports for those who had participated in a similar program, a secondary purpose was to provide a mechanism to continue engagement with past scholars as a way of nurturing the sensory disability community.

The management team coordinated the project, and Salus University served as the fiscal agent. Initially, the team was composed solely of the project team from Salus University. However, with NLCSD the management team evolved and comprised individuals with expertise in each of the sensory disability areas. Since the projects involved cooperative agreements with OSEP, the federal project officer was also actively involved in the management of the project and was part of the management team.

NLCSD provided the following to its scholars:

1. Four years of full-time tuition, a living stipend, and financial support for biannual required meetings and professional conferences. Continuation of this support was contingent upon (a) maintaining good academic standing at the scholars' respective institutions of higher education, (b) being employed for fewer than 20 hours per week in a position related to their fields of study, and (c) maintaining an on-campus presence throughout the fellowship. To ameliorate delays in program completion, scholars did not have to hold assistantship positions or work in any way to receive funding.
2. A formal Enrichment Program, which served as an intellectual community for the scholars, consortium faculty, and the public advisory council in order to increase collaborative learning and research opportunities for scholars.

In exchange for these benefits, scholars were required to meet the OSEP service obligations (two years of work in the field in which they were trained for every year of full-time academic support). In an effort to increase the number of highly qualified university faculty, OSEP altered the service obligation for NLCSD1 only: NLCSD1 scholars who entered faculty positions in higher education were required to complete only one year of work for every year of funding.

Enrichment Program

At the heart of the NLCSD project is the Enrichment Program. This four-year program was designed by consortium members to supplement and complement the training that scholars received at their individual universities. It was actualized through a variety of methods, most notably a modular-based online enrichment

course, synchronous webinars, and face-to-face meetings. The program was anchored largely through Blackboard, an online learning management system. From September through May of each year, scholars were required to participate in the Blackboard enrichment course that was taught as a collaborative effort by consortium faculty and public advisory council members and was managed by the management team. The course was a series of three- or four-week modules that were, respectively, designed and delivered by two or three consortium faculty members. Synchronous webinars complemented the asynchronous sessions. The synchronous sessions had the benefits of allowing for real-time dialogue that increased the sense of connectivity and community, and of providing opportunities for experts who might not otherwise have been able to moderate an entire Blackboard module to share their knowledge.

In addition to technologically mediated efforts, scholars engaged in the Enrichment Program were provided with funding to attend face-to-face meetings, including an annual two-day meeting with the university consortium and public advisory council members. These meetings, held at OSEP offices in Washington, D.C., also afforded opportunities for scholars to interface with OSEP staff members and administrators. Scholars, as a cohort, were required to attend and received funding for their attendance at one conference annually, which included a one-day face-to-face Enrichment Program meeting prior to or during the conference. The content of these meetings was designed in concert with the Blackboard enrichment course content. A committee of consortium faculty and scholars developed each of the meeting agendas and selected expert faculty, scholars, and leaders in the field to present the content. With NLCSD2, the mentors were also invited to participate in the face-to-face meeting at the conference each year. A particularly unique aspect of the Enrichment Program was the opportunity for scholars to attend the biennial project directors' meeting sponsored by OSEP. Scholars attended presentations led by OSEP staff members and administration and also networked with successful grant recipients from research, technical assistance, and personnel preparation programs.

The content of the Enrichment Program was modified from project to project. Evaluation data were used to inform subsequent iterations of the program. In addition, the consortium membership underwent a major transition from NCLVI to NLCSD as the consortium expanded to include faculty in deafness and deafblindness. Faculty from the three disciplines came together to design an Enrichment Program that would be meaningful for doctoral students in all of the sensory disability areas. Each year of the program had a specific focus, which included research in sensory disabilities, grantsmanship, leadership, the professoriate, and public policy in sensory disabilities.

In sum, the Enrichment Program afforded the scholars activities in quantitative and qualitative research design that were appropriate for low-incidence populations to provide scholars with opportunities to learn the skills needed to conduct high-quality research; discussions with leaders in the sensory disability fields regarding research methods, strategies, and collaborative efforts; and opportunities to create new connections between

Table 2
Consortia scholar data.

Variable	NLCVI	NLCSD1	NLCSD2
Total scholars	21	28	35
Scholars per disability area			
BVI	19	12	14
DB		4	5
DHH		13	17
Completers	17	23	0
Withdrawals	4	1	0
In progress	0	4	35
Time to completion	Mean: 52 months (range: 30–123 months)	Mean: 48 months (range: 32–69 months)	

Note: BVI = blindness and visual impairment; DB = deafblindness; DHH = deafness and hard of hearing.

doctoral students, faculty, and community leaders who shared specific interests.

Results

Over the past 13 years, this project has produced 40 highly trained leaders and is currently supporting 35 scholar-leaders to continue its mission. The completion rates were 81% and 82% for NLCVI and NLCSD1, respectively. However, it is possible that the NLCSD1 completion rate will increase, since there are four scholars who were actively engaged in their programs at the time of this writing. Both consortias' completion rates were considerably higher than the national average 10-year completion rate of 56% in the social sciences (Sowell, 2008). The average amount of time to completion was 52 and 48 months for NCLVI and NLCSD1, respectively (see Table 2). Similarly, the completion rate of these scholars represents a substantial improvement compared to the national average of 11.7 years to completion for doctorates in education (National Science Foundation, 2012).

The majority of scholars took university faculty positions after program completion (see Table 3). The remainder of scholars accepted positions in direct service with children with sensory disabilities and at research institutions and other

Table 3
Scholar scholarship, occupations (post-completion), and grantsmanship.

Variable	NCLVI	NLCSD1
Publications		
During program	54	86
Post-completion	188	32
Presentations		
During program	128	270
Post-completion	288	133
Occupations		
University faculty	7	12
Direct service	7	6
Research	1	3
Organization	3	–
Others	1	1
Grantsmanship (by funding source)		
OSEP	14	7
NIH	0	2
NSF	2	0
State	12	0
IHE	16	9
Other	7	1
Total grants	51	19

Note: OSEP = Office of Special Education Programs; NIH = National Institutes of Health; NSF = National Science Foundation; IHE = institutes of higher education.

organizations related to education, policy, or advocacy for children with sensory disabilities. It should be noted that the service obligation for OSEP for NLCSD1 incentivized scholars to obtain faculty positions upon graduation, since the standard two years of work for each year of support was reduced to one year of work for each year of support for those in faculty roles.

Table 3 also includes scholarship activity both during scholars' programs and post-completion as of December 2016. During their doctoral studies, NCLVI scholars authored a combined 54 papers and 128 presentations, while NLCSD1 scholars authored 86 papers and gave 270 presentations during the same time period. Since completing their programs, NCLVI scholars had a total of 188 publications and gave 288 presentations, and NLCSD1 scholars published 32 papers and gave 133 presentations. It should be noted that NCLVI scholars began graduating in 2008, while NLCSD1 scholars began graduating in 2013, which explains the lower levels of productivity post-completion for NLCSD1.

Overall, NCLVI scholars have won 51 grants, while NLCSD1 scholars have won 19 grants, for a total of 70. Scholars were successful in obtaining OSEP grants, the majority of which were personnel preparation grants, as well as grants from other highly competitive funding agencies (for example, National Institutes of Health, National Science Foundation, and the like).

Discussion

There is a critical need for appropriately trained faculty in the areas of visual impairment, deafness and hard of hearing, and deafblindness to produce research that informs best practices for children with disabilities and to prepare highly qualified teachers to educate these children, which was the goal of NLCSD. Although the project is not yet completed, it is clear that it is meeting its primary goal of infusing the sensory disability field with new, highly trained professionals who will have a direct effect on outcomes for children with disabilities via research and personnel preparation. As evidenced by the initial outcomes of the project, the scholars seem to have received exceptional benefits so far: paid tuition, a living stipend, collaborative opportunities with distinguished faculty and community leaders through the Enrichment Program, and a cohort in low incidence that provides support but also establishes a community of practice for possible future collaborations after graduation. The retention rate and time-to-completion averages for both NCLVI and NLCSD were superior to averages in traditional doctoral preparation programs (National Science Foundation, 2012; Smith et al., 2011; Sowell, 2008). In addition, the scholars were clearly prepared to write grant applications and successfully win funds that they may not have otherwise received if it had not been for the close mentorship and preparation provided by consortium faculty who were highly experienced in grantsmanship.

As in all projects, there are weaknesses in the design of the model. Much of its strength comes from the fact that scholars had multiple activities via the Enrichment Program that were developed and delivered by faculty across dozens of programs in sensory disabilities nationwide. That said, the project was funded to support the

scholars, and thus did not provide financial support for faculty other than travel reimbursements and attendance at one professional conference of choice per year. Despite this limitation, faculty continuously volunteered for multiple committees and this led to Enrichment Program course modules. Although the project was able to achieve high levels of faculty engagement and participation, it should be noted that future versions of this model could possibly take into account incentives for faculty to participate, which might include financial compensation and pedagogical and technological training. The strength of the project, the Enrichment Program, could also be perceived as a weakness since it added an additional burden on scholars in terms of expenditure of time and effort (Gardiner-Walsh, Kemmery, & Compton, 2014).

The intent of NLCSD was to develop a community of practice for doctoral students and faculty that could support the field of sensory disabilities while also creating a mechanism for innovation and research. Although opportunities for the creation of a community of practice are certainly available, albeit informally, at professional conferences or solely online, NLCSD uniquely and formally organized opportunities for connections among students and faculty that otherwise might not have happened. This community of practice brought together faculty and doctoral students—both synchronously and asynchronously, in person and online—to think, ponder, and engage in research that ultimately benefits children who are deaf or hard of hearing, deafblind, or visually impaired. Ultimately, the project continues to focus on developing the next generation of researchers and educational leaders within the field of education for the students with sensory disabilities.

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