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Laurie U. deBettencourt
Johns Hopkins University

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Preparing the Next Generation of Higher Education Faculty in Special Education

Laurie U. deBettencourt, Ph.D.
Johns Hopkins University

There is a shortage in the number of funded doctoral programs in the field of special education. As a result the number of higher education faculty who are trained in the knowledge and skills necessary to train the next generation of special education teachers is critically low. This article describes a doctoral program funded by the Office of Special Education that is currently in its third of four years. Several key goals of the program address the skills needed by the next generation of special education higher education teacher educators. The goals cover teacher preparation, professional development, and academic research. The objectives of each goal concentrate on the relationships between research and practice related to the development of teacher educators within the special education field. The program of study including the coursework and internships is detailed as it was developed to build the competencies needed by the doctoral students.

Over the last several decades, there has been a growing need for more special educators who are prepared at the doctoral level to fill faculty positions at higher education institutions (Benedict, Johnson, & Antia, 2011; Smith, 2012; Smith & Montrosse, 2012). The number of special education faculty who have retired recently is not matched by the number of doctoral graduates willing to go into higher education. Shortages in the number of special education faculty have a direct relationship on the shortages in the number of effective special educators providing services directly to children and youth with disabilities (West & Hardman, 2012). The special education faculty prepared today must be able to teach the

application of evidence-based practices within school settings in which special educators, general educators, and related services professionals work collaboratively to provide services directly and indirectly to children and youth with disabilities. They must also be able to conduct research and secure funding to increase the knowledge of effective interventions and services for these children (Smith & Montrosse, 2012). In addition, delivery of instruction at higher education institutions is changing to include more web-enhanced options. New faculty need to be skilled in designing and delivering instruction to online audiences. This paper describes a current doctoral training program funded by the

U.S. Department of Education's Office of Special Education and the context within which this program received funding. The doctoral training program was designed to prepare the next generation of special education higher education faculty for their anticipated roles as teacher trainers, professional development mentors and academic researchers. The goals of the program were designed such that the doctoral students gained a better understanding of the connections and disconnections between special and general educators and the current education policies regarding special education service delivery within K-12 high needs schools. These connections have become critical as more students with identified special needs are served within general education classrooms. After completing the described dynamic doctoral level four-year curriculum that focused on the wide range of 21st century knowledge and skills necessary for conceptualizing, implementing, and conducting research on programs preparing future generations of exemplary special education teachers the funded doctoral scholars will seek employment as part of the next generation of higher education faculty.

Context

Smith and Montrosse (2012) predicted that doctoral-granting universities will experience a faculty turnover rate of great magnitude across the next 5 years (p. 108). Critical competencies for the next generation of special education higher education faculty include skills in training initial licensure teachers, providing professional development for practicing teachers, conducting research on evidence-based practices, mentoring and collaborating with other professionals (e.g., behavior therapists), and understanding local, state and national education policies. In addition, with the growth of online and web-enhanced course delivery systems the next generation of higher education faculty must be prepared to design and deliver courses online. Special education faculty need to have current knowledge of effective evidence-based interventions and services that improve outcomes for children with disabilities, including those children who are served primarily in general education classrooms. Teachers in classrooms today require a new kind of preparation, one that transcends previous notions of curriculum coverage and working in isolation (Darling-Hammond & Bransford, 2005). This is particularly true in special education where teachers must be knowledgeable about an ever-expanding range of evidence-based instructional supports (e.g., use of mnemonics, use of positive behavioral instructional supports) and accommodations (e.g., use of digital text), as well as in innovative collaborative processes (e.g., co-teaching arrangements) and technology (e.g., use of smart boards) that facilitate the application of these techniques along with knowledge of general education Common Core curriculum (e.g., in mathematics) and assessment (e.g., progress monitoring) techniques used in even the most challenging and culturally responsive school environments.

In addition, development of the next generation of special education higher education faculty must focus on training new faculty to design, implement, evaluate, and conduct research. Faculty must also be aware of the continuum of special education teacher preparation alternatives and the programs of study available to such individuals seeking certification and graduate study through alternative routes. Secretary Duncan (2009) noted on several occasions that our nation's university-based teacher development programs need revolutionary change rather than mere tinkering at the margins (see also Chuck, 2013). Not surprisingly, many university teacher preparation administrators and researchers are rethinking teacher preparation curriculum (e.g., courses or modules), modes of instructional delivery (e.g., use of face to face or web-enhanced technology), and how best to provide support during the teachers' first few years (e.g., personalized learning), particularly

if the induction occurs in high needs schools (e.g., Billingsley, Griffin, Smith, Kamman, & Israel, 2009; Sindelar, Brownell, & Billingsley, 2010; Smith, Robb, West, & Tyler, 2010).

Since the original passage of Public Law 94-142 in 1975 (now the Individuals with Disabilities Education Act [IDEA]), Congress has authorized and appropriated funding for Part D of the Act, *Personnel Preparation*. However, in recent years federal funding for personnel preparation has been decreasing. As suggested by Hardman and West (2003), "the link between Part B and Part D is obvious: the success of Free Appropriate Public Education (FAPE) is dependent upon quality personnel, and the availability of such personnel is dependent upon quality teacher education and related services programs taught by university and college faculty" (p. 206). In 2001, the investigation now referred to as *The 2001 Special Education Faculty Shortage Study* (SEFNA; Smith, Pion, Tyler, Sindelar & Rosenberg, 2001) indicated that the federal funding in leadership training is critical and without it each state's ability to provide FAPE would be reduced or cut altogether. The SEFNA study reported an anticipated retirement of between one-half to two-thirds of current special education faculty at doctoral granting universities. Montrosse and Young (2012) found that although "the 97 doctoral programs in the nation represent only 9% of all Special Education personnel preparation programs, between half and two thirds of their faculty will retire in the next 5 years. Each of these programs has an average of eight full-time equivalent (FTE) tenure-line faculty and thus, between 388 and 520 doctoral faculty will be lost in the next 5 years" (p. 149). This unprecedented faculty turnover rate will directly contribute to a demand for the production of new higher education faculty that cannot be met by the current supply of new graduates.

The overarching purpose of the described doctoral training program was to prepare, over a period of four years, doctoral level special education teacher educators with the knowledge and skills to be change agents in special education teacher preparation and to fill the predicted shortages in special education faculty. To achieve this purpose we designed a four-year program focused on training the next generation of special education higher education faculty members. As part of the stipulation of accepting the federal funding the doctoral students agreed to teach within higher education for eight years after completion of their dissertation (i.e., two years for every year of funding). Our goal was to make sure they had the skills to be successful as a teacher trainer and higher education faculty member. Following an overview that reflects our approach for ensuring that our doctoral training program reflected current knowledge and practices, a description of the requirements for funding is provided (e.g., recruitment, training, and evaluation). The conclusion discusses the success of our doctoral students at this point in their program in reaching the goals.

Overview of Doctoral Program

Our training program addressed several key competency areas needed by the next generation of special education higher education teacher educators. Extending over a period of four years (8 semesters), the 90 credit post-master's degree program included 18 credits of research courses, 36 credits of special education seminars, 24 credits of applied internships, and 12 credits of dissertation research spread across four major themes: research methodology, special education teacher preparation knowledge, applied teacher professional development; and dissertation completion. In designing the program we also sought to: (a) ensure that the learning activities which comprised the program embraced evidence-based practices that have a significant impact on the quality of teacher development, ultimately improving services to students receiving special education; (b) ensure that the students had ample opportunities to apply the

didactic content of their programs in internship and research activities; (c) provide a full range of internship rotations that enabled students to work with mentor faculty on conceptualizing research, providing professional development in high need schools, and university-based graduate level teaching and field-based mentoring and supervision; and (d) enable the students to complete the entire program, including their dissertations, within a period of four years.

  The doctoral students completed coursework and research internships during their first three years of the program in the following areas: research to evidence-based practice in the area of special education, delivery of professional development within educational environments, and mentoring and supervision of student internships. See Table 1 for a list of special education research to evidence-based practice seminar's topics. The final year was designed for completion of the comprehensive examinations and the dissertation.

Table 1
Descriptions of Special Education Seminars.

Orientation to Doctoral Study and Teacher Preparation Research	In this seminar new doctoral candidates become acquainted with the tools and methods necessary for engaging in scholarly activity. Students will (1) begin to define their future roles and responsibilities as doctoral level professionals, (2) create their own individualized plans for research, and (3) learn how to write professionally. Topics include hypothesis development, literature searches, technical writing, and teacher preparation. Research studies on topics of current interest in special education, policy analysis, curriculum development, and evidence-based practices are reviewed and evaluated critically.
Research to Policy and Practice Seminar I: Policy Issues Affecting Individuals with Disabilities	The Policy Issues Affecting Individuals with Disabilities seminar will examine the policy making process at the federal and state levels. Students will become familiar with the major structures and individuals that influence policy development and implementation. Students will be exposed to policy analyses and policy research techniques and will gain an understanding of some of the current tensions and debates within the special and general education domains. In addition, this seminar will address current issues such as the RtI and the blurring of special education roles in the new ways general education proposes to address the needs of students with disabilities. Finally, students will become familiar with key reference sources for conducting policy analyses and policy research.
Research to Policy and Practice Seminar II: Studying Special Education Teacher Preparation	The seminar Studying Special Education Teacher Preparation will focus on the research literature pertaining to what we know, what we need to know, and the challenges in designing research about this topical area. We expect that the review papers developed as part of the OSEP funded COPSSE and NCIPP projects will provide a solid foundation to more recent work looking at the efficacy of special education preparation.

Research to Policy and Practice Seminar III: Evidence-Based Practices	This class will focus on what constitutes an evidence-based practice and how to collaborate in the development of effective interventions, design strategies that ensure implementation of the right practices, and help educators make sense of the massive amounts of information available.
Research to Policy and Practice Seminar IV: The Special Education-General Education Relationship	The Special Education-Regular Education Relationship seminar will examine practical, ethical, and theoretical issues in the context of national, state, and local initiatives for the least restrictive placement of students with mild through profound disabilities. This seminar will address the RtI and the blurring of special education roles in the new ways general education proposes to address the needs of students with disabilities.
Research to Policy and Practice Seminar V: Policy Issues Affecting General and Special Education Relationship	The seminar, Policy Issues Affecting General and Special Education Relationships, will examine the policy making process at the federal and state levels. Students will become familiar with the major structures and individuals that influence policy development and implementation with the particular emphasis on special education service delivery. Students will be exposed to policy analyses and policy research techniques and will gain an understanding of some of the current tensions and debates within the special and general education domains. In addition, this seminar will address current issues such as the RTI (Response-to-Intervention) and the blurring of special education roles in the new ways general education proposes to address the needs of students with disabilities.
Evidence-based Teacher Development: Program and Course Design, Delivery, and Evaluation	Students will receive explicit instruction and controlled practice in how best to develop a full range of special education higher education programs, courses, and learning activities. Illustrations of varying modes of delivery and the development of research, teaching and service activities at the Higher Education level are provided, as are methods to evaluate the activities. Students will review IHE special education programs in terms of the different visions, pedagogy, and practice, including their field experiences, and stressing how each approaches diversity, and collaboration with general education faculty. Effective methods for teaching college/university level courses and improving student's own professional development after receiving doctorate are discussed.
Doctoral Seminar: Culturally Responsive Education	This seminar will provide candidates the opportunity to examine race, ethnicity, and culture within the context of pre-K-12 and higher educational settings. Students will become familiar with the major racial, ethnic, and cultural groups in the United States. Through self-disclosure, experiential exercises, student presentations, readings, and lectures, students will gain a better knowledge of themselves, culturally distinct groups, multiculturalism, and implications for education.

Seminar in Proposal Development	Research studies on topics of current interest in special education research are reviewed and critically evaluated as students develop their own dissertation proposals. It is anticipated that these activities help prepare for dissertation activities (e.g., IRB, proposal, data collection).

First Year Seminars. During the first year of doctoral training the focus was on special education research and the methodology used across high impact research studies. Research methodology used to study special education teacher preparation was chosen as the theme for the first year of study because an in-depth knowledge of research design/data analysis methodologies using special education research as the basis of study is both prerequisite to and pervasive within the designed learning activities that followed in the second through fourth years. The introductory seminar ensured that the students were skilled in the basics of special education teacher preparation research, could locate information through electronic library research, and could produce written products that conform to the stylistic requirements of the sixth edition of the *Publication Manual of the American Psychological Association* (2009). The re-search methodology courses included *Quantitative Research Methods*, which addressed descriptive, correlational, experi-mental, and quasi-experimental research designs; *Single Subject Research Designs,* which emphasized applied behavior analysis methodologies and qualitative techniques which employ direct observation as the primary vehicle for data collection; *Evaluation of Education Policies and Programs* which introduced students to a variety of approaches for planning and conducting program evaluation and policy research; and finally a *Basic Statistics course which* focused on descriptive and inferential statistics, parametric and non-parametric tests of significance and how all these analyses can be conducted using personal computer software.

The extent to which educational research and policy formation influences day-to-day educational practice continues to be a focus of concern among those responsible for ensuring that an appropriate education is delivered to all students (e.g., Cook, Cook, & Landrum, 2013; Klingner, Boardman, & McMaster, 2013). In spite of a number of efforts to translate research and policy initiatives into practice (e.g., Spencer & Logan, 2003), large gaps among what is known, desired, and practiced in schools remain prevalent in the education of students with special education needs. Far too many K-12 special educators implement programs and employ practices within their classrooms based on fads and anecdotes. Most agree that the gap between research and practice needs to be narrowed and that such action would improve education efforts for all students. Educational research, in general, needs to become more trustworthy, useful, and accessible to frontline educators (Burns & Ysseldyke, 2009). Putting research into practice requires engaging diverse constituencies, and innovative higher education teacher educators must be active in (a) the collaborative development of effective interventions, (b) the delivery of evidence-based strategies that ensures implementation of the right practices with fidelity, (c) providing syllabi and student teaching requirements that help preservice and inservice teachers sort through the massive amounts of information available. In fact, McLeskey and Billingsley (2008) contend that the single most significant factor contributing to special education's research to practice gap is the inability to recruit, develop, and retain well-qualified teachers to the profession - situations that result in classrooms staffed by teachers who

lack the advanced understanding of the most effective practices for delivering instruction.

First Year Internships. During the first year the doctoral students were paired with faculty members actively involved in conducting research. A number of faculty members had on-going research agendas and we believed that the apprenticeship approach illustrates how scholarly integration within an intellectual community results in instances of direct and indirect instruction in how best to conceptualize and develop socially valid lines of research. Students had the opportunity to work with faculty on topics such as, to name a few, alternative routes to teacher preparation, cost effectiveness of teacher preparation alternatives, supply and demand for special education teachers, charter schools, efficacy of reading interventions, data-driven decision making, positive behavior supports, and professional development in high need school districts.

Clearly, for increased application of evidence-based practices there is a need for increased numbers of skilled special education teacher educators who know the research and are able to access and make use of existing structures for dissemination (e.g., university teaching, professional development; academic publishing). Moreover, these innovative teacher educators must be able to develop new avenues of dissemination and application (e.g., collaborative projects, partnerships, online learning activities) geared toward the new wave of participants seeking entry into the teacher preparation marketplace (Wasburn-Moses & Rosenberg, 2009). The courses and internships designed and completed during year one allowed the students to begin to understand the research within the field of special education and to participate in projects which studied several relevant questions relative to current research.

Second Year Seminars. During the second year the doctoral seminars focused on how special education teacher preparation was studied and assessed; what constitutes evidence-based practices; and the intersection of teacher development, special education service delivery, and the challenge of high needs schools. The students were exposed to policy analysis and policy research techniques in order to gain an understanding of the current tensions and debates within the special and general education domains. In addition, their seminars discussed the blurring of special education roles in the new ways general education proposes to address the needs of students with disabilities (e.g., Fuchs, Fuchs, & Stecker, 2010). The learning activities included didactic dialogue; written reviews and synthesis of relevant literature; field observations, implementation, and evaluation of relevant practices and case studies of successful minority education programs, and the interrelated roles of the school, family, and community in meeting the educational needs of all children, setting the stage for subsequent teacher professional development.

The current model adopted in most K-12 schools is the application of tiered systems of service delivery (e.g., RtI, PBIS), Response to Intervention (RtI), is viewed as a possible means of clarifying the special and general education teachers' instructional roles (Brownell, Sindelar, Kiely, & Danielson, 2010). However, the success of RtI hinges on both general and special educators knowing what type of instruction to implement at each level, and understanding the practical nuts and bolts of how such service delivery looks in classrooms and schools (Mastropieri & Scruggs, 2005). The research on the use of RtI as a special education service delivery system continues to require study and refinement, yet it is illustrative, along with

positive behavior interventions and supports (PBIS), of the complex new set of skills required of all teachers. Clearly, these two tiered systems represent challenges to teachers in the field that are different from those of a decade ago and require teacher educators to devise ways to introduce these concepts and develop programmatic ways of delivering relevant learning activities (Smith et al., 2010).

Second Year Internships. During year 2, students had the opportunity to intern in agencies that integrated research based practices and policy development in the design of tangible professional development activities. Students worked with agencies and project staff to conceptualize and design teacher development programs and learning activities, and contributed to the evaluation of these efforts. Professional development activities were conducted across the state and specifically in local high needs public and private schools.

As part of their professional development activities students learned a great deal about educational policies that affect K-12 classrooms. Teachers and teacher educators can no longer be passive recipients of local, state, and federal policy mandates. Being at crossroads of policy implementation and advocacy for the students and families they serve, teachers must be involved actively in public policy development and evaluation, especially as it relates to the critical activity of evaluating teacher quality (e.g., Goe & Croft, 2009). Although underemphasized in most preparation programs, teacher educators should be trained to understand how policy fits into teacher professional development activities. In our doctoral program teacher preparation learning activities during year two focused on how schools are contextualized in the social policy environment. These internships resulted in teacher educators having enhanced state and

local organizational and community awareness, as well as expanded inter-professional dialogue (e.g., Higher Education Consortium of Special Educators).

We also believe that partnerships between school districts (LEAs) and universities (IHEs) can improve the quality of personnel in underachieving schools (e.g., deBettencourt & Howard, 2004; McCray, Rosenberg, Brownell, deBettencourt, Leko, & Long, 2011). Partnerships allow individual organizations to maximize their assets, expand their own knowledge base, and set the stage for a more holistic view of teacher preparation. Ultimately, doctoral preparation should begin the process of learning to teach through a process of innovative delivery that bridges preservice development, induction, and on-going professional development (Steffy & Wolfe, 2001). This requires that today's teacher educators be knowledgeable in ways that IHE's and LEA's K-12 faculty members work together effectively to develop preservice teachers as well as in ways that contribute to in-service growth and professional development. Within IHEs there is increased collaboration among faculty in the arts and sciences, education, and special education; increased opportunities to work with diverse students; and enhanced opportunities for feedback and evaluation of reform efforts. Effective teacher educators need models of partnership and collaboration, as well as explicit instruction in and opportunities to experience the development of these arrangements. The second year internships allowed for the doctoral students to gain first-hand the knowledge and particulars of several active IHE and LEA K-12 partnerships.

Third Year Seminars. The theme for the third year of the program was applied teacher development. The seminars were

collectively designed to give the students much needed practice in the process of teacher development, from preservice preparation through induction to inservice refinement and retooling. The focus was on what is known about these valuable activities and how they are best applied in preservice preparation, new teacher support, and in the development of professional learning communities (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). The students also received explicit instruction and controlled practice in how best to develop a full range of teacher mentoring programs, courses, and learning activities (Wasburn-Moses & Rosenberg, 2008) and how to evaluate such activities. The students also explored successful models for delivering web-enhanced online instruction). Students completed a seminar on the theory, research, and best practices on school, family and community partnerships and how such arrangements influence teacher preparation. All students, in concert with their advisor, had the opportunity to select an elective course or seminar that was consistent with their specific interest area. In some cases this elective involved upgrading skills in research and measurement or online instruction to complete advanced techniques required for their own research projects (e.g., hierarchical linear modeling, qualitative designs or creating on-line courses).

Finally, all too often the execution of a dissertation causes an excessive delay in the completion of the student's degree requirements, and frequently results in the highly undesirable all-but-dissertation (ABD) status. To that end, we designed a seminar for second semester third year on proposal development. By the end of the third year each student prepared a complete dissertation research prospectus that was scheduled for approval by his/her dissertation research committee and ready for submission to the University Human Subjects Institutional Review Board.

Third Year Internships. During year 3, students had opportunities to apply their knowledge and skills in mentoring preservice teachers and in delivering course instruction face to face and online to graduate students attending the university. Each student was paired with a faculty member, and assigned to develop a face to face, hybrid or web-based special education graduate course syllabus and teach either all or part of a course. Faculty provided regular supervision and feedback. Doctoral students also had the opportunity to supervise and mentor master-level students completing their field-based internships.

Effective teacher development requires responsive mentoring and on-going support. Specifically, we know that the shortage of highly qualified teachers is not only a shortcoming in supply, but also a limitation in the ability to retain professional staff (Billingsley, 2005; McLeskey & Billingsley, 2008). To address the high turnover of special education teachers, supportive practices that facilitate the retention of special and general education teachers must be integrated into initial preparation programs and induction activities. Specifically, beginning teachers – many of whom possess idealistic impressions of what teaching entails - need guidance to translate what they have learned in teacher preparation courses to the real world of schools (Billingsley, 2005). When done effectively, mentoring bridges preservice and induction activities, while strengthening the performance and increasing the retention of beginning teachers. Consequently, teacher educators need to develop skills in designing, implementing, and evaluating collaborative, practical, cost-effective, and technologically enhanced (e.g., video analysis, online mentoring) methods of delivering mentoring

and support.

With an ever increasing number of special education teachers being prepared through alternative routes (AR), many teacher educators are likely to be involved in AR program design, implementation, and mentoring of alternative route teacher candidates (Wasburn-Moses & Rosenberg, 2008). Teacher educators must be equipped to meet the many challenges associated with the development of successful AR programs and have the skills to integrate effective teacher education internship activities into the varied formats and technological platforms associated with such programs. Moreover, with most programs having rapid entry to classroom teaching, teacher educators will need experience integrating coursework, onsite supervision, and evaluating teacher effectiveness while mentoring the fast-paced teacher candidates within their classrooms.

Fourth Year Seminars. To facilitate completion of the program, year 4 activities will be devoted to completion of comprehensive examinations, and dissertation research. Written and oral comprehensive examinations, tailored to the professional interests and the prior learning activities undertaken by the individual student, will be completed during the beginning of the fourth project year. In concert with his/her doctoral committee, each student will identify the specific areas that will be addressed in his/her comprehensive examinations, and a committee member with expertise in each of the selected areas will be chosen to compose the questions for the written portion of the examination. The written portion of the examination will be followed by an oral examination conducted by all of the examiners who prepared questions for the student's written examination.

Although a dissertation prospectus is completed at the end of third year,

dissertation seminars may be scheduled throughout the final year of the program in order to give the students guided practice and peer support in each of the steps involved in completing their dissertation research projects. The seminars also carefully structure, sequence, and provide positive supports for the dissertation process and help ensure the timely completion of this important degree requirement. The students will register for six credits of dissertation research during each of the two semesters that comprise the fourth year. Students will also have the opportunity to select internship opportunities that are compatible with their dissertation research and future professional plans.

Requirements for Federal Funding

The overarching purpose of the doctoral training program was designed in response to a request for proposals by OSEP. Our purpose was to prepare, over a period of four years, up to seven doctoral level special education teacher educators with the knowledge and skills to be change agents in special education teacher preparation. To achieve this purpose we developed five measurable objectives related to: (1) student recruitment, (2) demonstration of program competencies, (3) an efficient and effective management system; (4) evaluation; and (5) institutionalization**.** The next sections briefly discuss each objective.

*Student recruitment***.** In our student recruitment we admitted six highly qualified candidates with special education master's degrees (or equivalency) as we believed doctoral students would be more successful if they entered the program well-versed in special education research-based instructional and behavior practices and with experience teaching special needs children. However, we also believed it was essential that candidates be well-versed in ways that promote such practices in teacher

preparation and professional development activities such as the use of innovation configuration tools and program evaluation syntheses.

Demonstration of competencies. Although we employed explicit instruction in many seminars, we believe that this training program is best thought of as a range of activities that develop a scholarly identity. In Boyer's (1990) view, the categories of teaching, research, and service have become too segregated, and he describes scholarship as consisting of four overlapping functions: the scholarship of discovery (e.g., conducting specialized research), the scholarship of integration (e.g., writing a literature review paper), the scholarship of application (e.g., providing technical assistance to or directing a program), and the scholarship of teaching (e.g., teaching a course or conducting a workshop). Scholarship, in our view, is expressed more in how one approaches problems to be solved and tasks to be accomplished than it is in the specific skills that one employs for these purposes. Devising strategies to enhance the competency-based approach in nurturing the traits of scholarship in students is a formidable task. In addition to the activities traditionally employed in doctoral programs to achieve this purpose (i.e., preparing literature review papers, engaging in research activities, and disseminating information through teaching and professional presentations), we scheduled frequent and intensive contact between students and faculty. We believe faculty serve as models of scholarship-in-practice; should involve their students in their own applied scholarly activities; and provide them with generous feedback as they develop and practice their new skills.

Management. Existing doctoral degree offerings in the School of Education have served as a foundation for the development of the program described in this application; nonetheless, the additional students who were recruited required that we took additional measures to ensure efficient administration of the program. The co-directors of the grant devoted a large percentage of their time directing the doctoral students through their program of study. In addition, the overall project management was guided by a Formative Evaluation Plan. This plan uses the project's objectives to operationalize each of the major project goals. This plan allowed for the monitoring of the project's procedural steps and data from the plan served as the foundation for reports to OSEP. Ultimate responsibility for the timely completion of all project activities rests with the project director. The project directors met with each doctoral student at the end of each semester to review individual progress.

Each doctoral student who received federal funding must gain employment providing relevant services associated with students with disabilities after the completion of the project. Moreover, to ensure that students are aware of their responsibilities associated with the awarding of federal tuition assistance, students were required to enter into a contract of commitment which spelled out the requirements of the federal guidelines. This will involve having student employers (IHEs) after graduation verify that the individual is working in a leadership role involved in the education of students with disabilities for each year up to the required eight years of service.

Evaluation. We aligned our evaluation system with the GPRA performance and project measures framework required in annual and final reports to OSEP. This framework allows for objective formative and summative performance measures for the funding agency and has produced useful formative

quantitative and qualitative data for our specific program's improvement.

The evaluation of the project's specific goals is directed toward determining the extent to which (a) the program recruited targeted students and delivered the critical content; (b) the students acquired the competencies that have been set for the program during the course of their doctoral studies; and (c) contributions made by graduates improve special education services.

Each year the doctoral students complete a final self-assessment survey on the attainment of the competencies related to the leadership training program. This instrument is one indicator of the effectiveness of the program in delivering critical program content. Such data allows project faculty to address gaps identified by students and include that content is subsequent learning activities. In addition to delivery of training, data reflecting competency acquisition is collected continuously for the duration of each student's participation in the program. Table 2, lists the student's major accomplishments in relation to the competencies. Discussion of the students' accomplishments follows in the summary.

Institutionalization. One of our major project objectives strongly encouraged by the funding agency is referred to as "institutionalization" of the program (i.e., its continuation following the termination of federal support for its initial development). We believe that we will have successfully "institutionalized" the program if at least seven students are admitted into it without the benefit of external support. Therefore it is incumbent on us to demonstrate the tangible benefits of this doctoral program to individuals who have control of alternative streams of tuition support (the university, Foundations, etc.). Consequently, we have ensured that all stakeholders have been made aware of the contributions made by the doctoral students by disseminating the results of our evaluations at yearly intervals and involving our Offices of Communications and Development in making donors aware of the tangible contributions being made by the project.

Accomplishments of Doctoral Students

The goals of the training program match the measures we use to document doctoral students' competencies including the following: number of research publications and professional presentations, number of professional development workshops provided for practicing teachers, number of graduate special education courses taught, and number of preservice student interns supervised. (See Table 2 for more details on data collected for each competency.) Each year of the doctoral program focuses on the specific training needed for one of the goals and students are encouraged to continue in subsequent years to explore opportunities that would strengthen all competencies.

Table 2.
Accomplishments of Doctoral Students at the End of 2.5 years out of 4 in Program.

Doctoral Student	# of Publications /Grants/Book Chapters	# of Professional Development Workshops	# of Professional Presentations	# of Student Interns Supervised	# of Courses Taught
#1	2	6	10	8	5
#2	1	8	7	3	2
#3	3	6	7	1	5
#4	3	9	7	10	5

#5	2	4	5	11	5
#6	1	3	2	1	5
Total	**12**	**36**	**38**	**34**	**27**

All doctoral students began working with research faculty from the first day of the program and are receiving mentoring on writing professionally through these relationships. The six doctoral students have published 12 single and co-authored manuscripts including one grant and one book chapter (i.e., some of the manuscripts are in press, under review, or online). One doctoral student received a $3,000 state funded grant (i.e., one of only three funded by the state) to support her doctoral dissertation investigation. One doctoral student is working on a book chapter with full time faculty.

The doctoral students received federal funding to attend two professional conferences each year in the area of special education – the Council for Exceptional Children (CEC, every spring) and the Teacher Education Division of CEC (TED, every fall). The TED conference encourages doctoral student involvement especially in the TED Kaleidoscope program. This program provides an opportunity for doctoral students to share work they have completed with faculty and other doctoral students through poster sessions. The funded doctoral students have become very involved in the Kaleidoscope program over the past three years; one doctoral student has been elected as the Kaleidoscope representative to the TED Board beginning next year. Thirty-eight national presentations have been completed by the doctoral students with one student completing a total of 10 professional presentations.

The second year of the training program was focused at working in the field and providing professional development workshops to inservice teachers and special educators. Our doctoral students have provided over 35 professional development workshops across the state and a few have shared the development and evaluation of their workshops at national teacher conferences. Many of participating schools have requested multiple workshops. One doctoral student is working on a Positive Behavior Instructional Support grant which was funded to provide workshops across the state.

The third year focus was on supervision of student interns and college teaching. Several of the doctoral students have taught the internship class as well as supervised interns in the field. The six doctoral students have supervised a total of 34 interns – both at the induction and culmination levels. During the four years the doctoral students have also been given the opportunity to co-teach or individually teach several graduate level special education courses. The total number of courses across all six doctoral students at this mid-point of their third year is 27. Given one of the major goals of the training grant is to have the doctoral students become higher education faculty teacher trainers these teaching experiences (both face to face and online) will serve them well.

Conclusion

We believe the impact for this project falls into three important areas. First and foremost, doctoral level special educators who have the knowledge and skills to be change agents in special education teacher and teacher educator preparation will fill the gaps of retiring special education faculty when they are hired as IHE faculty within the next year. These individuals will be able to contribute to the reengineering of teacher preparation

programs that, arguably, have not prepared teachers for the realities of 21st century classrooms and the challenges of high need schools (Duncan, 2009). For those they teach and mentor, these teacher educators will ensure the development of domain expertise, skill in teaching subject area knowledge, understanding problems students with disabilities may experience, and the role of technology and specific interventions in providing appropriate supports and interventions (Brownell et al., 2010). The doctoral students participated in a range of applied activities involving policy analysis, professional development, and systemic reform of high needs schools. We anticipate that these activities will benefit school districts, research centers, and professional development agencies. Finally, we believe that data collected as part of the evaluation of this training curriculum will contribute to the ongoing evolution of special education teacher and leadership development research (e.g., Brownell et al., 2005; Sindelar et al., 2010; Smith, 2012). We anticipate that the development of this model will prepare teacher educators to navigate the changing teacher education marketplace and successfully prepare teachers to address the realities of 21st century schools.

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