Building and Sustaining School-University Partnerships in Rural Settings: One Approach for Improving Special Education Service Delivery

Larry Maheady
Buffalo State, The State University of New York
Kathleen Magiera
Rhea Simmons
The State University of New York at Fredonia

Abstract

School-university partnerships have been offered as possible solutions for many contemporary educational challenges. These relationships are generally well accepted by university and school personnel; however, unanswered questions remain regarding their nature and utility. This paper describes one teacher preparation program's efforts to strengthen and extend existing partnerships with a small group of primarily rural school districts. Partnership efforts were supported, in part by a 325T professional development grant to prepare highly qualified special education teachers. Three specific, grant-related activities (i.e., improving educators' understanding and use of evidence-based practices, capturing practitioners' professional wisdom, and changing practice through instructional coaching) were highlighted as exemplars of partnership work. Lessons learned over the 5-year partnership with nine rural school districts are summarized and directions for future research and practice are offered.

Key Words: school-university partnerships, teacher education, collaboration, rural education, special education service delivery

These are challenging times for P-12 educators and those responsible for their preparation. Teachers must instruct *all* students to higher academic standards, often using new and evolving curricula, and do so in the face of other initiatives (e.g., Response to Intervention, Positive Behavioral Interventions & Supports, character education programs) and policy-driven accountability systems that tie student learning to teacher evaluation (e.g., Annual Professional Performance Review [APPR]). Teacher educators struggle as well to prepare professionals for these increasingly challenging roles while simultaneously collecting "evidence" to document program efficacy for respective accreditation agencies. Both professional groups operate under increasing public and scientific scrutiny and criticism as never before seen (e.g., National Council on Teacher Quality, 2010; Sindelar, Washburn-Moses, Thomas, & Leko, 2014). As Sindelar et al. noted,

> Traditional teacher preparation has fallen out of favor, and criticisms of it abound. Characterized as overly long, lacking in substance, and burdensome, especially for high ability students, formal teacher preparation is considered by many to be unnecessary. (p. 3).

While there is ample room for professional debate regarding the merits of this conclusion and/or the circumstances prompting it, the fact remains that such conditions reflect "realities" in many public schools and teacher education programs. The question is how should education professionals respond to such realities? School-university partnerships have been offered as one possible solution for many educational challenges (Rosenberg, Brownell, deBettencourt, Leko, & Long, 2009).

This paper briefly summarizes findings and recommendations from the school-university partnership literature and examines the unique challenges of creating and sustaining such relationships in rural settings. We then describe lessons learned from a 5-year partnership with nine rural schools supported by a funded project and discuss evolving collaborative relationships. Partner school districts ranged in size from 723 to 4,200 students and shared some characteristics of rural settings (e.g., isolated location, low population density, elevated poverty rates; Helge, 1984). Partnerships ranged from 3 to 40 years, and common activities included on-site course instruction, co-teaching, and collaborative research efforts. Finally, recommendations are offered for future partnership research and practice.

Author Note

The contents of this article were developed under grants from the US Department of Education, H325T090014, Project Officer, Sarah Allen; however, these contents do not necessarily represent the policy of the US Department of Education, and you should not assume endorsement by the federal government.

Please address all correspondence to Kathleen Magiera (Kathleen.Magiera@fredonia.edu).

Rural Special Education Quarterly ✦ Volume 35, No. 2—pages 33-40 ✦ © 2016 American Council on Rural Special Education

Before proceeding, however, a couple of caveats are in order. First, we define school-university partnerships broadly to include *all* collaborative relationships among teacher educators and P-12 professionals (i.e., teachers and school leaders) to improve service delivery to students with disabilities in inclusive educational settings. These relationships can range in size from individual faculty working together to solve existing classroom problems to multi-institutional arrangements that address a variety of policy, curricular, and/or pedagogical issues. While comprehensive institutional participation and support is the ultimate goal, considerable progress can be made through the efforts of some or even a few. Next, we focus on two partnership outcomes, teaching practice and pupil learning, that have been underrepresented in empirical investigations to date. This emphasis does not diminish the important roles that cognitive (e.g., thoughts, reasoning, professional reflections), affective (e.g., beliefs, attitudes, predispositions), and contextual (e.g., cooperating teacher and supervisor characteristics, length and nature of placements, types of settings and students) variables/outcomes play in teacher development but rather highlights areas in need of additional attention in teacher education research (Goe & Coggshall, 2007; Wilson, Floden, & Ferrini-Mundy, 2002).

The Promise of School-University Partnerships

Schools and universities have worked together for many years to prepare and support new and experienced teachers. Whether or not these relationships constituted formal partnerships is less clear (Rosenberg et al., 2009). Irrespective, these collaborative arrangements allowed individual organizations (i.e., school and universities) to combine their resources and expertise and, in so doing, expand and enhance their collective knowledge and skills. This was all done, of course, with the implied purpose of improving pupil outcomes. The new array of personnel and resources also ushered in a more expansive and developmental view of teacher education, one in which pre-service preparation, induction, and professional development were seamless and personalized, P-12 and university faculty worked equally to mentor pre-service teachers and conduct collaborative research, and everyone benefitted in their own professional growth (Barnett, Hall, Berg, & Camarena, 1999; Stephens & Boldt, 2004).

School-university partnerships also were cited repeatedly as interventions that can improve the quality of instructional personnel in low achieving schools (e.g., Carnegie Task Force on Teaching as a Profession, 1986; Holmes Group, 1995; Levine, 2006; National Commission on Teaching and America's Future, 1996; Rosenberg et al., 2009). They were described as critical in preparing better teachers, enhancing professional development of practicing teachers and university faculty, and improving pupil learning (Badiali, Flora, Johnson, & Shiveley, 2000; Birrell et al., 1998). Others argued that school-university partnerships provided more structured teaching experiences, increased and sustained feedback for teacher candidates, and additional opportunities to collect pupil performance data than traditional teacher education programs (Beck & Kosnik, 2002; Brown, Murphy, Natale, & Coates, 2003; Conaway & Mitchell, 2004; Cowart & Rademacher, 2003; Smith & Trexler, 2006). Price (2005) cited additional secondary benefits of school-university partnerships for (a) *pre-service teachers* (e.g., more coherent programs, increased familiarity with school-based procedures, preferred hiring opportunities); (b) *in-service educators* (e.g., more on-site professional development, more opportunities to put research into practice, more collaborative and scholarly climate); (c) *pupils* (e.g., more adult professional attention and exposure to innovative teaching practices); and (d) *institutions* (e.g., increased P-12 educator voice in teacher preparation design, implementation and evaluation, more teachers with strong field-based experiences, additional opportunities to work with diverse learners).

While the purported benefits of school-university partnerships are extensive, empirical evidence to support such wide-ranging claims is lacking in both quantity and quality, particularly in terms of impact on teaching practice and pupil learning. As Rosenberg et al. (2009) concluded, enthusiasm and support for partnerships is, "more a function of anecdote and faith than empirical data" (p. 43). They did suggest, however, that there are some reasons for optimism about school-university partnerships. First, pre-service teachers felt more knowledgeable and better prepared to enter the profession after participating in school-university partnerships. Second, teacher educators became more directly involved in supervision of student interns (Beck & Kosnik, 2002; Ginsberg & Rhodes, 2003), taught more university courses at school sites (Bullough, Draper, Smith, & Birrell, 2004; Ginsberg & Rhodes, 2003), and engaged in more applied research projects to address classroom-based problems (Maheady, Jabot, Rey, & Michelli-Pendl, 2007; Zetlin, Harris, MacLeod, & Watkins, 1992). Third, classroom teachers received more opportunities to design and co-teach university courses and seminars (Gadja & Cravedi, 2006; Mule, 2006; Sandholtz, 2002), improved professional development, and expanded roles as mentors for pre-service candidates (Epanchin & Colucci, 2002; Smolkin & Suina, 1999). Finally, partnerships were accepted enthusiastically and perceived as being of great value to students with and without special needs (Rosenberg et al., 2009).

Unique Challenges of Rural Partnerships

Creating and sustaining functional partnerships is challenging enough; doing so in rural settings may be even more difficult. Given their generally small size, increased distances, and absence of urban and suburban amenities, rural districts have struggled to attract and retain qualified teachers, particularly in high need areas like science,

math, and special education (Dadisman, Gravelle, Farmer & Petrin, 2010). Small rural school districts also face student achievement problems similar to their urban and suburban peers; yet, they often have less capacity to address these concerns (Chalker, 1999; DeYoung, 1991; Haas & Nachtigal, 1998; Howley & Harmon, 2000). Harmon, Gordanier, Henry, and George (2007) noted, for example, that rural schools have higher per pupil costs, greater numbers of teachers instructing outside specialty areas, and decreasing populations and tax bases that further reduce fiscal resources. Limited institutional capacity, in turn, impedes rural schools' abilities to mount and maintain school improvement processes.

Teachers in rural schools also encounter difficulties obtaining adequate professional development (Harmon et al., 2007). They often must travel long distances to attend sessions that are not linked directly to their needs or interests while principals try to locate suitable and available substitutes. Historically, rural schools also faced persistent challenges in providing specialized services for students with disabilities.

Muller (2010) suggested that school-university partnerships can assist rural school districts in meeting many of these challenges. They can help with recruitment; create programs tailored to specific, local need; provide more accessible modes of course delivery; and cultivate interest in teaching special education in rural settings. Hammer, Hughes, McClure, Reeves, and Salgado (2005) described successful rural recruitment practices as strategic, sustained, community-based, and tailored to individual district needs, while retention was supported best by good working conditions, effective professional development, and formal mentorship programs. Mollenkopf (2009) discussed how the University of Nebraska at Kearny adjusted its teacher preparation program to meet specific needs of their rural partners. They facilitated access to their certification program and streamlined its requirements, provided ongoing professional support, tailored class assignments and field experiences to rural district needs, and built capacity for a teacher mentoring program. Warren and Peel (2005) also highlighted a partnership between a rural school facing a "turn around" and a regional university. The partnership produced a school reform plan that included specific instructional strategies to improve achievement and provided evidence to support its ability to do so. Finally, Semke and Sheridan (2011) proposed a collaborative research agenda to examine issues pertinent to rural schools. This agenda would use rigorous quasi-experimental and experimental research designs to document effects on student achievement and behavior.

Teacher Education at the State University of New York at Fredonia

Fredonia has a long history in teacher preparation. The university started as a normal school almost 150 years ago and has served the rural counties of Western New York ever since. In 2007, the university offered certification in special education for the first time (i.e., grades 1-6 childhood and childhood with disabilities) and 2 years later was awarded a 5-year, program improvement grant from the Office of Special Education Programs (OSEP). Project RAISE-UP, *Redesigning and Improving Special Education–Undergraduate Program*, focused on meeting the needs of rural school districts by preparing highly qualified special education teachers for inclusive educational settings. The project was initially a catalyst for program reflection and refinement and has served as a vehicle for creating and extending new professional relationships with rural partners.

Fredonia had a few things working in its favor when implementing the funded project. First, the institution had a long and positive history of collaborative relationships with P-12 schools that included (a) development, implementation, and evaluation of a highly structured, developmentally sequenced series of required early field experiences; (b) conduct of joint research projects and professional development activities; and (c) use of data to make decisions about candidate and pupil progress (Maheady, Smith, & Jabot, 2013; Magiera & Geraci, 2014). Core clinical experiences were developed and refined collaboratively with school partners, required coursework was co-taught by university and school partners, and some faculty focused on the direct measurement of teaching practice and pupil learning (Maheady et al., 2007; Mallette, Maheady, & Harper, 1999). It was clear, however, that existing clinical experiences and partnership ties could be enhanced, and the funded project provided a way to do so.

Lessons Learned from the 325T Partnership Grant

The project taught us much about curriculum reform, institutional support or lack thereof, and development and sustenance of positive working relationships with school partners. The learning experience was both humbling and energizing. We have renewed appreciation for what P-12 teachers and school leaders do every day to help children, particularly those who struggle academically and/or behaviorally. It is hard to think of a more challenging time for teachers, school leaders, and those responsible for their preparation. It is critical, therefore, that strategic partnerships are established and sustained during these trying times to coordinate efforts, share responsibilities, and provide mutual support. Three sets of grant-related activities are highlighted here: (a) enhancing teacher understanding and use of evidence-based practices, (b) sampling practitioners' "professional wisdom," and (c) changing teaching practice through peer coaching.

Promoting evidence-based practice. It has become increasingly clear that the U.S. Department of Education (e.g., Office of Special Education Programs, Institute of Educational Sciences) and major teacher accreditation

agencies (e.g., National Council for Accreditation for Teacher Education [NCATE]) have placed evidence-based practices (EBPs) at the heart of their reform efforts. They believe that educational outcomes for children are more likely to improve if teachers use practices shown *empirically* to enhance pupil performance. Requirements to use EBPs appear, for example, in important federal legislation (e.g., Individuals with Disabilities Education Improvement Act, 2004; No Child Left Behind, 2001), professional ethics codes (e.g., American Psychological Association Task Force on Evidence-Based Practice for Children and Adolescents, 2008; Council for Exceptional Children, 2008; National Association of School Psychology, 2000 [Standard III F 4, IV 4]), and teacher accreditation reports (Cibulka, 2009; NCATE, 2010). As Spencer, Detrich, and Slocum (2012) noted, basing educational practice on scientific evidence is no longer just a good idea; it is the law.

The funded project provided opportunities to (a) examine course syllabi using Instructional Configuration Tools (Roy & Hord, 2004) for the presence and application of EBPs in required coursework, (b) increase pre-service teachers' use of selected EBPs in clinical experiences, and (c) engage practitioners in practice-based, collaborative research projects. We initially reviewed all professional education course syllabi to determine the extent to which EBPs were taught, observed, and practiced in required coursework. Three trained raters independently coded syllabi for (a) the presence or absence of EBPs and (b) degree of implementation (i.e., 0 = no mention of component; 1 = component mentioned; 2 = component mentioned plus readings/tests; 3 = prior levels plus required papers and projects; and 4 = prior levels plus supervised practice and feedback) within and across course work. The project showed that, while pre-service teachers were exposed to EBPs via lecture and assigned readings, they received very few opportunities to use these practices in applied settings and even fewer chances to get feedback on their use (i.e., additional data available from authors upon request).

In response, EBPs were embedded more prominently and strategically within and across course syllabi and structured opportunities to apply them were built into existing clinical experiences. Curricular changes in applied experiences were done collaboratively with school partners. Finally, university faculty and classroom teachers worked collaboratively to design, implement, and evaluate research projects that examined the effects of selected practices on important pupil outcomes in inclusive educational settings.

Empirical evidence alone, however, is not enough to improve pupil outcomes and/or the accuracy of our instructional decision-making. Rather, evidence must be supplemented with the professional knowledge that practitioners have acquired about individual student needs, curriculum demands, and relative efficacy of past practices. Professional wisdom is critical for adapting EBPs to local circumstances and responding constructively in areas where little or no empirical evidence exists (Spencer et al., 2012).

Sampling practitioners' professional wisdom. The funded project provided new opportunities to capture and validate practitioners' professional wisdom. Through a series of five Academic Institutes (i.e., three in Summer and two in Winter), individual and small group interviews, teacher-teacher and university-teacher partnership posters, roundtable discussions (P-12 teachers and school leaders), classroom observations, and formal social validity surveys, we learned much about partner needs and supports and potential areas for university responsiveness. These collaborative activities offered local special and general education teachers, their administrators, and higher education faculty and staff time and resources to exchange ideas about their partnerships. School partners offered honest and useful information about how to improve teacher preparation, induction, and collaboration in our region. For brevity purposes, only the Academic Institutes and social validity results are discussed here.

Table 1 summarizes the nature and outcomes of five Academic Institutes conducted with nine school partners. The institutes were typically one full day, included keynote presentations by nationally recognized experts and well-respected local school leaders, small group discussions among P-12 teachers, leaders and University faculty, and series of poster sessions highlighting collaborative efforts around inclusive service delivery. Prominent recommendations included (a) closer alignment of clinical seminars with changing roles and responsibilities of general and special educators, (b) increased use of EBPs and data collection procedures to support its application, and (c) more exposure to P-12 teacher evaluation tools. School partners also wanted professional development on practices that "really" worked, especially with challenging students, and more ways to collect evidence to support their effectiveness. They requested additional in-class assistance, increased involvement of P-12 teachers in professional development, and more optional delivery formats (e.g., web-based video, peer coaching, performance-feedback, communities of practice). Finally, school partners suggested that collaborative relationships can be strengthened by increased university "visibility" and "commitment" to partner schools and the formation of collaborative professional teams (i.e., college professors, P-12 teachers, pre-service candidates, parents/community members) to address ongoing, local educational challenges.

Social validity assessments also were conducted during the final year of the funded project to determine how school-university partners felt about their ongoing relationships. More specifically, they were asked to rate the school university partnerships in terms of the (a) importance of partnership goals, (b) acceptability of partnership methods, and (c) satisfaction with partnership outcomes (Kennedy, 2005). Surveys were sent electronically to 80 school partners (i.e., pre-service candidates, P-12 teachers, University faculty

Table 1

Summary of Presenters, Keynote Topics, Big Ideas, and Collaborative Presentations during 325T Professional Training

Institutes	Presenter	Big Ideas from Keynote	Partnership Activities	Big Ideas
Winter 2010	Dr. Spencer Salend SUNY New Paltz	Nature and importance of inclusion; Implications of Evidence-Based Practice and teacher accountability movements	Summarize project goals; Implications for candidates and program; Elicit recommendations for future action	Common goals; Collaboration; Use of science to guide reform efforts
Summer 2010	Ms. Kimberly Moritz, Superintendent, Randolph Schools	Daily challenges of differentiation; Rethinking clinical experiences; Help with data-based decision-making	10 pairs of GE & SE teachers presented posters on their use of EBPs; Panel of P-12 teachers offered suggestions for program improvement	Align student teaching seminar with school needs; Increase feedback on how candidates can best assist teachers
Winter 2012	Dr. Phil Belfiore Mercyhurst University	Establish curricular match to maximize student engagement; Increase student opportunities to engage in meaningful learning; Be proactive and positive in management approach	Panel discussion P-12 school leaders; Small group discussions (P-12 teachers, leaders & University faculty & staff); P-12 teacher posters on collaborative activities	Align teacher education curriculum with Common Core Curriculum Standards; Prepare candidates for Annual Professional Performance Reviews
Summer 2012	Dr. Linda Blanton Florida International University Dr. William Heward The Ohio State University	Redesigning general & special education roles; Strengthening school-university partnerships; Misguided notions in teaching students with disabilities; Infusing EBPs in teacher education curriculum	9 school-university partnership posters highlighting current initiatives to strengthen school-university relations	University courses taught on site; Clinical faculty co-teaching; Collaborative professional development series
Summer 2013	Dr. Sheila Alber-Morgan The Ohio State University	Using EBPs to improve student writing in inclusive settings; Strategic approaches for improving pupil fluency and independence in inclusive classrooms	Formal social validity surveys completed by Pre-service candidates; Clinical faculty; University faculty	Most respondents (80%) rated partnership goals, procedures, and outcomes positively; Need for common lesson plan and language

and staff) and 29 completed forms were returned. This was a relatively low response rate (i.e., 36%) but was consistent with contemporary social science and educational research samplings (Kennedy, 2005).

Data were analyzed quantitatively (i.e., percentage of respondents per item, positive/negative nature of response) and qualitatively (i.e., 71 anecdotal comments rated independently and reliably as constructive, concern, or not applicable). In general, respondents rated partnership goals, methods, and outcomes quite favorably. Most school partners indicated that formal grant activities with the university were very important. See Table 1 for summary information (e.g., Academic Institutes, poster sessions) that were useful and efficient and partnership outcomes (e.g., better able to work effectively in inclusive settings, better able to share instructional responsibilities). Qualitatively, partners highlighted the importance of all teachers (general and special education) knowing how to program from student IEPs, expressed the need for a common lesson plan format, and requested the use of a common and consistent "language" across school and University settings.

Changing teaching practice through coaching. Gawande (2011), a noted surgeon and author, suggested that coaching done well may be the most effective intervention designed for human performance; yet, coaching is used infrequently in P-12 schools to improve teacher practice (Kretlow, Cooke, & Wood, 2012). This is problematic because (a) a gap exists between what works (i.e., research) and what gets implemented (i.e., practice); (b) traditional professional development activities (i.e., workshops) do not impact teaching practice; and (c) coaching is the only documented approach that impacts practice and pupil learning (Joyce & Showers, 2002; Kretlow et al., 2012; States, Detrich, & Keyworth, 2012). Instructional coaching provides intensive, differentiated support for teachers to help them implement new curricula and EBPs. The 325T grant provided opportunities to explore coaching as a mechanism for disseminating EBPs and bridging the research-to-practice gap.

To date, coaching activities included (a) the use of graduate students in literacy to coach pre-service teachers in early clinical experiences and (b) the conduct of research studies examining the effects of selected EBPs on pupil outcomes. In the former case, graduate students coached pre-service teachers who were tutoring students with special needs in an after-school tutoring program. In latter instances, graduate students and retired teachers coached P-12 teachers who requested instructional assistance. Coaching activities were semi-scripted and followed an "I do, we do, you do" coaching cycle. All research projects identified educationally important problems (e.g., active participation in class, increased academic productivity, reduction of disruptive behavior); selected practices with empirical support; implemented them with integrity; measured outcomes directly, frequently, and reliably; used rigorous single-case research designs (e.g., A-B-A-B, multiple baseline, alternating treatments); and included social validity assessments (Maheady et al., 2013). These collaborative research projects were useful for addressing important P-12 problems, replicating intervention effects, disseminating EBPs, and building credibility with school partners.

Future Directions for Partnership Research and Practice

There are clearly more unanswered than answered questions about preparing highly qualified teachers to meet the needs of all children in inclusive settings. These questions, in turn, are set against a backdrop of even more complex, indeed "wicked problems," confronting P-12 and teacher education today (Lignugaris/Kraft, Sindelar, McCray, & Kimerling, 2014). We examined the potential roles that school-university partnerships may play in addressing some unanswered questions, cautioned about the dearth of rigorous research, and provided a few partnership exemplars derived from the funded project. Future work will focus on expanding pre-service and in-service teachers' understanding and use of EBPs, exploring coaching as a vehicle for bridging the research-to-practice gap, and using rigorous, single case designs to link teacher practice to important pupil outcomes, whenever possible.

School-university partnerships of *any* size provide opportunities for educators to play a more significant and constructive role in educational reform efforts. While it would be better if more state and federal funding were available to establish and sustain comprehensive school-university partnerships, most teacher educators must persist in the absence of such resources. This should not diminish, however, the potential utility of collaborative efforts at any scale. Collectively, we can create more visible and reliable links among teacher education, instructional practice, and student learning, a prerequisite for reestablishing professional credibility in the eyes of critics. Doing so, however, will require substantive changes in how teaching and learning are conceptualized, how clinical experiences are designed and evaluated, and how well teacher educators learn to work collaboratively with school partners.

Instructional coaching will be used to disseminate EBPs, examine their impact on pupil outcomes, and identify the conditions under which practitioners can use and sustain them with sufficient fidelity. Reciprocal and expert coaching models will be used in conjunction with selected EBPs to address teacher-generated challenges. A practice-based research agenda will be adopted to (a) improve student learning, (b) strengthen external validity of EBP, and (c) accelerate the delivery of effective practices to inclusive educational settings. Practices deemed effective will be disseminated systematically, while ineffective strategies will be adapted or discarded. Finally, evidence generated from practice-based research will be used to meet Annual Professional Performance Review (APPR) requirements and improve instructional decision-making locally.

There is obviously more work to do in partnership research and practice. While the concept of institutional change can be overwhelming, there is solace in knowing that each university and school partner can contribute something meaningful to the change process. Perhaps the best way to proceed is to follow advice from B. F. Skinner who, when asked how can educators best promote and advocate for effective teaching in our schools, responded by saying, "Well I guess we just keep nibbling" (Heward & Wood, 2003). By that, he meant that we should continue working in our small ways to promote the good things that we see. Whenever we see teachers and schools using EBPs, we should thank them for what they are doing. When we see educators working effectively with parents, teacher unions, and the community to improve student learning, we should recognize and support them. When we see teachers, school leaders, and teacher educators using research evidence to improve instructional decision-making, we should advertise their success. There is great value in our collective efforts to affect meaningful change so that some children, families, and teachers have better days.

References

American Psychological Association Task Force on Evidence-Based Practice for Children and Adolescents. (2008). *Disseminating evidence-based practice for children and adolescents: A systems approach to enhancing care.* Washington, DC: American Psychological Association.

Badiali, B. J., Flora, R., Johnson, I., & Shiveley, J. (2000). Beyond collaboration: Accounts of partnership from the Institute for Educational Renewal based at Miami University. *Peabody Journal of Education, 75*(3), 145-160.

Barnett, B. G., Hall, G. E., Berg, J. H., & Camarena, M. M. (1999). A typology of partnerships for promoting innovation. *Journal of School Leadership*, *9*(6), 484-510.

Beck, C., & Kosnik, C. (2002). Professors and the practicum involvement of university faculty in pre-service practicum supervision. *Journal of Teacher Education, 53*(1), 12-20.

Birrell, J. R., Ostlund, M. R., Eagan, M. W., Young, J. R., Cook, P. F., Dewitt, P. F., & Tibbitts, C. B. (1998). Collaboration, communities, and covey: A model for personal and professional change. *The Clearing House, 71*(6), 359-362.

Brown, K. S., Murphy, C. H., Natale, D., & Coates, D. (2003). Student learning outcomes in a partnership intern program. In D. L. Wiseman & S. L. Knight (Eds.), *Linking school-university collaboration and K-12 student outcomes* (pp. 103-114). Washington, DC: American Association of Colleges for Teacher Education.

Bullough, R. V., Draper, R. J., Smith, L., & Birrell, J. R. (2004). Moving beyond collusion: Clinical faculty and university/public school partnership. *Teaching and Teacher Education, 20*(5), 505-521.

Carnegie Task Force on Teaching as a Profession. (1986). *A nation prepared: Teachers for the 21st century.* Washington, DC: Carnegie Forum on Education and the Economy.

Chalker, D. (Ed.). (1999). *Leadership for rural schools: Lessons for all educators*. Lancaster, PA: Technomic Publishing Company, Inc.

Cibulka, J. G. (2009). *Meeting urgent national needs in P-12 Education: Improving relevance, evidence, and performance in teacher preparation*. Washington, DC: National Council for Accreditation of Teacher Education.

Conaway, B. J., & Mitchell, M. W. (2004). A comparison of the experiences of yearlong interns in a professional development school and one-semester student teachers in a non-PDS location. *Action in Teacher Education, 26*(3), 21-28.

Council for Exceptional Children. (2008). *Classifying the state of evidence for special education: Professional Practices. CEC Practice Study Manual*! Reston, VA: Council for Exceptional Children.

Cowart, M., & Rademacher, J. (2003). Turning student voice into student outcomes. In D. L. Wiseman & S. L. Knight (Eds.), *Linking school-university collaboration and K-12 student outcomes* (pp. 87-102). Washington, DC: American Association of Colleges for Teacher Education.

Dadisman, K., Gravelle, M., Farmer, T., & Petrin, R. (2010). Grow your own and other alternative certification programs in rural school districts. *National Research Center on Rural Education Support Issue Brief.* Retrieved from http://www.nrcres.org/NRCRES%20GYO%20Issue%20Brief.pdf

DeYoung, A. J., (Ed.). (1991). *Rural Education: Issues and Practices*. New York, NY: Garland Publishing, Inc.

Epanchin, B. C., & Colucci, K. (2002). The professional development school without walls: A partnership between a university and two school districts. *Remedial and Special Education, 23*(6), 348-358.

Gadja, R., & Cravedi, L. (2006). Assimilating "real" teachers in teacher education: Benefits and limitations of a professional development school course delivery model. *Action in Teacher Education, 28*(3), 42-52.

Gawande, A. (2011). Personal best: Top athletes and singers have coaches. Should you? *The New Yorker, Annals of Medicine, October 3, 2011*. Retrieved from http://www.newyorker.com/magazine/2011/10/03/personal-best

Ginsberg, R., & Rhodes, L. K. (2003). University faculty in partner schools. *Journal of Teacher Education, 54*(2), 150-162.

Goe, L., & Coggshall, J. (2007). *The teacher preparation – teacher practices – student outcomes relationship in special education: Missing links and necessary connections.* NCCTQ Research and Policy Brief. Washington, DC: National Comprehensive Center for Teacher Quality. Available from www.ncctq.org

Haas, T., & Nachtigal, P. (1998). *Place value: An educator's guide to good literature on rural life-ways, environments, and purposes of education*. Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.

Hammer, P. C., Hughes, G., McClure, C., Reeves, C., & Salgado, D. (2005). *Rural teacher recruitment and retention practices: A review of literature, national survey of rural superintendents, and case studies of programs in Virginia*. Appalachia Educational Laboratory (AEL) at Edvantia. Retrieved from http://files.eric.ed.gov/fulltext/ED489143.pdf

Harmon, H. L., Gordanier, J., Henry, L., & George, A. (2007). Changing teaching practices in rural schools. *The Rural Educator, 28*, 8-12.

Helge, D. I. (1984). The state of the art of rural special education, *Exceptional Children, 50*, 294-305.

Heward, W. L., & Wood, C. L. (2003). Thursday afternoons with Don: Selections from three teleconference seminars on applied behavior analysis. In K. S. Budd & T. Stokes (Eds.), *A small matter of proof: The legacy of Donald M. Baer* (pp. 293-310). Oakland, CA: Context Press.

Holmes Group (1995). *Tomorrow's schools of education*. East Lansing, MI: Author.

Howley, C. B., & Harmon, H. L., (Eds.) (2000). *Small high schools that flourish: Rural context, case studies and resources*. Charleston, WV: AEL, Inc.

Individuals with Disabilities Education Improvement Act of 2004. Public Law 108-446 (118 STAT. 2647).

Joyce, B., & Showers, B. (2002). *Student achievement through staff development* (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Kennedy, C. R. (2005). *Single-case designs for educational research*. Upper Saddle River, NJ: Merrill/Pearson.

Kretlow, A. G., Cooke, N. L., & Wood, C. L. (2012). Using in-service and coaching to increase teachers' accurate use of research-based strategies! *Remedial and Special Education, 33*(6), 348-361.

Levine, A. (2006). *Educating school teachers.* Princeton, NJ: The Education Schools Project.

Lignugaris/Kraft, B., Sindelar, P. T., McCray, E. D., & Kimerling, J. (2014). The "wicked question" of teacher education effects and what to do about it. In P. T. Sindelar, E. D. McCray, M. T. Brownell, & B. Lignugaris/Kraft (Eds.), *Handbook of Research on Special Education Teacher Preparation* (pp. 461-471). New York, NY: Routledge.

Magiera, K., & Geraci, L. (2014). Sustaining a rural school-university partnership: A twenty-two year retrospective of after-school tutoring program. *Rural Special Education Quarterly 33*(1), 12-17.

Maheady, L., Jabot, M., Rey, J., & Michelli-Pendl, J. (2007). An early field based experience and its effects on pre-service teachers' practice and student learning. *Teacher Education and Special Education, 30*, 24-33.

Maheady, L., Smith, C., & Jabot, M. (2013). Utilizing evidence-based practice in teacher preparation. *Advances in Learning and Behavioral Disabilities, 26*, 121-147.

Mallette, B., Maheady, L., & Harper, G. F. (1999). The effects of reciprocal peer coaching on pre-service general educators' instruction of students with special learning needs**.** *Teacher Education and Special Education, 22*, 201-216.

Mollenkopf, D. L. (2009). Creating highly qualified teachers: Maximizing university resources to provide professional development in rural areas. *The Rural Educator, 30*(3), 34-39.

Mule, L. (2006). Pre-service teachers' inquiry in a professional development school context: Implications for the practicum! *Teaching and Teacher Education, 22*(2), 205-218.

Muller, E. (2010, October). *State-level efforts to recruit and retain qualified special education personnel including related service providers: In Forum Brief Policy Analysis.* Alexandria, VA: National Association of State Directors of Special Education.

National Association of School Psychology (2000). *Professional conduct manual.* Prepared by the Professional Standards Revision Committee. Bethesda, MD: NASP Publications. Retrieved from www.naspweb.org

National Commission on Teaching and America's Future (1996). *What matters most: Teaching for America's future.* New York, NY: Author. Retrieved from http://nctaf.org/research/National Council on Teacher Quality. (2010). *2009 state teacher policy yearbook: National summary*. Washington, DC: Author.

National Council for Accreditation of Teacher Education (2010, November). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers.* Washington, DC: NCATE. Retrieved from www.ncate.org/publications No Child Left Behind Act of 2001, 20 U. S. C. 6319 (2008).

Price, M. (2005). *Promoting linkages: Partnerships between schools and higher education!*

Syracuse, NY: New York Higher Education Support Center for Systems Change at Syracuse University.

Rosenberg, M. S., Brownell, M., deBettencourt, L. U., Leko, M., & Long, S. (2009).

Development and sustainability of school-university partnerships in special education teacher preparation: A critical review of the literature. (NCIPP Doc. No. RS-3). Retrieved from http://ncipp.education.ufl.edu/partnerships.php

Roy, P., & Hord, S. M. (2004). Innovation configurations chart a measured course toward change. *Journal of Staff Development, 25*, 54-58.

Sandholtz, J. H. (2002). Inservice training or professional development: Contrasting opportunities in a school /university partnership. *Teaching and Teacher Education, 18*(7), 815-830.

Semke, C. A., & Sheridan, S. M. (2011). Family-school connections in rural educational settings: A systematic review of the empirical literature. *The National Center for Research on Rural Education*, R2Ed Working Paper No. 2011-1.

Sindelar, P. T., Washburn-Moses, L., Thomas, R. A., & Leko, C. D. (2014). The policy and economic contexts of teacher education. In P.T. Sindelar, E. D. McCray, M. T. Brownell, & B. Lignugaris/Kraft (Eds.), *Handbook of Research on Special Education Teacher Preparation* (pp. 3-16). New York, NY: Routledge.

Smith, M. H., & Trexler, C. J. (2006). A university-school partnership model: Providing stakeholders with benefits to enhance science literacy. *Action in Teacher Education, 27*(4), 23-34.

Smolkin, L. B., & Suina, J. H. (1999). Cross-cultural partnerships: Acknowledging the "equal other" in the Rural/Urban American Indian Teacher Education Program. *Teaching and Teacher Education, 15*(5), 571-590.

Spencer, T. D., Detrich, R., & Slocum, T. A. (2012). Evidence-based practice: A framework for making effective decisions. *Educational and Treatment of Children, 35*, 127-151.

States, J., Detrich, R., & Keyworth, R. (2012). Effective teachers make a difference. In R. Detrich, R. Keyworth, & J. States (Eds.), *Advances in evidence-based education (Vol. 2): Education at the crossroads: The state of teacher preparation* (pp. 1-45). Oakland, CA: The Wing Institute.

Stephens, D., & Boldt, G. (2004). School/university partnerships: Rhetoric, reality, and intimacy. *Phi Delta Kappan, 85*(9), 703-707.

Warren, L. L., & Peel, H. A. (2005). Collaborative model for school reform through a rural school/university partnership. *Education, 126*(2), 346-352.

Wilson, S., Floden, R., & Ferrini-Mundy, J. (2002). Teacher preparation research: An insider's view from the outside. *Journal of Teacher Education, 53*(3), 190-204.

Zetlin, A. G., Harris, K., MacLeod, E., & Watkins, A. (1992). The evolution of a university/inner-city school partnership: A case study account. *Urban Education, 27*(1), 80-90.