## School–University Partnerships: One Institution's Efforts to Integrate and Support Teacher Use of High-Leverage Practices

HAMMILL INSTITUTE ON DISABILITIES

Remedial and Special Education 2019, Vol. 40(6) 356–364 © Hammill Institute on Disabilities 2018 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/0741932518812689 rase.sagepub.com



Lawrence J. Maheady, PhD<sup>1</sup>, Angela L. Patti, PhD<sup>1</sup>, Lisa A. Rafferty, PhD<sup>1</sup>, and Pixita del Prado Hill, EdD<sup>1</sup>

#### Abstract

School-university partnerships have served as possible solutions for many contemporary educational challenges. As centers for clinical practice, they are potential vehicles for the development and refinement of candidate use of highleverage practices (HLPs). This article describes our institution's efforts to utilize our framework for clinically rich preparation to infuse HLPs into programming for undergraduate, dual-certification majors (i.e., general and special education). With the goal of program revision, general and special education faculty mutually agreed on a draft set of HLPs, which were finalized based on extensive feedback from school partners. To assess the viability of these collaboratively crafted HLPs, a subset of HLPs were identified and integrated into course content and clinical experiences during a pilot project. We highlight these learning experiences; discuss organizational, pedagogical, and empirical challenges; and offer general recommendations for next steps.

#### Keywords

school-university partnerships, high-leverage practices, practice-based teacher education

School-university partnerships have been heralded as potential solutions for many educational challenges such as improving the quality of instructional personnel in low achieving schools (Rosenberg, Brownell, deBettencourt, Leko, & Long, 2009), enhancing professional development (PD) opportunities for P-12 and university faculty (Badiali, Flora, Johnson, & Shiveley, 2000), and providing P-12 educators with more "voice" in preparation program design, implementation, and evaluation (Price, 2005). More recently, these partnerships were touted as essential to the successful development, implementation, and refinement of clinically based teacher education programs (McDonald, Kazemi, & Kavanaugh, 2013; McLeskey & Brownell, 2015; Windschitl, Thompson, Braaten, & Stroupe, 2012). The Council for Accreditation of Educator Preparation (Council for the Accreditation of Educator Preparation, 2013) noted as well that "effective partnerships and highquality clinical practice are central to preparation so that candidates develop the knowledge, skills, and dispositions necessary to demonstrate positive impact on all P-12 students' learning and development" (p. 6).

This is an impressive set of expectations for a single educational innovation, particularly since *empirical* support for school–university partnerships is limited, at least in terms of impact on teacher practice and student learning. Rosenberg et al. (2009) concluded, for example, that enthusiasm and support for school–university partnerships is "more a function of anecdote and faith than empirical data" (p. 43). However, as the late, great singer/songwriter Jim Croce said, "It doesn't have to be that way." Although there is limited empirical research, using HLPs as a common framework in partnership between schools and universities may help close the research-to-practice gap and improve the quality of candidates entering the field.

This article includes a brief examination of the nature of high-quality school–university partnerships. It highlights our institution's efforts to move from a siloed, dualcertification program, where general and special education courses were developed and taught separately by faculty in two different departments to a unified, co-written, teamtaught, clinically based, dual-certification program. Program changes were institutionalized in *writing* (i.e.,

<sup>1</sup>SUNY Buffalo State, New York, NY, USA

#### **Corresponding Author:**

Lawrence J. Maheady, Exceptional Education Department, SUNY Buffalo State, 1300 Elmwood Ave., Buffalo, NY 14222, USA. Email: maheadlj@buffalostate.edu revised curriculum based on commonly agreed upon highleverage practices; HLPs) and tested in *practice* through a pilot project in a high need partner school. The project gave P–12 teachers and school leaders input into the identification of important and relevant HLPs for their school, provided candidates with direct opportunities to use these practices during clinical experiences, and offered teacher educators the chance to examine the ongoing process and outcomes. We describe important learning experiences and discuss significant organizational, pedagogical, and empirical challenges before offering some general recommendations about what to do next.

Before proceeding, however, a few caveats are warranted. First, there are other important challenges related to school-university partnerships that are beyond the scope of this article (e.g., improving candidate recruitment, selection, and retention practices, and/or adjusting university promotion and tenure policies to promote partnershiprelated work). Second, 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 services to students with and without disabilities. These relationships can range 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. Although comprehensive institutional participation and support is the ultimate goal, considerable progress can be made through the efforts of some or even a few educational professionals.

# High-Quality School–University Partnerships

McLeskey, Billingsley, Brownell, Maheady, and Lewis (2019) noted that teacher education scholars from multiple disciplines agreed that preparation efforts should be centered around clinical practice, focused on the development of a small set of practices (i.e., HLPs), and conducted systematically to identify effective preparation methods. Pedagogical procedures must be developed to teach candidates to implement these practices with fidelity and fluency, and none of these goals can be accomplished without the assistance and support of P-12 school partners.

Schools and universities have worked together for many years to prepare and support new and experienced teachers. These collaborative arrangements have allowed individual organizations to combine resources and expertise and expand and enhance their collective knowledge and skills. This is all done, of course, with the implied purpose of improving student outcomes. More recently, King (2014) and others (e.g., Robinson, Nemr, Nicoll-Senft, Spear-Swerling, & Tralli, 2017) have outlined sets of quality indicators for partnership development that are based on shared

responsibility, clear communication, and mutual benefits. Quality indicators include (a) shared vision; (b) institutional leadership; (c) communication and collaboration; (d) joint ownership and accountability for results; (e) system alignment, integration, and sustainability; and (f) responsiveness to local context. We used these criteria to guide subsequent work on curriculum reform at our institution.

## **Our Work at SUNY Buffalo State**

### PDS History

The SUNY Buffalo State Professional Development Schools (PDS) Consortium (hence known as PDS Consortium) is a collaborative effort based on three, interrelated frameworks: (a) National Council for Accreditation of Teacher Education (NCATE; 2001) Standards for PDS, (b) National Association for Professional Development Schools (NAPDS) Nine Essentials (Brindley, Field, & Lessen, 2008), and (c) NCATE (2010) Blue Ribbon Panel Report. These documents provide the conceptual infrastructure that guides clinical practice for teacher education faculty, teacher candidates, and P–12 teachers and leaders. The PDS Consortium was rated "At Target" during our most recent accreditation review and has served as the university's primary connection to P–12 schools and community agencies for almost three decades.

Led by the Teacher Education Unit Professional Advisory Council (TEUPAC), the PDS Consortium (a) supports teacher candidates and provides connections to authentic classroom practice, (b) promotes shared PD for all constituents, (c) positively impacts student learning, and (d) conducts research on innovative and effective educational practices (http://pds.buffalostate.edu). The consortium places teacher candidates in cohorts at partner schools to improve student learning while building skills and knowledge under the guidance of experienced mentor teachers. The consortium also offers PD opportunities to administrators, practicing teachers, candidates, and college faculty through (a) annual conferences attended by more than 200 educators, (b) three annual meetings hosted by partner schools to share effective educational practices with approximately 60 educators per gathering, and (c) collaborative action research projects funded via mini-grants linked to identified school needs.

The PDS Consortium began in 1991 with one methods course hosted by one school partner. Twenty-seven years later, the consortium has grown to more than 100 school partners in the greater Buffalo region, New York State, and across five continents with signed agreements in approximately 45 schools every semester. Given this expansive work, SUNY Buffalo State received the 2018 Exemplary PDS Achievement Award from the NAPDS. This is the PDS Consortium's third national award in addition to several

In its early years, the PDS Consortium membership was primarily focused on general education. Special education had its own field-based partnerships which ran parallel to the consortium, although some attempts at collaboration across general and special education were made. The release of the NCATE (2010) Blue Ribbon Panel Report and hiring of a new dean in the School of Education in 2012 reignited collaborative efforts. One of the Dean's first initiatives linked the larger goal of meaningful clinically rich practice through PDS to create "border crossing" opportunities to bring the elementary and special education departments together. She provided essential supports to make the collaborative initiatives successful including (a) funding to support curriculum development across programs, (b) course release time for faculty interested in co-teaching pilot courses, and (c) regularly scheduled, cross-departmental meetings for collaborative brainstorming and problemsolving. Because these initiatives were supported by college leadership and driven by college faculty, changes were more substantive and enduring.

As special education faculty began participating in consortium board discussions and attending PDS events, they proposed ways that HLPs might be linked to PDS needs to improve the preparation of a new generation of educators. The PDS Consortium subsequently adopted *High-Leverage Practices* as its 2014–2015 theme. The annual conference and school-based meetings then centered on specific HLPs and promoted action research mini-grants to support HLP integration into clinical experiences. The result was a twopronged approach that institutionalized broad curriculum revisions and a mini-grant pilot project with PDS partners to infuse HLPs into clinical practice.

#### Broad Curriculum Revisions

SUNY Buffalo State had a long history of preparing general and special education teachers at the undergraduate and graduate levels and a reputation for extensive clinical practice. This history, however, was also marked more by separation than integration; for example, in our undergraduate, dual-certification program, candidates were prepared to meet the general education certification requirements by completing courses taught by elementary education faculty who wrote and implemented these courses separate from the special education faculty and vice versa-even the clinical placements were separate. During conversations within the PDS consortium, this was identified as a concern; the disjointed nature of the dual-certification program did not match the realities of inclusive classrooms today. The HLPs provided a vehicle for us to begin a conversation around how to address these issues, while including our PDS consortium members and colleagues across departments in the conversation.

Curricular alignment around HLPs. An organizational decision was made to revise our undergraduate, dual-certification program so that it would maintain the historically clinically rich practice and center around a core set of mutually agreed upon HLPs. Program revisions included (a) better content alignment across three departments—elementary education, special education, and educational foundations; (b) curriculum compacting across courses addressing similar content; (c) infusion of HLPs as "core" content; (d) increased modeling of preferred instructional practices and co-teaching; (e) blocked methods courses focusing on teaching students with, without, and at-risk for disabilities using a multitiered system of support (MTSS) framework; and (f) integrated clinical experiences. Figure 1 shows eight basic phases involved in curriculum revisions. Here, information regarding HLPs and clinical experiences are highlighted.

Developing a framework. Initially, a collaborative faculty work group was formed with members from the three education departments. Group members reviewed the 19 HLPs developed by the University of Michigan (n.d.), Teaching-Works (Ball & Forzani, 2011) that were applicable to the daily work of *general education* teachers and 25 "draft" HLPs for *special* educators (the latter set was later reduced to 22 HLPs and adopted formally by the Council for Exceptional Children [CEC], 2017 in July 2016).

The work group discussed how both HLP sets were related to program vision (i.e., common, integrated curriculum, shared clinical experiences, and collaborative working relationships) and created a crosswalk to examine HLP similarities and differences. Group members agreed that adopting separate sets of HLPs for general and special education would be inconsistent with program vision and almost impossible to implement. They also concurred that the total number of HLPs should be (a) limited (i.e., below 20), (b) linked to PDS partners' instructional needs, and (c) teachable on and off campus. Following deliberation, they developed a draft, modified, common set of 17 HLPs to potentially serve as a core curriculum for the revised dualcertification program.

To better understand partner needs, the work group shared the draft HLPs, presented and took notes at advisory board meetings, conducted workshops at PDS Consortium sessions, and developed and sent surveys to PDS Consortium teachers and leaders. The goals were (a) to gather feedback on the draft HLPs, (b) determine which HLPs were most *important* and *relevant* in PDS Consortium schools, and (c) use this information to align course content and clinical experience with these prioritized practices. There were no substantive modifications made to the 17 HLPs; however, there was a lot of discussion surrounding the language used, which resulted in clarification of language and a shared vocabulary. Additional feedback and support were gathered from faculty members in the three



Figure 1. Revision process of dual-certification program in special and general education, Grades 1 to 6. Note. HLPs = high-leverage practices.

education departments, and the 17 HLPs were formally adopted for the revised, dual-certification program (see Figure 2). Although consensus building led to the adoption of 17 HLPs, larger questions about *how* to prepare candidates to use these practices with some degree of fluency must still be addressed as the revised program is implemented. A pilot study was designed and conducted to test out some initial ideas related to this plan.

## PDS Pilot Project

In his seminal work on the diffusion of innovative practices, Rogers (2003) noted that systems are more likely to adopt practices that are "piloted" before broad-scale dissemination. Pilot testing allows developers to examine program components and delivery systems, refine them for efficiency, if necessary, and assess their general acceptability among those who will use them. The revised, dual-certification program included at least three innovative components that had to be examined before broader diffusion: (a) co-teaching between university faculty members, (b) shared clinical experiences, and (c) using P–12 school needs to guide program implementation. To examine the feasibility of these innovative components on a larger scale, a pilot program was designed and implemented in the unrevised dual-certification program (Patti & del Prado Hill, 2017).

The first innovative component examined was the use of co-teaching between university faculty members. In the pilot program, one faculty member from general education and one from special education co-taught a blocked section of courses (i.e., foundations of special education, advanced literacy instruction for students with and without disabilities, and classroom management) to a cohort of teacher candidates across two semesters. The course instruction took place on site at the PDS where the teacher candidates engaged in related clinical experiences.

| Communication and Collaboration  |
|--|
| HLP 1: Communicate and collaborate effectively with colleagues, parents/guardians, school leaders, and other professionals.                        |
| HLP 2: Advocate for students and families to secure needed services and promote social justice.  |
| Instructional Design   |
| HLP 3: Use knowledge about the curriculum and students' present levels of performance to identify short- and long-term goals.                      |
| HLP 4: Design a sequence of lessons towards a specific learning outcome.   |
| HLP 5: Choose and adapt curriculum materials and tasks specific to learning goals.   |
| Instructional Delivery   |
| HLP 6: Make learning explicit through modeling, guided practice, and independent practice.   |
| HLP 7: Use strategies to promote active student engagement in whole class and small group instruction.   |
| HLP 8: Scaffold instruction during lessons.  |
| HLP 9: Teach students to work independently.   |
| HLP 10: Select, implement, and evaluate instructional and assistive technologies to support student learning.                                      |
| HLP 11: Identify and implement an instructional strategy or intervention in response to common patterns of student performance or individual need. |
| HLP 12: Self-analyze teaching for the purpose of improving instruction and learning.   |
| Classroom Management   |
| HLP 13: Establish and implement effective classroom and individual student management plans to increase student social and academic outcomes.      |
| HLP 14: Provide high rates of specific feedback.   |
| HLP 15: Create and facilitate a safe, respectful, productive, and positive learning environment.   |
| Assessment   |
| HLP 16: Develop/select and implement specific assessment measures to determine relevant information about students' present levels of performance. |
| HLP 17: Interpret and communicate assessment data to make important educational decisions.   |
|  |

**Figure 2.** List of HLPs being used as a framework in the dual-certification, undergraduate program at our institution. *Note.* The development of these HLPs was based upon (a) the combined professional knowledge of SUNY Buffalo State School of Education faculty and partners, (b) HLPs from the University of Michigan, and (c) HLPs from the Council for Exceptional Children. HLPs = high-leverage practices.

University faculty participated in each other's instruction each day. This took a variety of forms: (a) observing to learn one another's content, (b) co-teaching lessons to model co-teaching practices and indicate relevant advantages and disadvantages of each, and (c) interjecting in one another's lessons to make connections between the content of the two disciplines (i.e., general education and special education). In this way, candidates were able to see the coteaching and collaborative processes they were going to use in their future teaching roles modeled by the university faculty. In addition, university instructors were able to draw explicit connections between topics in each of their disciplines and provide clarification when candidates were unclear about how issues, philosophies, or practices differed between general and special education.

A second innovative component investigated was a shared clinical experience. Two teacher candidates were paired in one classroom for a clinical placement, which directly related to the college coursework that was part of the pilot program. In the placement, candidates carried out projects related to course content, such as developing a behavioral intervention plan and implementing a reading assessment. In pairs, they were also responsible for codesigning, co-teaching, and co-evaluating multiple lessons.

Candidates were placed in classrooms where they could not only practice co-teaching with their partners but also observe co-teaching taking place with their mentor teachers. Each classroom had some combination of a general education teacher, special education teacher, English as a New Language (ENL) teacher, and various other specialists working within it. This allowed candidates to see and participate in the complex nature of co-teaching and collaboration required to meet students' diverse learning needs.

The field placements were supervised by both the general education and special education faculty who co-taught the program coursework. This model was innovative as candidates could receive guidance on course-related projects and feedback on lesson implementation from both instructors' perspectives. This contrasts with a typical model of dual-certification programs, in which candidates engage in separate, often unrelated clinical experiences for general and special education.

The third innovative program component examined the use of a "bottom-up rather than top-down" approach to

program development and implementation. We *asked* teachers and school leaders what types of instructional assistance they needed rather than telling them which requirements or competencies (or HLPs) candidates must satisfy for certification and/or accreditation. The bottomup approach informed programmatic decision-making, aligned curriculum and clinical experiences, and was well accepted by P–12 partners.

The pilot program PDS was a P–8, bilingual (English and Spanish) school with high rates of students with disabilities, English language learners, and students from highpoverty backgrounds. Student performance on standardized assessment measures was persistently low, and high school graduation rates were poor. Due to these circumstances, the school had a state-mandated school improvement plan from which PDS instructional priorities were derived.

A liaison committee, consisting of the two university instructors, a representative mentor teacher from the PDS, and the school principal met regularly to discuss the program. Through discussion, two interrelated school-wide priorities (as outlined on the school improvement plan) emerged as issues which could be addressed through the pilot program: (a) increasing student talk time and (b) active student engagement. Both targets were well aligned with CEC's HLP 18, "use strategies to promote active student engagement." Thus, during class time, the university faculty modeled a variety of empirically supported strategies for increasing active student engagement (e.g., response cards; Heward & Wood, 2015; Randolph, 2007) and then candidates implemented these strategies in clinical placements where they received performance-based feedback.

Addressing student engagement was only one example of how the pilot program was shaped by school-identified priorities. In addition to CEC HLP 18, the liaison committee prioritized HLP 1, "collaborate with professionals to increase student success" and HLP 17, "use flexible grouping" as closely linked to their school's needs. University faculty, in turn, taught related strategies in class and PDS mentor teachers provided opportunities for candidates to practice them in clinical experiences.

The pilot program was well received and viewed as successful by university faculty, school partners, and teacher candidates. Two keys to success were (a) mutual benefits and (b) clear and ongoing communication. School partners' identification of a limited number of important and relevant HLPs brought focus and coherence to the curriculum and provided opportunities for faculty to create meaningful practice-based opportunities for candidates. School partners and their students received additional instructional assistance from teacher candidates—assistance that was linked directly to their specified needs.

Ongoing communication was required between university faculty, respective department chairs, the Dean of

the School of Education, and PDS Consortium schoolbased partners. Most planning was front-loaded, but ongoing communication was necessary throughout the year. This included weekly co-planning sessions between university faculty, weekly in-person checks with mentor teachers, monthly liaison committee meetings, and regular program updates via email to maintain program focus and logistics.

## Discussion: Implementation, Adaptation, and Evaluation

Cook and Odom (2013) argued that the emergence of a process to identify effective practices in education has great potential for improving educational programs and important student outcomes. These potential benefits will be limited, however, if practices are implemented poorly, confined to a small proportion of educators, and/or not maintained over time. Educational reform movements have not had a strong track record of sustainability and implementation scientists suggest that the problem may not be the practices but rather the implementation strategies or lack thereof (Fixsen, Blasé, Duda, Naoom, & Van Dyke, 2010; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). This section describes some substantive organizational, pedagogical, and empirical challenges facing teacher education as we try to improve HLP implementation and concludes with recommendations about how to proceed.

## Organizational Challenges

Initially, teacher educators must embrace a practice-based approach for teacher preparation and agree on a core set of instructional practices around which to build the program. The number and nature of those practices, including when and where they will be embedded into course and clinical experiences, must also be addressed. In our case, involving school partners in the identification of important and relevant practices was helpful to (a) establish relevance and social acceptability of HLPs in draft form, (b) align expectations across programs and partners, and (c) prioritize their use as expected outcomes upon graduation.

Once HLPs are adopted and linked to particular courses, clinical experiences must be created, reorganized, and/or adapted and professional roles and responsibilities must be renegotiated (see Brownell et al., 2019). Our experience involved a long-standing partner who welcomed our assistance; this was a useful way to start but is unlikely to be representative of new or unfamiliar partnerships. Scholars suggest that candidates will also need multiple and preferably developmentally sequenced opportunities to teach and receive feedback and support to use HLPs with fluency (e.g., Grossman, Hammerness, & McDonald, 2009; McLeskey & Brownell, 2015). This change will require comparable organizational changes to scope, sequence, and supervision in clinical experiences to those that were previously described.

Finally, teacher educators must study the change process more rigorously using quantitative and qualitative measures to ensure that the most effective practice and process elements are sustained. In *Learning to Improve: How America's Schools Can Get Better at Getting Better*, Bryk, Gomez, Gronow, and LeMahieu (2015) described an approach to educational reform that combines disciplined inquiry with the use of networks of professionals to identify, adapt, and scale up promising educational innovations (e.g., HLPs). These *Networked Improvement Communities* (NICs) are used to bring together researchers and practitioners to accelerate learning around common educational challenges (e.g., improving feedback to teacher candidates).

LeMahieu (2017) noted that NICs integrate the tools and technologies of improvement science with the power of networks. They are characterized as (a) focused on welldefined, common questions; (b) guided by deep understanding of educational problems, systems, and improvement theory; (c) disciplined by the rigor of improvement science; and (d) coordinated to accelerate development, testing, and refinement of educational innovations and infusion into diverse contexts. Current models for scaling up and sustaining educational innovations like HLPs take many years and often require extensive field-testing, randomized control trials, systematic evidence reviews, and formal approval and adoption *before* implementation and dissemination. NICs reflect a paradigm shift to "learning fast to implement well" and should be considered in scaling up HLP use in the future.

#### Pedagogical Challenges

To develop some degree of HLP fluency, teacher candidates will require multiple opportunities to practice and receive constructive performance-based feedback. Opportunities can occur across university and P–12 classroom settings, vary in instructional complexity and scaffolded supports, and should be linked to important student outcomes. Ericsson (2014) described this as *deliberate practice* with performance feedback. Candidates are given carefully designed practice opportunities that gradually increase in complexity and decrease in levels of support. When deliberate practice is driven by P–12 student needs and monitored regularly for implementation fluency and impact on student learning, benefits should accrue for all constituents.

The Collaboration for Effective Educator Development, Accountability, and Reform (CEEDAR) Center has developed some important tools and resources to assist teacher educators in pedagogical redesign (Benedict, Foley, Holdheide, Brownell, & Kamman, 2016; Benedict, Holdheide, Brownell, & Foley, 2016). Practice guides describe how university faculty can work with P–12 partners to define and plan clinical experiences that are well aligned, carefully sequenced, and practice based. Specific tools include an observation/coaching guide for schoolbased practitioners and clinical planning templates. Clinical experience templates (a) map applied experiences by program and candidate, (b) locate them in program and course sequences, (c) delineate participants' roles and responsibilities, and (d) outline and communicate the scope and sequence of clinical experiences with school partners.

In addition to identifying and validating effective pedagogical practices, teacher educators must develop an infrastructure to support these efforts. Although these challenges may involve organizational changes, the concerns here involve which HLPs to teach and how to teach them effectively, efficiently, and acceptably. Are some HLPs, for example, more effective, efficient, and acceptable than others, and how do we determine that across multiple constituencies? Which HLPs produce the broadest and most noticeable impact on P-12 students, teachers, candidates, and university personnel? Are the structure and impact of HLPs affected by educational contexts? If so, in what ways? Are particular preparation methods (e.g., role-playing, modeling, or coaching) more effective than others in teaching HLPs? Can HLPs be clustered for more effective and efficient instruction?

## Empirical Challenges

Linking teacher preparation to candidate practice and their practice to student learning is a "wicked" educational problem (Lignugaris-Kraft, Sindelar, McCray, & Kimerling, 2014). The problem is compounded by a dearth of rigorous empirical studies in this area (Goe & Coggshall, 2007). Practice-based teacher education in general and HLP use in particular will pose notable conceptual, methodological, and logistical challenges for teacher educators and applied researchers. Some relevant research questions were raised above.

Conceptualizations of major independent and dependent variables (i.e., preparation programs, candidate practice, and student learning) and relationships among them are relatively underdeveloped; empirical methods to measure them reliably are limited; and there are few notable exemplars in the professional literature. Conducting research in P-12 settings under "existing conditions" is quite challenging, labor-intensive, and often overlooked by university promotion and tenure committees and/or school leaders. The good news is that practice-based teacher education and clinically rich experiences provide many opportunities for developing a coherent and comprehensive research agenda to improve important outcomes for candidates, teachers, and/or P-12 students.

## Conclusion

There are clearly more unanswered than answered questions about practice-based teacher education, HLPs, and building and sustaining productive School–University partnerships. Here, we described our institution's efforts at curriculum reform and the testing of some innovative components in a pilot investigation. We found that a P–8 partner school was an appropriate center for clinical practice and the accompanying clinical experience was a useful way for candidates to develop and refine HLP use. P–12 partner input into the importance and relevance of HLPs helped to align candidate practice with student needs and the shared clinical experience provided ample opportunities for candidates to develop instructional and collaborative competence.

We cautioned that significant organizational, pedagogical, and empirical challenges remain in the long, system change process. Greenhalgh, Robert, MacFarlane, Bate, and Kyriakidou (2004) noted that educational reformers have three basic choices when making systemic changes; let them happen, help them happen, or make them happen. Extant research suggests that the two former options rarely produce notable change. Making change happen through implementation science principles and resources and/or NICs may be the most promising way forward (see, for example, Bryk et al., 2015; National Implementation Research Network [NIRN]; http://nirn.fpg.unc.edu).

School–university partnerships of *any* size offer educators the opportunity to play significant and constructive roles in making change happen. Each of us, for example, can build professional relationships with P–12 schools and work collaboratively to align our coursework, methods, and preparation programs with their context and needs. We can examine common problems of practice (e.g., HLP use) systematically and through multiple lenses and assess the impact of proposed solutions on candidate practice and student learning. We can all work in our small ways to recognize and promote the good things that we see in our schools and universities daily. There is great value in our collective efforts to make meaningful changes that improve candidate practice and enhance student learning.

#### **Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

#### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

#### References

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, 145–160.

- Ball, D., & Forzani, F. (2011). Building a common core for learning to teach: And connecting professional learning to practice. *American Educator*, 35, 17–21, 38–39.
- Benedict, A., Foley, A., Holdheide, L., Brownell, M., & Kamman, M. (2016). Learning to teach: A framework for crafting high-quality, practice-based opportunities. Washington, DC: American Institutes for Research, Center on Great Teachers and Leaders.
- Benedict, A., Holdheide, L., Brownell, M., & Foley, A. (2016). Learning to teach practice-based preparation in teacher education. Washington, DC: American Institutes for Research, Center on Great Teachers and Leaders, and Gainesville.
- Brindley, R., Field, B. E., & Lessen, E. (2008). What it means to be a professional development school. Columbia, SC: National Association for Professional Development Schools.
- Brownell, M. T., Benedict, A. E., Leko, M. M., Peyton, D., Pua, D., & Richards-Tutor, C. (2019). A continuum of pedagogies for preparing teachers to use high-leverage practices. *Remedial and Special Education*, 40, 338–355.
- Byrk, A. S., Gomez, L. M., Gronow, A., & LeMahieu, P. G. (2015). Learning to improve: How America's schools can get better at getting better. Cambridge, MA: Harvard Education Publishing.
- Cook, B. G., & Odom, S. L. (2013). Evidence-based practices and implementation science in special education. *Exceptional Children*, 79, 135–144.
- Council for the Accreditation of Educator Preparation. (2013). *CAEP Accreditation Standards*. Washington, DC: Author.
- Council for Exceptional Children. (2017). *High leverage practices* for K-12 special education teachers. Arlington, VA: Author.
- Ericsson, K. A. (2014). The road to excellence: The acquisition of expert performance in the arts and sciences, sports, and games. Florence, KY: Psychology Press.
- Fixsen, D. L., Blasé, K. A., Duda, M., Naoom, S., & Van Dyke, M. (2010). Sustainability of evidence-based programs in education. *Journal of Evidence-Based Practices for Schools*, 11, 30–46.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis* of the literature (FMHI Publication #231). Tampa: Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network, University of South Florida.
- Goe, L., & Coggshall, J. (2007). The teacher preparation— Teacher practices—Student outcomes relationship in special education: Missing links and necessary connections (Research and Policy Brief). Washington, DC: National Comprehensive Center for Teacher Quality.
- Greenhalgh, T., Robert, G., MacFarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. *The Milbank Quarterly*, 82, 581–629.
- Grossman, P., Hammerness, K., & McDonald, M. (2009). Redefining teaching, re-imaging teacher education. *Teachers* and *Teaching: Theory and Practice*, 15, 273–289.

- Heward, W. L., & Wood, C. L. (2015, April). Improving educational outcomes in America: Can a low tech, generic teaching practice make a difference? Retrieved from www.winginstitute.org/uploads/docs/2013WingSummitWH.pdf
- King, C. L. (2014). Partnership effectiveness continuum: A research-based tool for use in developing, assessing, and improving partnerships. Waltham, MA: Education Development Center. Retrieved from http://www.wal lacefoundation.org/knowledge-center/Documents/Quality -Measures-Partnership-Effectiveness-Continuum.pdf
- LeMahieu, P. (2017, June). The problem of implementing good ideas well: A case example. Presentation at CEEDAR, Cross-State Convening, Chicago, IL.
- 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.
- McDonald, M., Kazemi, E., & Kavanaugh, S. (2013). Core practices of teacher education: A call for a common language and collective activity. *Journal of Teacher Education*, 64, 378–386.
- McLeskey, J., Billingsley, B., Brownell, M. T., Maheady, L., & Lewis, T. J. (2019). What are high leverage practices for special education teachers and why are they important? *Remedial and Special Education*, 40, 331–337.
- McLeskey, J., & Brownell, M. (2015). *High-leverage practices* and teacher preparation in special education (Document No. PR-1). Retrieved from www.winginstitute.org/uploads/ docs/2013WingSummitWH.pdf
- National Council for Accreditation of Teacher Education. (2001). Standards for professional development schools. Washington, DC: Author.

- National Council for Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers* (Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships). Washington, DC: Author.
- Patti, A. L., & del Prado Hill, P. (2017). Co-teaching in a co-PDS: Outcomes of a year-long pilot program. *PDS Partners*, 13, 10–12.
- Price, M. (2005). Promoting linkages: Partnerships between schools and higher education!. Syracuse: New York Higher Education Support Center for Systems Change at Syracuse University.
- Randolph, J. J. (2007). Meta-analysis of the research on response cards: Effects on test achievement, quiz achievement, participation, and off-task behavior. *Journal of Positive Behavioral Interventions*, 9, 113–128.
- Robinson, S., Nemr, G., Nicoll-Senft, J., Spear-Swerling, L., & Tralli, R. (2017, February). *Developing quality fieldwork: Experiences for teacher candidates*. Gainesville: Collaboration for Effective Educator Development, Accountability, and Reform Center, University of Florida.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Simon & Schuster.
- 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/files\_5/NCIPP%20 Partnership%20Executive%20Summary%20Final.pdf
- University of Michigan. (n.d.) Teachingworks: High leverage practices. Retrieved from http://www.teachingworks.org /work-of-teaching/high-leverage-practices
- Windschitl, M., Thompson, J., Braaten, M., & Stroupe, D. (2012). Proposing a core set of instructional practices and tools for teachers of science. *Science Education*, 965, 878–903.