

June 2016

Thank you for your request to our REL Reference Desk to identify

**(1) promising professional development (PD) practices for rural schools and
(2) challenges to implementing professional development in rural schools.**

Ask REL Southwest is part of a collaborative Ask-A-REL reference desk service provided by the 10 regional educational laboratories (REL). By design, this service functions much in the same way as a technical reference library providing references, referrals, and brief responses in the form of citations for research-based education questions.

Please note that REL Southwest has not evaluated the resources themselves, but offers this list to you for your information only.

BACKGROUND

REL Southwest works in partnership with the Oklahoma Rural Schools Research Alliance, and has prepared this Ask A REL to respond to the alliance members' request for information on the topic of promising PD practices and challenges to PD implementation. This information will be disseminated during a Bridge Event scheduled for September 2016 in Arkansas.

Following an established REL Southwest protocol, we conducted a search for research reports as well as descriptive briefs on recruitment and retention in rural schools, for use and dissemination at the September 2016 Bridge Event. The sources included federally funded organizations, additional research institutions, educational databases, and general Internet searches.

QUESTIONS

There were two Ask-A-REL Questions posed by members of the Oklahoma Rural Schools Research Alliance on the topics of promising PD practices and challenges to implementing PD in rural settings. We first present the sources that answer the question about promising PD practices. Next, we present the sources that answer the question about challenges to PD implementation. Last, we present the sources that address both questions. The two specific questions for this Ask A REL are:

1. *What steps, initiatives, or actions does the research literature on professional development suggest are potentially promising¹ in rural school settings?*

¹ Adapted from a Thurston County, Washington (<http://www.co.thurston.wa.us/treatment-tax/docs/EvidenceBasedSummary.pdf>.) document entitled, "Evidence-Based" and "Promising Practices" and Other Important Terms Defined: "Potentially promising" PD practices include strategies and

2. *What challenges to implementing professional development in rural schools are identified by all relevant literature?*

Sources for Question 1: What steps, initiatives, or actions does the research literature on professional development suggest are potentially promising in rural school settings?

Anderson, K. D. (2008). Transformational teacher leadership in rural schools. *Rural Educator*, 29(3), 8–17. <http://eric.ed.gov/?id=EJ869293>.

From the ERIC abstract: “In this paper, the author explores the rural school context and its teacher leaders as a third transformational leadership prototype adding to Leithwood and Jantzi’s (1999) two transformational leadership prototypes of females and new teachers in the elementary school. The author helps illuminate new understanding of rural schools and their highly interactive decision making styles where teacher leaders are a source of creativity development of unique forms of leadership. If researchers focus on teachers as leaders in rural schools, specifically those who operate outside of traditional leadership roles, there exists a promising area of new understanding for educational leadership as transformational teacher leadership.”

Borko, H., Elliot, R., & Uchiyama, K. (2002). Professional development: A key to Kentucky’s educational reform effort. *Teaching and Teacher Education*, 18, 969–987. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.470.696&rep=rep1&type=pdf>

From the abstract: “Despite its essential role in educational reform, professional development typically does not receive adequate support in systemic reform efforts. This article presents an exception—a state that incorporated professional development as a central priority in its reform effort and four schools that used state resources to build their capacity for enacting the reform agenda. We describe central features of Kentucky’s approach to professional development, characterize elements of professional development within the four schools, and discuss how these elements promoted three dimensions of school capacity: individual teachers’ knowledge, skills, and dispositions; professional community; and program coherence. Based on this “image of the possible,” we offer recommendations for professional development that supports systemic, standards-based educational reform.”

Cady, J., & Rearden, K. (2009). Delivering online professional development in mathematics to rural educators. *Journal of Technology and Teacher Education*, 17(3), 281-298. <http://eric.ed.gov/?id=EJ858539>.

From the ERIC abstract: “Rural school districts struggle to attract, retain, and support highly qualified mathematics teachers. A series of four online professional development

programs that have some scientific research or data showing positive results or effects in delaying or preventing an unfavorable outcome.

² NOTE: Not all references provided to answer this question are specifically focused on rural schools; however, they all are relevant to promising PD practices and, therefore, apply to rural schools.

courses in the form of integrated mathematics content and pedagogy courses was designed to meet the professional development needs of rural middle school mathematics teachers. Changes in teachers' mathematics content knowledge and their pedagogical content knowledge over the duration of the courses are documented. Results suggested that while teachers' mathematics content knowledge did not change significantly, pedagogical content knowledge did increase. Additionally, the design of the courses fostered communities of practice among the teachers, and can be used as a model for other distance learning courses. (Contains 2 tables.)”

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Kwang, S. Y. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Association*, 38(4), 915–945. Retrieved from <http://www.jstor.org/stable/3202507>.

From the abstract: “This study uses a national probability sample of 1,027 mathematics and science teachers to provide the first large-scale empirical comparison of effects of different characteristics of professional development on teachers' learning. Results, based on ordinary least squares regression, indicate three core features of professional development activities that have significant, positive effects on teachers' self-reported increases in knowledge and skills and changes in classroom practice: (a) focus on content knowledge; (b) opportunities for active learning; and (c) coherence with other learning activities. It is primarily through these core features that the following structural features significantly affect teacher learning: (a) the form of the activity (e.g., workshop vs. study group); (b) collective participation of teachers from the same school, grade, or subject; and (c) the duration of the activity.”

Lave, J., & Wenger, E. (1998). *Communities of practice*. Retrieved from <http://www.learning-theories.com/communities-of-practice-lave-and-wenger.html>.

From the summary: “Etienne Wenger summarizes Communities of Practice (CoP) as “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.” This learning that takes place is not necessarily intentional. Three components are required in order to be a CoP: (1) the domain, (2) the community, and (3) the practice.”

“There are three required components of CoPs:

1. There needs to be a *domain*. A CoP has an identity defined by a shared domain of interest (e.g. radiologists, Star Trek fans, middle school history teachers, Seahawks football fans, etc.); it's not just a network of people or club of friends. Membership implies a commitment to the domain.
2. There needs to be a *community*. A necessary component is that members of a specific domain interact and engage in shared activities, help each other, and share information with each other. They build relationships that enable them to learn from each other. In this way, merely sharing the same job does not necessitate a CoP. A static website on hunting in itself is not a community of practice. There needs to be people who interact and learn together in order for a CoP to be formed. Note that members do not necessarily work together

daily, however. Wenger points to the example of Impressionist painters who sometimes met in cafes to discuss their painting styles. He indicates that even though these men normally painted alone, these kinds of interactions were essential to making them a CoP.

3. There needs to be a *practice*: A CoP is not just people who have an interest in something (e.g. sports or agriculture practices). The third requirement for a CoP is that the members are *practitioners*. They develop a shared repertoire of resources which can include stories, helpful tools, experiences, stories, ways of handling typical problems, etc. This kind of interaction needs to be developed over time. A conversation with a random stranger who happens to be an expert on a subject matter that interests you does not in itself make a CoP. Informal conversations held by people of the same profession (e.g. office assistants or graduate students) help people share and develop a set of cases and stories that can become a shared repertoire for their practice, whether they realize it or not.

Communities develop their practice through a variety of methods, including: problem solving, requests for information, seeking the experiences of others, reusing assets, coordination and synergy, discussing developments, visiting other members, mapping knowledge and identifying gaps.”

Libler, R. (2010). Indiana State University professional development school partnership: Systemic, symbiotic, and solution-oriented. *School-University Partnerships*, 4(2), 20–30. <http://eric.ed.gov/?id=EJ969835>.

From the ERIC abstract: “The Indiana State University Professional Development Schools (ISU PDS) Partnership sprang from the convergence of two strong needs: (1) the need for real life practice in the way of extended clinical experiences for teacher education students in schools of practice; and (2) the need on the part of the schools in the community to have access to research on best practice, rejuvenation through contact with content area experts, and assistance with improving the learning environment for all students. This Partnership is guided by the overarching purpose of “linking renewal in schools to renewal in educator preparation.” To meet this purpose, the Partnership has four main goals: (1) increase learning for all students through creating enhanced learning environments where effective curricular, instructional, and organizational practices are used to ensure that all students reach their full potential as students and as persons; (2) provide optimal learning environments for preservice educators to learn the craft of teaching and learning to high and rigorous standards of performance in schools committed to restructuring and continuous professional development for faculty; (3) provide meaningful professional development for university and school faculty based on their needs and collaboratively developed by them; and (4) support scholarly inquiry and the advancement of knowledge in teaching and learning, especially through collaboratively designed programs of scholarship. The vision of the ISU PDS Partnership rests on three interlocking assumptions and beliefs. First, the partnership believes that reform and renewal activities must be systemic. Second, the partnership believes that a symbiotic relationship, built on trust and parity between its members and existing institutions, is necessary to achieve systemic change. Third, the

partnership needs a critical study process to inform and guide its work. (Contains 2 figures.)”

Mitchem, K., Wells, D., & Wells, J. (2003). Using evaluation to ensure quality professional development in rural schools. *Journal of Research in Rural Education, 18*(2), 96–103. <http://eric.ed.gov/?id=EJ785691>.

From the abstract: “Professional development practices implemented in rural school systems have often led nowhere. These practices seem to produce adult learning activities with few results other than participants' mounting frustration and another innovation left by the wayside. To encourage the development of productive professional development, many studies are beginning to indicate the importance of making evaluation central to the design of professional development. Employing an evaluative approach may assist staff developers in addressing the frequent criticism that professional development activities are disconnected from one another and do not form part of a coherent program of teacher learning and development. The CIPP Model was formulated by Stufflebeam (1966) to show how evaluation contributes to the decision-making process in the program management. We propose a similar conceptual model for ongoing data-based professional development in rural settings. This model provides practitioners with a useful and manageable tool for incorporating an evaluative approach to the design, development, and delivery of professional development. In addition, we provide a practical application of the model to an ongoing rural professional development project. (Contains 1 figure and 2 tables.)

O’Hair, M. J., & Reitzug, U. C. (2006). Working for social justice in rural schools: A model for science education. *International Electronic Journal for Leadership in Learning, 10*(28), 1–11. Retrieved from <http://eric.ed.gov/?id=EJ987928>.

From the ERIC abstract: “One-third of all U.S. school children attend school in rural settings. Rural schools are much poorer than urban America, with most of the poorest counties in the United States located in rural areas. Equity is a concern not only in terms of race, class, gender, disability, and sexual orientation, but also in terms of being geographically located in a rural area. Rural teachers are often not certified in their teaching areas, with one in four rural science teachers lacking in academic preparation or certification. This article describes the K20 Oklahoma Science Initiative for Rural Schools that targets low-income, rural schools serving diverse populations in Oklahoma. The K20 Initiative helps reduce the professional, cultural, and social isolation and lack of professional development in rural schools. The objectives of the initiative are to improve teacher quality and student success through three research-based strategies which are described in the article. (Contains 1 endnote.)”

Salazar, P. S. (2007). The professional development needs of rural high school principals: A seven-state study. *Rural Educator, 28*(3), 20–27. <http://eric.ed.gov/?id=EJ783878>.

From the ERIC abstract: “The increased emphasis on standards-based school accountability since the passage of the No Child Left Behind Act of 2001 is focusing critical attention on the professional development of school principals and their ability to

meet the challenges of improving student outcomes. While rural school districts are dealing with many of the same issues facing urban districts, there are unique challenges that rural school principals face. However, effective professional development that addresses the unique needs of rural school leaders can build essential leadership capacity that supports school success. This article discusses the results of a study on the professional development needs of rural high school principals for school improvement. These findings provide direction for the development of professional development activities that will enhance the leadership skills that principals need to guide school reform and reach higher standards of student achievement. (Contains 5 tables.)”

Seltzer, D. A., & Himley, O. T. (1995). A model for professional development and school improvement in rural schools. *Journal of Research in Rural Education*, 11(1), 36–44. http://jrre.vmhost.psu.edu/wp-content/uploads/2014/02/11-1_4.pdf.

From the report abstract: “The model we describe below provides a framework for rural educators to employ as they seek ways to improve their schools and meet the national goal of providing all teachers access to professional development opportunities. Implementation strategies of our model include commitment of school teams; assistance based on the teams' assessment of their needs; a focus on teaching and learning strategies that promote meaningful connections; extended planning time for teams; recognition that change is a long-term process that requires long-term support; networking of teams across schools to promote collegial support; ownership of the professional development agenda; and process evaluations to guide future professional development opportunities.”

Taylor, A. R., Anderson, S., Meyer, K., Wagner, M. K., & West, C. (2005). Lesson study: A professional development model for mathematics reform. *Rural Educator*, 26(2), 17–22. <http://eric.ed.gov/?id=EJ783835>.

From the ERIC abstract: “In this action research report 4 teachers and 1 teacher educator use the Japanese lesson study model of professional development for 15 months in rural Carlinville, Illinois. In March 2001, 4 teachers identified a goal to improve their students' understanding of two step word problems in 2nd grade elementary mathematics. Teachers completed three cycles of researching, planning, teaching, evaluating and reflecting. They were motivated, empowered, and found lesson study effective professional development in their rural setting. It focused on the classroom lesson; provided an effective lesson plan and hours of focused professional development; supported attempts to put into practice best professional knowledge of reform mathematics; and developed a professional community among them.”

Warren, L. L., & Peel, H. A. (2005). Collaborative model for school reform through a rural school/university partnership. *Education*, 126(2), 346–352. <http://eric.ed.gov/?id=EJ765684>.

From the ERIC abstract: “This paper describes a study of a collaborative initiative between a rural high school and a university. The purpose of this study was to determine the effectiveness of collaboration in a rural school reform partnership. What

grew out of this study was a collaborative model of a partnership. While partnerships are not unique, there is a unique nature of how universities successfully partner with rural schools. Educators in rural schools, as well as university faculty members who serve rural schools, may find the description of the partnership instructive as they embark on similar ventures. Addressed in this paper are the unique characteristics of rural school and the fundamental principles of rural school/university partnerships.”

Yoon, K. S., Duncan, T., Lee, S. W.-Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from http://ies.ed.gov/ncee/edlabs/regions/southwest/pdf/rel_2007033_sum.pdf.

From the report summary: “Examining more than 1,300 studies identified as potentially addressing the effect of teacher professional development on student achievement in three key content areas, this report finds nine that meet What Works Clearinghouse evidence standards. That only nine meet standards attests to the paucity of rigorous studies that directly assess the effect of in-service teacher professional development on student achievement in mathematics, science, and reading and English/language arts.

Highlighting the problems of many studies of professional development, this report can help researchers avoid methodological pitfalls. Especially important is that researchers undertaking studies with quasi-experimental designs provide data on the baseline equivalence of the treatment and comparison groups. Future studies of the effect of professional development on both teachers and students would be particularly useful—studies more fully addressing professional development’s direct effect on teachers and its indirect effect on students.”

Source for Question 2: What challenges to implementing professional development in rural schools are identified by all relevant literature?

Chimerine, C. B., Haslam, M. B., & Laguarda, K. G. (1994). *Third-year evaluation of the Nine Site Program Improvement Initiative*. Washington, DC: Policy Studies Associates. <http://eric.ed.gov/?id=ED380522>.

From the ERIC abstract: “The Nine-Site Program Improvement Initiative evaluated in this report was a 3-year venture in which federal contractors provided technical assistance to schools. The contractors, Chapter 1 Technical Assistance Centers (TACs) and Rural Technical Assistance Centers (RTACs) received about \$60,000 per year for their work with each site, which included several schools. Participating schools had programs funded by Chapter 1 that had been identified as needing improvement on the basis of inadequate gains in student performance. Five sites were large urban districts (Baltimore, Chicago, Detroit, Los Angeles, and Dade County, Florida). Three sites included relatively small isolated rural schools (Pike County, Kentucky; a cluster of schools in Southeastern Iowa; and 9 schools in 6 districts in the Mississippi Delta). Seven schools administered by the Bureau of Indian Affairs comprised the ninth site.

Although there were positive outcomes of the initiatives, including increased understanding of the requirements of Chapter 1, a central finding is that technical assistance had limited impact in these schools. Reasons for these limited effects are discussed. They center on the facts that the assistance conformed to conventional models of external assistance and school change and that clear, long-range visions were not available. An appendix presents 18 tables of study findings. (Contains 8 references.)”

Sources for both Questions (1) What steps, initiatives, or actions does the research literature on professional development suggest are potentially promising in rural school settings; and (2) What challenges to implementing professional development in rural schools are identified by all relevant literature?

Blitz, C. L. (2013). *Can online learning communities achieve the goals of traditional professional learning communities? What the literature says* (REL 2013–003). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Mid-Atlantic. Retrieved from http://ies.ed.gov/ncee/edlabs/regions/midatlantic/pdf/REL_2013013.pdf.

From the report summary: “This review of the literature on online PLCs responds to a request from district and school administrators in the Regional Educational Laboratory Mid-Atlantic Region for information on using online PLCs to engage their teachers in professional development. The review looked at advantages, challenges, and emerging best practices.”

Eargle, J. C. (2013). “I’m not a bystander”: Developing teacher leadership in a rural school-university collaboration. *Rural Educator*, 35(1), 23–33. <http://eric.ed.gov/?id=EJ1022601>.

From the ERIC abstract: “Rural teachers need ongoing, flexible professional development designed to encourage collaboration and curriculum development. Furthermore, rural school reform requires successful collaborations between schools and colleges to create leaders within schools. Therefore, this case study is a program review that investigates how social studies teachers at Timberwood High School, a rural high school in the American southeast, are emerging as teacher leaders through a school-university partnership to improve their practice, mentor pre-service teachers, and generate reform. Interviews were conducted with members of the social studies department, all of whom were involved in the project. The findings indicate that the school-university partnership encouraged experimentation with new strategies, stimulated reflective practices and teacher growth, and created a more cohesive social studies department. However, while it was evident that teacher leadership did develop through the process, traditional school norms of egalitarianism and structural hierarchy prevented teachers from fully embracing their roles as teacher leaders. Study findings suggest that rural administrators and rural school-university partnerships must focus on developing teacher leaders to initiate school reform and grow professionally.”

Howley, A., & Howley, C. B. (2005). High-quality teaching: Providing for rural teachers' professional development. *Rural Educator*, 26(2), 1–5.
<http://eric.ed.gov/?id=EJ783825>.

From the ERIC abstract: “Policymakers and educators see professional development as a way to improve the quality of instruction in classrooms across the nation, but the empirical literature linking professional development to improved student achievement is extremely thin. Logically, though, it would seem that the right kinds of professional development would improve instruction, and that better instruction would result in higher student achievement. Very limited empirical evidence suggests that such linkages may exist. In this article, the authors review relevant principles of organizational learning; the importance of knowledge of subject matter; and how rural circumstances interact with other professional development considerations.”

Johnson, J., Showalter, D., Klein, R., & Lester, C. (2014). *Why rural matters 2013–14: The condition of rural education in the 50 states*. Washington, DC: Rural School and Community Trust Program. <http://eric.ed.gov/?id=ED556045>.

From the ERIC abstract: “*Why Rural Matters 2013-14* is the seventh in a series of biennial reports analyzing the contexts and conditions of rural education in each of the 50 states and calling attention to the need for policymakers to address rural education issues in their respective states.

While it is the seventh in a series, this report is not simply an updating of data from earlier editions. We have deliberately altered the statistical indicators and gauges from one report to the next to call attention to the variability and complexity of rural education. Our intent is not to compare states in terms of their differing rates of progress toward an arbitrary goal. Rather, our intent is (1) to provide information and analyses that highlight the priority policy needs of rural public schools and the communities they serve, and (2) to describe the complexity of rural contexts in ways that can help policymakers better understand the challenges faced by their constituencies and formulate policies that are responsive to those challenges.”

Strange, M., Johnson, J., Showalter, D., & Klein, R. (2014). *Why rural matters 2011–12: The condition of rural education in the 50 states*. Washington, DC: Rural School and Community Trust Program. <http://eric.ed.gov/?id=ED528634>.

From the ERIC abstract: “*Why Rural Matters 2011–12* is the sixth in a series of biennial reports analyzing the contexts and conditions of rural education in each of the 50 states and calling attention to the need for policymakers to address rural education issues in their respective states. While it is the sixth in a series, this report is not simply an updating of data from earlier editions. On the contrary, from one report to the next, the authors have deliberately altered the statistical indicators and gauges to call attention to the variability and complexity of rural education. Their intent in these reports is not--as it is in many state-by-state analyses--to compare states in terms of their differing rates of progress toward an arbitrary goal. Rather, their intent is (1) to provide information and analyses that highlight the priority policy needs of rural public schools and the communities they serve, and (2) to describe the complexity of rural contexts in ways

that can help policymakers better understand the challenges faced by their constituencies and formulate policies that are responsive to those challenges. (Contains 7 tables and 6 footnotes.)”

ADDITIONAL RESOURCES TO CONSULT

U.S. Department of Education, National Center for Education Statistics. (2014). Common Core of Data. Local Education Agency Universe Survey Data, 2012–13. Retrieved February 2015 from <http://nces.ed.gov/ccd/pubagency.asp>.

From the IES National Center for Education Statistics site: “The primary purposes of the Local Education Agency (School District) Universe Survey are:

- to provide a complete listing of every education agency in the United States responsible for providing free public elementary/secondary instruction or education support services;
- to provide basic information about all education agencies and the students for whose education the agencies are responsible.

If you have any questions on this data set please contact [Patrick Keaton](#).

The annual reports using this CCD file’s data are the [School and Agency Reports](#).”

METHODS

Search of Databases and Websites

Databases:

- Education Resources Information Center,
- JSTOR,
- EBSCO Publishing,
- Google, and
- Google Scholar.

Websites:

- Institute of Education Sciences
- U.S. Department of Education
- American Institutes for Research;
- The REL Network;
- National Rural Education Association,
- National Center for Research on Rural Education,
- Rural School and Community Trust

Keywords and Search Strings Used in the Searches

professional development” + “rural school(s)” or “rural district(s)” or “rural education” or “rural principal(s)” or “rural teacher(s)”; “rural schools” + “professional development”; “professional development” + “rural school teachers”; “educator effectiveness” + “rural schools”; “Rural Educator” (as a source) + “professional development” (as a subject term).

Criteria for Inclusion

REL Southwest selected resources that provide research to identify promising professional development practices and challenges to implementing professional development in rural schools. When REL Southwest staff reviewed the resources, we considered, among other things, three factors:

- 1. Date of Publication:** The original search was limited to studies specific to rural settings and conducted in the United States since 2000. One relevant resource dates back to 1995.
- 2. Source and Funder of the Report/Brief/Article:** Priority was given to publications written in relevant, peer-reviewed journals or reports or produced by well-known research organizations.
- 3. Methodology:** Sources include literature reviews and commissioned reports.

Ask-A-REL is a service provided by a collaborative of the Regional Educational Laboratory (REL) Program, funded by the U.S. Department of Education’s Institute of Education Sciences (IES). This response was prepared by REL Southwest, administered by SEDL, under contract ED-IES-12-C-0012 with IES. The content of this document does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.