Effective Coaching: Improving Teacher Practice and Outcomes for All Learners

Purpose of the Brief

The purpose of this brief is to synthesize research on coaching[1] and to offer a framework of effective coaching practices.

o   **Part 1** provides general information on coaching, including the need for coaching and the goals of coaching.
o   **Part 2** describes critical coaching practices that are linked to improvements in teacher practice and learner outcomes. **As these practices are most associated with such improvements, they are the recommended practices that should be central to the every-day routine of coaches working in** general education or special education settings, as well in environments (e.g., homes, schools, childcare centers) with learners of all ages.
o   **Appendix A** contains information about various coaching models commonly cited in research and applied in the field (e.g., literacy coaching, behavior coaching, math coaching).

This brief is intended to be used in conjunction with the tool entitled *Implementation Guide for Coaching.* Research from Implementation Science suggests that how a program, practice, or innovation is put into place impacts the degree to which we can expect that innovation to achieve its intended goals (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Greenhalgh, Macfarlane, Bate, Kyriakidou, 2004). Similarly, it is important to attend to how the innovation is implemented. Drawing upon principles of Implementation Science, the guide outlines key areas that should be considered and action steps that should be taken when using coaching as a pathway toward improving teacher practice and learner outcomes.

Part 1: General Information on Coaching

The Promise of Coaching

Education holds a clear affinity for coaching as a method for improving teacher practice and learner outcomes. In fact, support for coaching can be found across

---

[1] Although we use the label "teacher" throughout this document, the term is used to denote those who work with learners in a less traditional educational setting (i.e., the home) such as an early childcare provider, interventionist, or parent. We also use the term to describe those working with learners in a more traditional setting (i.e., the classroom) such as a prekindergarten-12th grade teacher. Further, we use the term "learner" to describe the infants, toddlers, children, and youth with whom these teachers work.

research and literature from general education (Shanklin, 2006; Neumann & Wright, 2010; Biancarosa, Bryk, & Dexter, 2010) and special education (Kretlow & Bartholomew, 2010; Winton, Snyder, & Goffin, 2015) focused on infants, toddlers, young children (Snyder, Hemmeter, & Fox, 2015; Israel, Carnahan, Snyder, & Williamson, 2013) as well as learners in the K-12 school setting (Kretlow & Bartholomew, 2010; Horner, 2009). Despite the fact that coaching research suggests that it does not *necessarily* lead to improved outcomes among teachers and learners (Gamse, Jacob, Horst, Boulay, Unlu, 2008; Bean, Draper, Hall, Vandermolen, & Zigmond, 2010), Joyce and Showers' (1982) seminal research remains one of the most resounding messages about the potential for coaching. These researchers found that the common form of professional development (PD) such as PD; infrequent and decontextualized training resulted in the implementation of less than 20 percent of new practices in the classroom setting. Conversely, Joyce and Showers found that training reinforced by ongoing coaching led to 80 percent to 90 percent of implementation of new practices.

Coaching also is included as an aspect of effective implementation across various fields, including education (Fixsen, Blase, Naoom, Wallace, & Friedman, 2005), health services (Damschroder, Aron, Keith, Kirsch, Alexander, & Lowery, 2009), and nursing (Kitson, Harvey, & McCormack, 1998). Implementation frameworks from these different fields promote the idea that coaching helps practitioners bridge the research-to-practice gap by continually developing and honing teachers' skills learned in initial trainings.

Drawing from this research, coaching has been suggested as a strategy for improving teaching and learning across overall systems (e.g., Metz, 2015; Sugai & Horner, 2006). Although less is known about the degree to which coaching can transform teacher practices within an entire system as well as the practice of individual teachers, a variety of educational organizations and technical assistance networks have embraced coaching for this purpose (e.g., The State Implementation of Scaling Up of Evidence-Based Practices, or SISEP; Positive Behavior Intervention and Supports Technical Assistance Center).

Perhaps because coaching has been so widely embraced, many different models of this form of PD now exist in a host of learning environments (i.e., day care, classroom, or home). Coaches may provide support with early learning, literacy, math, or behavior as they work in these different settings. Subsequently, coaches often may fulfill a wide range of responsibilities. For example, coaches may analyze data, maintain action plans or other records of progress, or directly work with teachers. For descriptions of models and key responsibilities, refer to the Appendix.

However, despite the variability in coaching roles and responsibilities, few certification programs or university preparation programs exist that specifically train and produce coaches (Denton & Hasbrouck, 2009; Galluci, Van Lare, Yoon, & Boatright, 2010). Given variation that occurs with coaching- as well as the expectation that coaching produces powerful changes in teaching and learning- educators and leaders alike benefit from a clear understanding of who may be coached, who typically serves as coach, and the goals of coaching. Moreover, it is important to ensure that coaching consists of effective coaching practices. The following sections address these topics.

Who Is a Coach? Who Is Coached?

Frequently, the role of the coach is performed by a range of adults. For example, general education and special education teachers with expertise in instructional practices and school psychologists often assume the role of coach (Denton & Hasbrouck, 2009; Kretlow & Bartholomew, 2010; Snyder et al., 2015; Stormont & Reinke, 2012). Although new general and special education teachers oftentimes are coached, experienced teachers may benefit from coaching as well (Kretlow & Bartholomew, 2010). In the context of early learning, parents or caregivers may be coached (Snyder et al., 2015). Coaching also has occurred within the juvenile justice setting, with experts in behavior serving as coaches for facility-level leadership teams and juvenile correction officers (Sprague, Scheuermann, Wang, Nelson, Jolivette, & Vincent, 2013).

Some educational organizations suggest that coaching ratios should remain small (e.g., one coach per school or early childcare setting); however, in the real-world application of coaching, these ratios may not be feasible (International Reading Association, 2004; Mangin, 2009). Existing research on coaching has not yet offered definitive recommendations for ideal teacher-coach ratios.

Goals of Coaching

Despite the diversity that exists with coaching, the goals of this form of professional development remain focused on two areas:

o   Improving teaching practice, with a particular emphasis on increasing the use of practices shown to be highly effective, including evidence-based practices (Knight, 2009; Kretlow & Bartholomew, 2010; Neufeld & Roper, 2003; Snyder et al., 2015).
o   Improving learner academic and behavioral outcomes through improved teaching practices (Bean, Knaub, & Swan, 2000; Joyce & Showers, 2002; Kretlow & Bartholomew, 2010; Snyder et al., 2015).

The next section will present research on coaching practices that are most likely to lead to the achievement of these two goals.

Part 2: Effective Coaching—Improving Teacher Practice and Learner Outcomes

Defining Effective Coaching Practices

Experimental and qualitative research supports the idea that several specific coaching practices are linked to improved teacher practice. In fact, these coaching practices can be effective in the early childhood setting (Snyder et al., 2015; Winton et al., 2015) as well as in the K-grade 12 classroom (Biancarosa, Bryk, & Dexter, 2010; Kretlow & Bartholomew, 2010; Neuman & Cunningham, 2009; Wehby, Maggin, Partin, & Robertson, 2012). Although an emerging line of research exists on coaching teachers of infants, toddlers, and the very youngest learners (Snyder et al., 2015), less is known about the impact of these coaching practices on these children. Despite this point, coaching practices with the strongest evidence for improving teacher practice and learner outcomes include the following:

- o   Observation
- o   Modeling (also referred to as "demonstration")
- o   Performance Feedback
- o   Alliance-Building Strategies also referred to as "relationship-building strategies")

See Figure 1.

Figure 1. Effective Coaching Practices
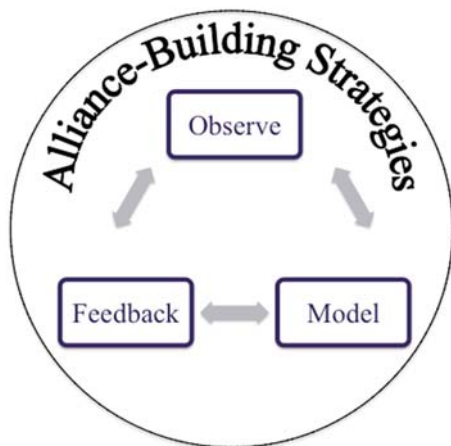
Source: Pierce, 2015, p. 27.

This section of the brief provides a review of these high-quality coaching practices. It is important to note that as originally found by Joyce and Showers (1982), these coaching practices typically occur *after* teachers participate in didactic instruction (e.g., workshops, institutes, trainings) as a way to ensure content is applied to the learning environment.

Observation

Observation refers to direct monitoring of the teacher in a learning environment. The primary purpose of observation is to enable a coach to engage in other coaching practices such as modeling or providing performance feedback (Kretlow & Bartholomew, 2010; Neuman & Cunningham, 2009; Stormont & Reinke, 2012; Snyder et al., 2015). For example, observation allows the coach to collect data on the teacher's use of an evidence-based practice; or, it may provide opportunities for the coach to model the use of that same evidence-based practice. Given that observation is considered as the entry point for using other coaching practices, it is often studied in tandem with other coaching practices.

Modeling

Modeling occurs when a coach demonstrates how to use the practice. Modeling is most typically used by a coach when a teacher is not correctly using a practice with the learner or does not know how to use that practice. However, modeling may also occur when learners are not present (i.e., during a training or during a postobservation meeting with the teacher). The primary purpose of in-classroom-situated modeling is to help the teacher better understand how the accurate use of a practice "looks" and how it impacts the performance of the learner (Kretlow and Bartholomew, 2010; Neuman & Cunningham, 2009; Winton et al., 2015).

- o **Modeling can support improvements in teachers' academic practices** (Biancarosa et al., 2010; Kim et al., 2011; Kretlow, Cooke, & Wood, 2012; Neuman & Cunningham, 2009; Neuman & Wright, 2010) **and behavioral practices** (Barton, Chen, Priblle, Pomes, & Kim, 2013; Bethune & Wood, 2013; Kohler, Crilley, Shearer, & Good, 1997; Kretlow & Bartholomew, 2010).
- o **Coaching that integrates modeling supports improvements in learner academic outcomes** (Biancarosa et al., 2010; Kim et al., 2011; Neuman & Cunningham, 2009; Neuman & Wright, 2010; for special education settings, see Barton et al., 2013; Bethune & Wood, 2013).
- o **Modeling also supports improvements in learner behavioral outcomes** (Domitrovich, Gest, Jones, Gill, & DeRousie, 2010; Filcheck, McNeil, Greco, & Bernard, 2004).

Performance Feedback

Providing performance feedback is a third critical coaching practice and entails the coach's presentation of data to the teacher on his or her teaching practice. Providing this type of feedback is highly effective in improving early childhood teacher practice (Shannon, Snyder, & McLaughlin, 2015; Artman-Meeker & Hemmeter, 2012; Diamond & Powell, 2011) as well as K-grade 12 teacher practice *and* learner outcomes (Cornelius & Nagro, 2014; Scheeler, Ruhl, & McAfee, 2004; Solomon, Klein, & Politylo, 2012; Stormont, Reinke, Newcomer, Marchese, & Lewis, 2015). In fact, giving feedback is so effective in improving teacher practice and K-grade 12 learner outcomes that it is considered by some researchers as an evidence-based practice (Fallon, Collier-Meek, Maggin, Sanetti, & Johnson, 2015; Solomon et al., 2012; Stormont et al., 2015). Some studies of performance feedback also suggest early learning outcomes may also improve (Snyder et al., 2015).

In addition, research on feedback suggests the following:

o **Feedback is most effective when it is specific, positive, timely, and corrective, if warranted** (Scheeler et al., 2004; Solomon et al., 2012).
  - Specific feedback, as opposed to general feedback, includes precise information about teaching practices that benefit learners. General feedback (e.g., "Great teaching!") may not explain to teachers why some teaching practices are more effective than others. Specific feedback clarifies how teachers' practices directly impact learning (e.g., "During small-group instruction, four out of five learners were actively engaged in the task you assigned").
  - Positive feedback includes overt statements of praise for the teacher's use of specific practices (e.g., "Good job using 'stating behavioral expectations' during the morning meeting").
  - Corrective feedback, used only when warranted, involves the use of statements and questions that suggest that a change to teaching practice is needed (e.g., "Learners were redirected seven times in the 20-minute lesson. How can we increase praise for learners while reducing redirections?").
  - The timeliness of feedback also seems to be important. Feedback is considered timely when it is delivered within roughly the same day of an observation (Scheeler et al., 2004).
o **Coaches can use several delivery mechanisms for providing feedback.**
  - While feedback can be discussed in a face-to-face postobservation conference (Kretlow & Bartholomew, 2010; Conroy, Sutherland, Algina, Wilson, Martinez, & Whalon, 2014; Snyder et al., 2015), it also may be provided via bug-in-ear technology (Scheeler et al., 2004). This technology allows for a coach to observe (i.e., visual and provide feedback).
  - Some recent research draws on the use of video-based technology to present written and verbal feedback (Israel, Carnahan, Snyder, & Williamson, 2013; Artman-Meeker, Fettig, Barton, Penney, & Zeng, 2015). It is unclear, however, whether this format for providing feedback improves both teacher practice *and* outcomes among learners of all ages, as much of this research focuses on early learners
o **Feedback may be based on informal or formal data that are presented verbally, graphically, or both** (Neuman & Cunningham, 2009; Scheeler et al., 2004; Snyder et al., 2015).
  - Formal data may consist of learner engagement data, whereas informal data may consist of qualitative notes on the learning environment.
  - Graphs, charts, and oral feedback are frequently used to deliver feedback (Solomon et al., 2012). Such feedback may be particularly powerful when used to develop action plans, goals, or to help teachers engage in problem solving processes as they attempt to implement new practices (Shannon, Snyder, & McLaughlin, 2015).

Alliance Building Strategies

A final critical coaching practice includes the development of a positive teacher–coach relationship, also referred to as alliance (Ippolito, 2010; Snyder et al., 2015; Mraz, Algozzine, & Watson, 2008; Neufeld & Roper, 2003; Shanklin, 2006; Wehby et al., 2012). Strong alliance between teachers and coaches establishes a solid foundation for subsequent work between the dyad. Within the early learning environment, alliance has been referred to as a "collaborative partnership" (Snyder et al., 2015, p. 135), which is a cornerstone of productive coaching. Some research from early learning suggests that alliance is also important across coaches, teachers, and families (Basu, Salisbury & Thorkidlsen, 2010; Rush & Shelden, 2011).

Research on teacher–coach alliance offers the following conclusions:

- o **Alliance is shaped by several factors:**
    - **interpersonal skills** (Ippolito, 2010; Neuman & Wright, 2010; Walpole & Blamey, 2008),
    - **collaboration skills** (Neuman & Wright, 2010; Vanderburg & Stephens, 2009; Walpole, McKenna, Uribe-Zarain, & Lamitina, 2010; Shannon, Snyder, & McLaughlin, 2015),
    - **the coach's expertise in area in which he or she is coaching** (Cantrell & Hughes, 2008; Chval et al., 2010; Gallucci et al., 2010; Snyder et al., 2015). An alliance may also be shaped by teachers' perceptions of coaching as evaluative (Mangin, 2009; Matsumura, Garnier, & Resnick, 2010; Matsumura, Sartoris, Bickel, & Garnier, 2009; Walpole et al., 2010).
- o **Specific strategies can be used by coaches to build alliance** (Becker, Bradshaw, Domitrovich, & Ialongo, 2013; Ippolito, 2010; March & Gaunt, 2013; Wehby et al., 2012).
- o **Positive teacher-coach alliance correlates with improved teacher practice; however, it is unclear how alliance impacts learner outcomes** (Wehby et al., 2012).
- o **The use of specific alliance building strategies can lead to increased use of behavioral interventions by teachers** (See Figure 2; Pierce, 2015).

Table 1 summarizes critical coaching practices and offers suggestions for when these practices can be used by coaches.

Table 1. Effective Coaching Practices and Suggestions for Use

Effective Coaching Practices	Description	When Used
Observation	Watching the teacher[2] in the classroom environment use a specific program, intervention, or practice (including EBPs)	Every coaching cycle
Modeling, also referred to as demonstration	Showing the teacher how to use a specific program, intervention, or practice (including EBP)	Based on need (e.g., when teacher is unfamiliar with practice or uses practice incorrectly)
Performance Feedback	Presenting formal or informal data about the teacher's use of a specific program, intervention, or practice (including EBP) Characteristics of effective feedback: o Specific o Positive o Corrective (if warranted) o Timely Delivery mechanisms: o Verbal, written, or graphical data presented during pre–post observation conferences with a teacher or in the moment of teaching (e.g., using bug-in-ear technology)	Every coaching cycle
Alliance Building Strategies	Using specific strategies that relate to factors of alliance to build a positive relationship in a teacher–coach dyad Factors of alliance: o Interpersonal skills o Collaboration o Expertise o Conveying coaching is non-evaluative Examples of alliance-building strategies: o Empathetic listening o Restating and summarizing information conveyed by the teacher o Conveying expertise in teaching and deep content-area knowledge o Identifying and working toward teachers' goals and needs	Every coaching cycle

Note. EBP = Evidence-based practice.

---

[2] Although we use the label "teacher" throughout this document, the term is used to denote those who work with learners in a less traditional educational setting (i.e., the home) such as an early childcare provider, interventionist, or parent. We also use the term to describe those working with learners in a more traditional setting (i.e., the classroom) such as a prekindergarten-grade 12 teacher. Similarly, we use the term "learner" to describe the infants, toddlers, children, and youth with whom these teachers work.

WestEd
ncsi
national center for systemic improvement

Strategies for Building Alliance

Figure 2 summarizes the strategies coaches can use to build alliance with teachers. Strategies are listed in the row on the right. These strategies correspond to three primary factors of alliance (i.e., interpersonal skills, collaboration, and expertise). For example, when a coach summarizes teacher comments, that coach may be showing strong interpersonal skills. Strong interpersonal skills are one factor in building alliance.

Figure 2. Coaching Strategies to Build Alliance with Teachers

Interpersonal Skills:
Effective communication
Building trust
Nonevaluative & nonjudgmental language

- **Summarize**: "What I hear from your comments is…"
- **Open-ended questions**: "Can you tell me more about that?
- **Affirm difficulty of change:** "This is really hard!"
- **Nonevaluative language:** "Coaching is about supporting your teaching practice, not about evaluating how you teach."

Collaboration:
Meeting needs and goals
Conveying that improving teaching is teamwork

- **Refer to past accomplishments:** "This week you hoped to accomplish…"
- **Refer to current goal:** "Your goal for this week is…..
- **Help teacher progress toward goal:** "Let's talk about what we'll do to meet that goal. I can…. What do you think you will try to do…."

Expertise:
In teaching in the content area

- **Refer to effective teaching practices:** "Learners who struggle to show mastery benefit from explicit and systematic instruction. Explicit means…"
- **Convey deep content-area knowledge:** "We know that effective reading instruction focuses on the five pillars of reading. These include…"
- **Explain complex concepts succintly:** "The Tier 3 learner may show challenging behavior because…"

Source: Pierce, 2015, p. 138.

Appendix

This appendix contains a list of coaching models commonly found in research on this form of professional development. Although commonalities exist across these descriptions of coaching, individual coaches often show great variation in how they approach working with teachers (Deussen, Coskie, Robinson, & Autio, 2007; Denton & Hasbrouck, 2009; Snow, Ippolito, & Schwartz, 2006). With this point in mind, it is important that coaching relies on the specific practices linked to improved teacher practice and learner outcomes as described in Part 2 of this brief, rather than a particular coaching model.

Instructional Coaching Across Content Areas

Denton, C. A., & Hasbrouck, J. (2009). A description of instructional coaching and its relationship to consultation. *Journal of Educational and Psychological Consultation, 19*(2), 150–175.

Knight, J. (2007). *Instructional coaching: A partnership approach to improving instruction*. Thousand Oaks, CA: Corwin Press.

Literacy Coaching

Bean, R., & Isler, W. (2008). *The school board wants to know: Why literacy coaching?* Urbana, IL: Literacy Coaching Clearinghouse. Retrieved from http://www.literacycoachingonline.org/briefs/SchoolBoardBrief.pdf

Deussen, T., Coskie, T., Robinson, L., & Autio, E. (2007). *"Coach" can mean many things: Five categories of literacy coaches in Reading First* (Issues and Answers Report, REL 2007–No. 005). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest.

Gamse, B. C., Jacob, R. T., Horst, M., Boulay, B., Unlu, F., Bozzi, L.,…Rosenblum, S. (2008). *Reading First Impact Study final report* (NCEE 2009-4038). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences.

International Reading Association. (2004). *The role and qualifications of the reading coach in the United States*. Newark, DE: Author.

International Reading Association. (2006). *Standards for middle and high school literacy coaches.* Newark, DE: International Reading Association.

McKenna, M. C., & Walpole, S. (2008). *The literacy coaching challenge: Models and methods for grades K-8* (Vol. 9). New York: Guilford Press.

Sailors, M., & Shanklin, N. L. (2010). Introduction: Growing evidence to support coaching in literacy and mathematics. *Elementary School Journal, 111*(1), 1–6.

Mathematics Coaching

Hansen, P. (2013). *Mathematics coaching handbook: Working with teachers to improve instruction.* New York: Routledge.

Hull, T. H., Balka, D. S., & Miles, R. H. (Eds.). (2009). *A guide to mathematics coaching: Processes for increasing student achievement.* Thousand Oaks, CA: Corwin Press.

Yopp, D., Burroughs, E. A., Luebeck, J., Heldema, C., Mitchell, A., & Sutton, J. (2011). How to be a wise consumer of coaching. *Journal of Staff Development*, *32*(1), 50–53.

Cognitive Coaching

Costa, A. L., & Garmston, R. J. (1994). *Cognitive coaching: A foundation for renaissance schools.* Norwood, MA: Christopher-Gordon Publishers.

Peer Coaching

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

Showers, B., & Joyce, B. R. (1996). The evolution of peer coaching. *Educational Leadership*, *53*(6), 12–16.

Coaching in the Early Childhood Setting

Artman-Meeker, K., Fettig, A., Barton, E. E., Penney, A., & Zeng, S. (2015) Applying an evidence-based framework to the early childhood coaching literature. *Topics in Early Childhood Special Education, 35*(3), 183–196.

Kucharczyk, S., Shaw. E., Smith Myles, B., Sullivan, L., Szidon, K., & Tuchman-Ginsberg, L. (2012). *Guidance and coaching on evidence-based practices for learners with autism spectrum disorders.* Chapel Hill, NC: University of North Carolina, Frank Porter Graham Child Development Institute, National Professional Development Center on Autism Spectrum Disorders.

Snyder, P. A., Hemmeter, M. L., & Fox, L. (2015). Supporting implementation of evidence-based practices through practice-based coaching. *Topics in Early Childhood Special Education, 35*(3), 133–143.

Snyder, P., Hemmeter, M. L., Meeker, K. A., Kinder, K., Pasia, C., & McLaughlin, T. (2012). Characterizing key features of the early childhood professional development literature. *Infants and Young Children*, *25*(3), 188–212.

Snyder, P. A., Denney, M. K., Pasia, C., Rakap, S., & Crowe, C. (2011). Professional development in early childhood intervention: Emerging issues and promising approaches. In C. Groark (Series Ed.) & L. A. Kaczmarek (Vol. Ed.), *Early childhood intervention: Shaping the future for children with special needs and their families: Vol. 3* (pp. 169–204). Santa Barbara, CA: Praeger/ABC-CLIO.

Tout, K., Isner, T., & Zaslow, M. (2011). *Coaching for quality improvement: Lessons learned from quality rating and improvement systems (QRIS).* (Research Brief). Washington, DC: Child Trends.

Behavioral Coaching, Sometimes Referred to as Behavioral Consultation

Becker, K. D., Darney, D., Domitrovich, C., Keperling, J. P., & Ialongo, N. S. (2013). Supporting universal prevention programs: A two-phased coaching model. *Clinical Child and Family Psychology Review, 16*(2), 213–228.

Bradshaw, C. P., Pas, E. T., Goldweber, A., Rosenberg, M. S., & Leaf, P. J. (2012). Integrating school-wide positive behavioral interventions and supports with tier 2 coaching to student support teams: The PBIS*plus* model. *Advances in School Mental Health Promotion, 5*(3), 177–193.

Hershfeldt, P. A., Pell, K., Sechrest, R., Pas, E. T., & Bradshaw, C. P. (2012). Lessons learned coaching teachers in behavior management: The PBISplus coaching model. *Journal of Educational and Psychological Consultation, 22*(4), 280–299.

Kucharczyk, S., Shaw, E., Smith Myles, B., Sullivan, L., Szidon, K., & Tuchman-Ginsberg, L. (2012). *Guidance and coaching on evidence based practices for learners with autism spectrum disorders.* Chapel Hill, NC: The University of North Carolina, Frank Porter Graham Child Development Institute, National Professional Development Center on Autism Spectrum Disorders.

Pas, E. T., Bradshaw, C. P., & Cash, A. H. (2014). Coaching classroom-based preventive interventions. In M. D. Weist, N. A. Lever, C. P. Bradshaw, & J. S. Owens (Eds.), *Handbook of school mental health* (pp. 255–267). New York, NY: Springer.

Reinke, W. M., Stormont, M., Webster-Stratton, C., Newcomer, L. L., & Herman, K. C. (2012). The incredible years teacher classroom management program: Using coaching to support generalization to real-world classroom settings. *Psychology in the Schools, 49*(5), 416–428.

Stormont, M., & Reinke, W. M. (2012). Using coaching to support classroom-level adoption and use of interventions within school-wide positive behavioral interventions and support systems. *Beyond Behavior, 21*(2), 11–19.

References

Artman-Meeker K. M., Hemmeter M. L. (2012). Effects of training and feedback on teachers' use of classroom preventive practices. Topics in Early Childhood Special Education, 33, 112–123.

Artman-Meeker, K., Fettig, A., Barton, E. E., Penney, A., & Zeng, S. (2015) Applying an evidence-based framework to the early childhood coaching literature. *Topics in Early Childhood Special Education, 35*(3), 183–196.

Barton, E. E., Chen, C.-I., Pribble, L., Pomes, M., & Kim, Y.-A. (2013). Coaching preservice teachers to teach play skills to children with disabilities. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, *36*(4), 330–349.

Basu, S., Salisbury, C. L., & Thorkildsen, T. A. (2010). Measuring collaborative consultation practices in natural environments. *Journal of Early Intervention, 32*(2), 127–150.

Bean, R. M., Knaub, R., & Swan, A. (2000). *Reading specialists in leadership roles*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, Louisiana.

Bean, R. M., Draper, J. A., Hall, V., Vandermolen, J., & Zigmond, N. (2010). Coaches and coaching in Reading First schools: A reality check. Elementary School Journal, 111(1), 87-114

Becker, K. D., Bradshaw, C. P., Domitrovich, C., & Ialongo, N. S. (2013). Coaching teachers to improve implementation of the good behavior game. *Administration and Policy in Mental Health and Mental Health Services Research*, *40*(6), 482–493.

Bethune, K. S., & Wood, C. L. (2013). Effects of coaching on teachers' use of function-based interventions for students with severe disabilities. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, *36*(2), 97–114.

Biancarosa, G., Bryk, A. S., & Dexter, E. R. (2010). Assessing the value-added effects of literacy collaborative professional development on student learning. *Elementary School Journal*, *111*(1), 7–34.

Cantrell, S. C., & Hughes, H. K. (2008). Teacher efficacy and content literacy implementation: An exploration of the effects of extended professional development with coaching. *Journal of Literacy Research*, *40*(1), 95–127.

Chval, K. B., Arbaugh, F., Lannin, J. K., van Garderen, D., Cummings, L., Estapa, A. T., & Huey, M. E. (2010). The transition from experienced teacher to mathematics coach: Establishing a new identity. *Elementary School Journal*, *111*(1), 191–216.

Cornelius, K. E., & Nagro, S. A. (2014). Evaluating the evidence base of performance feedback in preservice special education teacher training. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*. Advance online publication. doi:10.1177/0888406414521837.

Conroy, M. A., Sutherland, K. S., Algina, J. J., Wilson, R. E., Martinez, J. R., & Whalon, K. J. (2014). Measuring teacher implementation of the BEST in CLASS intervention program and corollary child outcomes. *Journal of Emotional and Behavioral Disorders*, *23*(3), 144–155.

Damschroder, L., Aron, D., Keith, R., Kirsch, S., Alexander, J., Lowery, J. (2009) Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implementation Science. 4-50

Denton, C. A., & Hasbrouck, J. (2009). A description of instructional coaching and its relationship to consultation. *Journal of Educational and Psychological Consultation*, *19*(2), 150–175.

Deussen, T., Coskie, T., Robinson, L., & Autio, E. (2007). *"Coach" can mean many things: Five categories of literacy coaches in Reading First* (Issues and Answers Report, REL 2007–No. 005). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest.

Diamond K. E., Powell D. R. (2011). An iteractive approach to the development of a professional development intervention for Head Start teachers. Journal of Early Intervention, 33, 75–93.

Domitrovich, C. E., Gest, S. D., Jones, D., Gill, S., & DeRousie, R. M. S. (2010). Implementation quality: Lessons learned in the context of the Head Start REDI trial. *Early Childhood Research Quarterly*, *25*(3), 284–298.

Fallon, L. M., Collier-Meek, M. A., Maggin, D. M., Sanetti, L. M. H., & Johnson, A. H. (2015). Is performance feedback for educators an evidence-based practice? A systematic review and evaluation based on single-case research. *Exceptional Children*, *81*(2), 227–246.

Filcheck, H. A., McNeil, C. B., Greco, L. A., & Bernard, R. S. (2004). Using a whole-class token economy and coaching of teacher skills in a preschool classroom to manage disruptive behavior. *Psychology in the Schools*, *41*(3), 351–361.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). Implementation Research: A synthesis of the literature (FMHI #231). Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network

Gallucci, C., Van Lare, M. D., Yoon, I. H., & Boatright, B. (2010). Instructional coaching: Building theory about the role and organizational support for professional learning. *American Educational Research Journal*, *47*(4), 919–963.

Gamse, B. C., Jacob, R. T., Horst, M., Boulay, B., & Unlu, F. (2008). Reading First Impact Study Executive Summary (NCEE 2009-4039). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Greenhalgh, T., Robert, G., MacFarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: System review and recommendations. *Milbank Quarterly*. 82, 581 − 629.

International Reading Association. (2004). *The role and qualifications of the reading coach in the United States*. Newark, DE: Author.

Ippolito, J. (2010). Three ways that literacy coaches balance responsive and directive relationships with teachers. *Elementary School Journal*, *111*(1), 164–190.

Israel, M., Carnahan, C. R., Snyder, K. K., & Williamson, P. (2013). Supporting new teachers of students with significant disabilities through virtual coaching: A proposed model. *Remedial and Special Education*, *34*(4), 195–204.

Joyce, B., & Showers, B. (1982). The coaching of teaching. *Educational Leadership*, *40*(1), 4–10.

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

Kim, J. S., Olson, C. B., Scarcella, R., Kramer, J., Pearson, M., van Dyk, D., & Land, R. E. (2011). A randomized experiment of a cognitive strategies approach to text-based analytical writing for main- streamed Latino English language learners in grades 6 to 12. *Journal of Research on Educational Effectiveness, 4*(3), 231–263.

Kitson, A., Harvey, G., McCormack, B. (1998) Enabling the implementation of evidence based practice: a conceptual framework. *Quality Health Care*. 7(3), 149-158

Knight, J. (2009). Coaching. *Journal of Staff Development*, *30*(1), 18–22.

Kohler, F. W., Crilley, K. M., Shearer, D. D., & Good, G. (1997). Effects of peer coaching on teacher and student outcomes. *Journal of Educational Research*, *90*(4), 240–250.

Kretlow, A. G., & Bartholomew, C. C. (2010). Using coaching to improve the fidelity of evidence-based practices: A review of studies. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, *33*(4), 279–299.

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.

Mangin, M. M. (2009). Literacy coach role implementation: How district context influences reform efforts. *Educational Administration Quarterly*, *45*(5), 759–792.

March, A. L., & Gaunt, B. T. (2013). *Systems coaching: A model for building capacity*. Tampa, FL: University of South Florida, Florida's Multi-Tiered System of Supports Project. Retrieved from http://flpbs.fmhi.usf.edu/pdfs/SystemsCoaching.pdf

Matsumura, L. C., Garnier, H. E., & Resnick, L. B. (2010). Implementing literacy coaching: The role of school social resources. *Educational Evaluation and Policy Analysis*, *32*(2), 249–272.

Matsumura, L. C., Sartoris, M., Bickel, D. D., & Garnier, H. E. (2009). Leadership for literacy coaching: The principal's role in launching a new coaching program. *Educational Administration Quarterly*, *45*(5), 655–693.

Metz, A. (2015). Coaching for competence and competent coaching. Chapel Hill, NC: University of North Carolina, Frank Porter Graham Child Development Institute, National Implementation Research Network. Retrieved from http://www.signetwork.org/content_page_assets/content_page_255/SPDG_Coaching_Metz_October%202015.pdf

Mraz, M., Algozzine, B., & Watson, P. (2008). Perceptions and expectations of roles and responsibilities of literacy coaching. *Literacy Research and Instruction*, *47*(3), 141–157.

Neufeld, B., & Roper, D. (2003). *Coaching: A strategy for developing instructional capacity—Promises and practicalities*. Washington, DC: Aspen Institute.

Neuman, S. B., & Cunningham, L. (2009). The impact of professional development and coaching on early language and literacy instructional practices. *American Educational Research Journal*, *46*(2), 532–566.

Neuman, S. B., & Wright, T. S. (2010). Promoting language and literacy development for early childhood educators: A mixed-methods study of coursework and coaching. *Elementary School Journal*, *111*(1), 63–86.

Pierce, J. D. (2015). *Teacher-coach alliance as a critical component of coaching: Effects of feedback and analysis on teacher practice* (Doctoral dissertation, University of Washington). Retrieved from http://hdl.handle.net/1773/33786

Rush, D. D., & Shelden, M. L. L. (2011). *The Early Childhood Coaching Handbook*. Baltimore, MD: Brookes Publishing.

Scheeler, M. C., Ruhl, K. L., & McAfee, J. K. (2004). Providing performance feedback to teachers: A review. *Teacher Education and Special Education,* *27*(4), 396–407*.*

Shanklin, N. L. (2006). *What are the characteristics of effective literacy coaching?* Urbana, IL: Literacy Coaching Clearinghouse. Retrieved from http://www.literacycoachingonline.org/briefs/charofliteracycoachingnls09-27-07.pdf

Shannon D., Snyder P., McLaughlin T. (2015). Preschool teachers' insights about web-based self-coaching versus on-site expert coaching. Professional Development in Education, 41, 290–309.

Snow, C., Ippolito, J., & Schwartz, R. (2006). What we know and what we need to know about literacy coaches in middle and high schools: A research synthesis and proposed research agenda. In International Reading Association, *Standards for middle and high school literacy coaches* (pp. 35–49). Newark, DE: Author.

Snyder, P. A., Hemmeter, M. L., & Fox, L. (2015). Supporting implementation of evidence-based practices through practice-based coaching. *Topics in Early Childhood Special Education, 35*(3), 133–143.

Solomon, B. G., Klein, S. A., & Politylo, B. C. (2012). The effect of performance feedback on teachers' treatment integrity: A meta-analysis of the single-case literature. *School Psychology Review*, *41*(2), 160–175.

Stormont, M., & Reinke, W. M. (2012). Using coaching to support classroom-level adoption and use of interventions within school-wide positive behavioral interventions and support systems. *Beyond Behavior*, *21*(2), 11–19.

Stormont, M., Reinke, W. M., Newcomer, L., Marchese, D., & Lewis, C. (2015). Coaching teachers' use of social behavior interventions to improve children's outcomes: A review of the literature. *Journal of Positive Behavior Interventions*, *17*(2), 69–82.

Sprague, J. R., Scheuermann, B., Wang, E., Nelson, C. M., Jolivette, K., & Vincent, C. (2013). Adopting and adapting PBIS for secure juvenile justice settings: Lessons learned. *Education and Treatment of Children*, *36*(3), 121–134.

Sugai, G., & Horner, R. R. (2006). A promising approach for expanding and sustaining school-wide positive behavior support. *School Psychology Review*, *35*(2), 245–259.

Vanderburg, M., & Stephens, D. (2009). What teachers say they changed because of their coach and how they think their coach helped them. Urbana, IL: Literacy Coaching Clearinghouse. Retrieved from http://files.eric.ed.gov/fulltext/ED530297.pdf

Walpole, S., & Blamey, K. L. (2008). Elementary literacy coaches: The reality of dual roles. *Reading Teacher*, *62*(3), 222–231.

Walpole, S., McKenna, M. C., Uribe-Zarain, X., & Lamitina, D. (2010). The relationships between coaching and instruction in the primary grades: Evidence from high-poverty schools. *Elementary School Journal*, *111*(1), 115–140.

Wehby, J. H., Maggin, D. M., Partin, T. C. M., & Robertson, R. (2012). The impact of working alliance, social validity, and teacher burnout on implementation fidelity of the good behavior game. *School Mental Health*, *4*(1), 22–33.

Winton, P., Snyder, P., & Goffin, S. (2015). Rethinking professional development for early childhood teachers. In L. Couse & S. Recchia (Eds.), *Handbook of Early Childhood Teacher Education* (pp. 54–68). New York: Routledge.