The National Status of In-Service Professional Development Systems for Early Intervention and Early Childhood Special Education Practitioners

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Early intervention and preschool special education coordinators in the 50 states and territories were interviewed about the current status of professional development in-service systems in their state. A definition consisting of 8 components of an in-service professional development system was used to analyze the state systems. Twenty Part C early intervention systems had professional development in-service training models that met the definition, and 23 preschool special education in-service systems met the definition. Results on selected findings are presented and discussed within the context of developing effective in-service professional development systems for the early intervention and preschool special education workforce. **Key words:** *early intervention, inservice training, preschool special education*

IT HAS LONG been noted that the quality of any organization, be it corporate, educational, or nonprofit, hinges on 1 factor: the quality of its workforce (Kagan, Kauerz, & Tarrant, 2008; Winton, McCollum, & Catlett, 2008). In early childhood intervention (serving children with delays or disabilities age

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birth–5 years), this would include those professionals and paraprofessionals in disciplines responsible for the provision of services under the Individuals with Disabilities Education Act (IDEA). At the least, this includes those professionals from the disciplines of education, nutrition, nursing, psychology, occupational therapy, physical therapy, social work, speech pathology, and special education. All of these disciplines have separate and unique preservice programs of study, must obtain discipline-specific licenses to practice (most practice across the lifespan), and have different philosophies of service delivery (Bruder, 2005; Hanson & Bruder, 2001). Yet, once hired to be an early childhood interventionist, all are expected to deliver evidence-based practices in natural or least restrictive environments using a family-centered philosophy and a transdisciplinary approach (Bruder, 2005). A major challenge to the field of early childhood

intervention is the provision of ongoing workforce development opportunities, so all disciplines providing services will be effective in doing so.

Professional development is the term used in education to describe activities to enhance the knowledge and skills of those in the workforce. A comprehensive system of professional development consists of many interrelated elements, including needs assessments, onsite coaching, technical assistance, follow-up, evaluations, and dissemination. In early childhood intervention, professional development is typically described as consisting of at least 2 complimentary educational components in which elements of recommended practice are embedded: preservice and in-service (Bruder & McCollum, 1992; Striffler & Fire, 1999; Winton & McCollum, 2008). Preservice education occurs prior to a person being licensed or certified to perform in a job category. This usually occurs within an institution of higher education and culminates with a degree (Kilgo & Bruder, 1997). In-service education or training occurs once a person is performing in a job category, though credits or certificates for the completion of training may be awarded by an institution of higher education or state or federal agency or organization (Yates & Hains, 1997). The literature has numerous examples of recommended practices for both types of educational components for those in early childhood intervention (c.f., Bruder & Dunst, 2005; Bruder, Lippman, & Bologna, 1994; Bruder & Nikitas, 1992; Kilgo & Bruder, 1997; Snyder & Wolfe, 2008; Winton & McCollum, 2008; Winton, McCollum, & Catlett, 1997; Yates & Hains, 1997), yet less than half of the statewide early intervention or preschool special education systems in the United States report having a workforce that is adequately trained to serve infants or young children with disabilities (www.uconnucedd.org/per_prep_center/publications.html). This suggests a blatant and urgent need for the expansion and enhancement of both preservice and in-service opportunities for those serving children who are enrolled in state systems of early intervention and preschool special education.

The Center to Guide Personnel Preparation Policy and Practice in Early Intervention and Preschool Education (hereafter called the center) was funded to provide information on the current status of personnel training in early childhood intervention. One of the first studies that was conducted gathered information from state Part C early intervention coordinators ($n = 45$) and 619 preschool coordinators ($n = 53$) on a number of policy and practice issues related to personnel training. In addition to reporting inadequately trained providers, most of the coordinators reported workforce shortages across the disciplines of early childhood special education; and occupational, physical, and speech and language therapists. Of equal concern is that in many instances, the coordinators were unsure of their service providers' training needs. When asked about barriers to having a qualified workforce in early intervention, the Part C coordinators reported a lack of a trained personnel pool, higher education issues (an absence of preservice programs), and low salaries. Likewise, the 619 coordinators identified low salaries and benefits, a lack of preservice programs, and lack of trained personnel as contributors to a lack of qualified preschool special educators. Another system deficit reported by both Part C and 619 coordinators was a lack of comprehensive personnel development plan addressing preservice, needs assessments, in-service, technical assistance, dissemination, evaluation, and recruitment and retention of personnel (www.uconnucedd.org/per_prep_center/publications.html).

To more fully examine the status of professional development opportunities in statewide early intervention (Part C) and preschool special education programs (619), the Personnel Institute completed 10 in-depth studies on selected components of professional development. This article will summarize the information gathered in a national study of statewide in-service training

systems for service providers in Part C and 619 programs.

METHODS

Participants

The Part C and 619 preschool coordinators from the 50 states, the District of Columbia, and the Virgin Islands were the targeted population for this survey. To recruit the sample, information about the survey and a request for participation were electronically mailed to coordinators through the National Early Childhood Technical Assistance Center listserv. A total of 51 Part C and 49 coordinators of 619 programs, representatives, or both agreed to participate.

Procedure

Part C and 619 coordinators were contacted by telephone, provided with information about the purpose of the study, and asked if they were the most appropriate person to complete the survey. After identifying the appropriate respondent(s), their consent to be surveyed, and to have their responses to the survey audiotaped for later transcription by project staff, was obtained.

The duration of the Part C survey ranged from 25 to 75 minutes, and approximately 13 call attempts or e-mails were made to contact a participant and complete the interview, with a range of 1 to 62 attempts. In 3 states, Part C coordinators requested to complete the survey independently via electronic mail. The duration of the 619 telephone survey ranged from 25 to 60 minutes, and 19 call attempts or e-mails were made to contact a participant and complete an interview; the range was from 2 to 82. In 10 states, 619 coordinators requested to be sent the survey via electronic mail to be completed independently. Follow-up telephone conversations were conducted with respondents when clarification was needed.

Following the telephone interview, the transcript of the survey was sent to each respondent for verification. Modifications to the transcript were made by respondents and returned to project staff via e-mail. Qualitative information was coded by question by research staff members.

Survey content

The definitions used to classify systems of training were influenced by the work of Winton et al. (1997). We defined an in-service training system as demonstrating a systematic, sustainable approach to professional development. Defining components included the following: (1) dedicated resources such as an agency budget line item; (2) staffing; (3) a dedicated agency responsible for the provision of the training; (4) policies or procedures for determining professional development needs; (5) training content; (6) quality assurance systems; (7) a process for evaluating outcomes; (8) ongoing training that is provided over time; (9) a structure for the delivery of content (training modules etc), and (10) workplace applicability.

The training survey consisted of 31 open-ended questions to gather information on the above definition. The first section related to training; the second set of questions included the same questions, but as related to technical assistance (data on these elements are not included in this study). The last 3 questions were global questions regarding the state system. In most cases, the survey was administered as a semistructured interview to allow respondents to engage in a dialogue with project staff and to clarify any questions asked or information provided.

Research staff examined all telephone survey tapes to ensure the accuracy of data entry and interpretation. Inter-rater reliability for more than 25% of the Part C states was performed and resulted in an overall agreement of 94%. Inter-rater reliability for more than 33% of the 619 states was completed and resulted in an overall agreement of 96%. Both raters met and came to a consensus on the disagreed-upon items for 100% agreement.

RESULTS

Part C programs

Results indicated that 39 Part C states (76%) reported that their state had an in-service training system that met the definition provided to them. However, for the purpose of analysis, state responses to survey questions were compared with each component of the training definition (see above), and 20 states (39%) were considered to have a training system. Of the 20 states that had a Part C training system, 18 funded it through federal sources, usually the IDEA state allocation. The training was provided to all early intervention providers across disciplines, and it was delivered by instate experts (20) with an additional 5 states using out-of-state experts. Most frequently, training was delivered through workshops ($n = 19$) or the Web ($n = 16$), followed by presentations ($n = 9$) and conferences ($n = 8$). A majority of states provided CEUs for training ($n = 15$), and 5 linked training to a credential and 2 to a certificate. Half the states paid for training to occur during paid work time, and 9 offered training free of charge. Training content was most often identified through administrative and consultant input ($n = 19$), and the most popular training areas were service delivery ($n = 19$), policies and procedures ($n = 18$), families ($n = 11$), and disability-specific information ($n = 10$). Training was evaluated by trainee feedback forms (18), and 5 states used compliance monitoring to further assess training.

Preschool (619) programs

Results of the interviews indicated that 35 of the 619 preschool respondents (78%) stated that their state had a training system, yet upon comparison with the training components in the definition we used, 23 states (58%) had an in-service training system that contained all of the components. Of the 23 states that had a 619 preschool training system, 15 funded it through state dollars with the addition of federal dollars ($n = 14$). The training was provided to early childhood spe-

Table 1. Statewide in-service training characteristics

	Part C early intervention ($n = 51$)	619 preschool ($n = 49$)
States meeting definition	20	23
Main funding source		
Federal	18	
State		15
Delivery methods		
Workshop	19	21
Web-based	16	18
Presentations	9	
Annual conferences/ meetings	8	18
Training topics		
Service delivery	19	21
Policies and procedures	8	15
Families	11	
Disability specific	10	10
Data management outcomes		16
Evaluation		
Trainee feedback	18	18
Competence monitoring	5	5

cial education teachers in all 23 states and related service providers ($n = 17$), general education preschool teachers ($n = 13$), and district administrators ($n = 13$).

Most frequently, training was delivered through workshops ($n = 21$), annual meetings or conferences ($n = 18$), and the Web ($n = 18$). A majority of states provided CEUs for training ($n = 16$), and 3 linked training to a credential. Seven states paid for training to occur during paid work time, and 4 offered training free of charge. Training content was most often identified through providers, administrative, or consultant input ($n = 14$), and compliance or performance monitoring ($n = 13$). Most states offered training on service delivery ($n = 21$), data management on outcomes ($n = 16$), policies and procedures ($n = 15$), and disability-specific information ($n = 10$). Training was evaluated by trainee feedback forms ($n = 18$), and 5 states used compliance monitoring to assess training. Selected characteristics are contained in Table 1.

DISCUSSION

The data collected on state training systems for early intervention (Part C) and preschool (619) personnel providing services under IDEA are both encouraging and discouraging. Almost half of the states have personnel development in-service training systems that contain recommended components of practice, yet more than half do not. Of those states that did not meet all 10 system components, most had a majority of components, reflecting the field of early childhood intervention is striving to provide its workforce with in-service training opportunities. It should be noted, however, that these data provide only a superficial picture of in-service training systems. That is, we were able to present the breadth of statewide early childhood intervention system components, as opposed to an in-depth analysis of whether training is effective at changing both provider behaviors and child outcomes.

The data that were collected are useful in that similarities across states, and Part C and 619 in-service training systems, can be identified. These similarities include positive practices such as interdisciplinary audiences, CEUs being provided, and trainee feedback being used at the conclusion of training. There are also similarities in practices that could be improved. These include the use of workshops as the most frequent mode of training and a lack of coordination of training to any state credential or certificate. Additionally, and reflective of our survey focus, states did not provide specificity in regard to their training content and outcomes.

In discussing these findings, it would be easy to lament the absence of recommended practices across these statewide programs and then recommend practices that have been previously cited to improve the knowledge and skills of early childhood intervention providers (c.f., Bailey, 1989; Bruder & McCollum, 1992; McCollum & Thorp, 1988; Striffler & Fire, 1999; Winton, 1990; Winton et al., 2008, 1997). However, the growing complexity of early childhood intervention

and the increasing numbers of children being identified for services have created a demand to reexamine the provision of in-service training for the increasing numbers of early intervention childhood providers. As an example, the numbers of professionals and paraprofessionals who serve infants and young children with disabilities and their families have grown to 30 720 special education preschool teachers and 63 149 early childhood interventionists (as reported by the US Department of Education in 2006), and there are at least 5 times as many early childhood interventionists who teach children in settings, such as child care, Head Start, and nursery schools. Compounding these growing numbers is the fact that most state early intervention and preschool special education system coordinators have reported personnel shortages (http://www.uconnucedd.org/per_prep_center/publications.html). Additionally, the growing diversity of the population of children receiving early childhood intervention (eg, racial, ethnic, linguistic, and, most important, types and severity of disability) has challenged interventionists to demonstrate a larger and more flexible skill set including individualized (and sometimes etiology specific) instructional competencies. This skill set also includes the ability to assess and report a child's behavior and development across functional outcome areas as required by the federal government (see http://www.fpg.unc.edu/~eco/index.cfm). To meet these growing challenges, it seems that all statewide systems need to focus on the most efficient and effective ways to provide in-service opportunities to early childhood interventionists so that they may do their job effectively.

After examining these data in the context of other components of professional development, we propose the following recommendations in in-service training within state early intervention and preschool special education systems:

1. Develop a mental model that links effective in-service training to competent interventionists, to service delivery, and to child and family outcomes. A mental

model is a value-based assumption that governs our actions, and it is integral to any learning organization (Senge, 1994). It is a picture that provides a rational for *what* and *why* we do things. State systems must view the provision of in-service training for providers as a mandatory component of an early childhood intervention system and fund it as such. In-service training then becomes integral to the service delivery that contributes to outcomes achieved by the children and families receiving early intervention and preschool special education. Instances of system change beginning with the development of a mental model are available in our field (Bruder, 2001; Winton & Catlett, this issue), and this practice should be expanded to the development of statewide in-service training models that are funded components of early intervention and preschool special education service delivery systems.

2. Develop a logic model that links the competence of early childhood interventionists to the output of child and family outcomes. Surprisingly, there are conflicting data on this relationship (c.f., Bogard, Traylor, & Takanishi, 2008), yet most agree the quality of a teacher's skills (eg, early interventionist) does impact children's behavior and development (Early et al., 2008; Palermo, Hanish, Martin, Fabes, & Reiser, 2007). To document this relationship, a logic model should be used to measure interventionist skills as a contributor to child and family outcomes. Logic models help to guide evaluations of complex service systems, and they have been used in prior evaluations in early childhood intervention work (Bruder, 2005; Gilliam & Leiter, 2003; W.K. Kellogg Foundation, 2001).

A recent requirement of state systems in early intervention (Part C) and preschool special education (619) is to report child and family outcomes as articulated by the US Department of Education, Office of Special Education. Data on these outcomes must be collected on every child and family receiving services at program entry and exit, and these are submitted to the Congress. The data for children are collected under the following areas: (1) children have positive social-emotional skills (including social relationships); (2) children demonstrate acquisition and use of knowledge and skills (including early language/communication and early literacy); and (3) children use appropriate behavior to meet needs. The outcomes for families that are required include the following: (1) families know their rights; (2) families effectively communicate their children's needs; and (3) families help their children develop and learn. A logic model can assist state systems to conceptualize and measure the knowledge and skills needed by early childhood interventionists to facilitate growth and development of children and families for these outcomes. These knowledge and skills can be used as competencies and inputs to the logic model, and in-service training can then be provided in these content areas.

3. Use evidence-based practices in adult learning for all in-service training. Professional development for adult learners has a history that transcends early childhood intervention. The National Research Council identified a body of evidence-based adult learning principles and practices that they recommend as forming the foundation of any professional development endeavor (Donovan, Bransford, & Pellgrino, 2000). Specific recommended practices include the following: (1) activities should be learning-centered; (2) attention is given to what is taught (information), why it is taught (understanding), and what competence or mastery looks like; (3) formative assessments occur frequently; and (4) learning is contextually referenced and occurs in the context it is needed. These practices support previous recommendations for in-service training methods in general (Guskey, 2000, 2001; Knowles, Holton, & Swanson, 1998)

and early childhood intervention in particular (Bruder & Nikitas, 1988; Sexton et al., 1996; Striffler & Fire, 1999; Winton, 1990), and they should thus guide any in-service professional development offered by systems of early intervention and preschool special education. These methodological practices can be further broken into elements of a statewide in-service model and also used as a measure of training implementation fidelity.

4. Collaborate with other early care and education systems. The quality of the early childhood workforce has received recent attention because of the growing numbers of children receiving out-of-home care and the growing number of early childhood education programs (c.f., Kagan et al., 2008). Both research and practice in the area of early childhood teacher education have focused on enhancing professional development to enhance child outcome, with particular emphasis on school readiness (Pianta, Cox, & Snow, 2007). These efforts are occurring in every state and as such should be linked to any in-service activities implemented by Part C early intervention or 619 preschool special education systems. Since many children with disabilities are receiving services in nonspecialized early care and education programs, it seems apparent that duplicative and parallel in-service training systems are not only inefficient but also indefensible in this area of fiscal responsibility and program accountability.

CONCLUSION

Effective, ongoing in-service training must be available to all who provide services in early childhood intervention. As early intervention and preschool special education services demand accountability for child and family outcomes, the workforce who provides these services must be able to demonstrate the skills necessary to achieve them. This means that statewide systems of early intervention and preschool special education must refocus their service delivery models to embrace workforce development as an integral component of services. Consequently, the in-service opportunities provided as workforce development must meet evidence-based adult learning standards and contain content derived from personnel competencies needed to achieve identified child and family outcomes. Admittedly, this will create many challenges for state and local administrators who continue to struggle with many competing service demands, the most pertinent being a stable funding base. But, if we believe in the purposes laid out in the preamble of early intervention in IDEA, do we have any choice? We think not.

REFERENCES

Bailey, D. B., Jr. (1989). Issues and directions in preparing professionals to work with young handicapped children and their families. In J. Gallagher, P. Trohanis, & R. Clifford (Eds.), *Policy implementation and P.L. 99-457: Planning for young children with special needs* (pp. 97–132). Baltimore: Paul H. Brookes.

Bogard, K., Traylor, F., & Takanishi, R. (2008). Teacher education and PK outcomes: Are we asking the right questions? *Early Childhood Research Quarterly, 23*(1), 1–6.

Bruder, M. B. (2001). Infants and toddlers: Outcomes and ecology. In M. J. Guralnick (Ed.), *Early childhood inclusion: Focus on change* (pp. 203–228). Baltimore: Paul H. Brookes.

Bruder, M. B. (2005). Service coordination and integration in a developmental systems approach to early intervention. In M. J. Guralnick (Ed.), *A developmental systems approach to early intervention: National and international perspectives* (pp. 29–58). Baltimore: Paul H. Brookes.

Bruder, M. B., & Dunst, C. J. (2005). Personnel preparation in recommended early intervention practices: Degree of emphasis across disciplines. *Topics in Early Childhood Special Education, 25*(1), 25–33.

Bruder, M. B., Lippman, C., & Bologna, T. M. (1994). Personnel preparation in early intervention: Building capacity for program expansion within institutions of higher education. *Journal of Early Intervention, 18*(1), 103–110.

Bruder, M. B., & McCollum, J. (1992). Analysis of state applications for year 4: Planning for the personnel components of Part H of P.L. 99-457. *NEC*TAS Notes, 2*.

Bruder, M. B., & Nikitas, T. (1988). *Training and technical assistance feasibility study: A report on Connecticut's needs for P.L. 99-457*. Farmington, CT: University of Connecticut School of Medicine.

Bruder, M. B., & Nikitas, T. (1992). Changing the professional practice of early interventionists: An inservice model to meet the needs of Public Law 99-457. *Journal of Early Intervention, 16*(2), 173–180.

Donovan, M. S., Bransford, J. D., & Pellgrino, J. W. (Eds.). (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.

Early, D. M., Maxwell, K. L., Clifford, R. M., Pianta, R. C., Ritchie, S., Howes, C., et al. (2008). Teacher education and child outcomes: A reply to the commentary. *Early Childhood Research Quarterly, 23*(1), 7–9.

Gilliam, W. S., & Leiter, V. (2003). Evaluating early childhood programs: Improving quality and informing policy. *Zero to Three, 23*(6), 6–13.

Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin.

Guskey, T. R. (2001). The backward approach. *Journal of Staff Development, 22*(3), 60.

Hanson, M. J., & Bruder, M. B. (2001). Early intervention: Promises to keep. *Infants and Young Children, 13*(3), 47–58.

Kagan, S. L., Kauerz, K., & Tarrant, K. (2008). *The early care and education teaching workforce at the fulcrum*. New York: Teachers College Press.

Kilgo, J., & Bruder, M. B. (1997). Creating new visions in institutions of higher education: Interdisciplinary approaches to personnel preparation in early intervention. In P. J. Winton, J. McCollum, & C. Catlett (Eds.), *Reforming personnel preparation in early intervention: Issues, models, and practical strategies* (pp. 81–102). Baltimore: Paul H. Brookes.

Knowles, M. S., Holton, E. F., III, & Swanson, R. A. (1998). *The adult learner: The definitive classic in adult education and human resources development* (5th ed.). Houston, TX: Butterworth-Heinemann.

McCollum, J., & Thorp, E. (1988). Training of infant specialists: A look to the future. *Infants and Young Children, 1*(2), 55–65.

Pianta, R. C., Cox, M. J., & Snow, K. L. (2007). *School readiness and the transition to kindergarten in the era of accountability*. Baltimore: Paul H. Brookes.

Palermo, F., Hanish, L. D., Martin, C. L., Fabes, R. A., & Reiser, M. (2007). Preschoolers' academic readiness: What role does the teacher-child relationship play? *Early Childhood Research Quarterly, 22*(4), 407–422.

Senge, P. (1994). *The fifth discipline fieldbook*. New York: Bantam Doubleday.

Sexton, D., Snyder, P., Wolfe, B. L., Logman, M., Stricklin, S., & Akers, P. (1996). Early interention inservice training strategies: Perceptions and suggestions from the field. *Exceptional Children, 62*(6), 485–495.

Snyder, P., & Wolfe, B. (2008). The big three process components of effective professional development: Needs assessment, evaluation, and follow-up. In P. J. Winton, J. A. McCollum & C. Catlett (Eds.), *Practical approaches to early childhood professional development: Evidence, strategies, and resources* (pp. 13–51). Washington, DC: Zero to Three.

Striffler, N., & Fire, N. (1999). Embedding personnel development into early intervention service delivery: Elements in the process. *Infants and Young Children, 11*(3), 50–61.

W.K. Kellogg Foundation. (2001). *Using logic models to bring together planning, evaluation, and action: Logic model development guide*. Battle Creek, MI: Author.

Winton, P. J. (1990). A systematic approach for planning inservice training related to Public Law 99-457. *Infants and Young Children, 3*(1), 51–60.

Winton, P. J., & McCollum, J. A. (2008). Preparing and supporting high-quality early childhood practitioners: Issues and evidence. In P. J. Winton, J. A. McCollum, & C. Catlett (Eds.), *Practical approaches to early childhood professional development* (pp. 1–12). Washington, DC: Zero to Three.

Winton, P. J., McCollum, J. A., & Catlett, C. (2008). *Practical approaches to early childhood professional development: Evidence, strategies, and resources*. Washington, DC: Zero to Three.

Winton, P. J., McCollum, J. A., & Catlett, C. (Eds.). (1997). *Reforming personnel preparation in early intervention: Issues, models, and practical strategies*. Baltimore: Paul H. Brookes.

Yates, T., & Hains, A. H. (1997). State perspectives on meeting personnel challenges: Closing the gap between vision and reality. In P. J. Winton, J. McCollum, & C. Catlett (Eds.), *Reforming personnel preparation in early intervention: Issues, models & practical strategies* (pp. 27–51). Baltimore: Paul H. Brookes.