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Alignment of Professional Standards and Practice-Based Evidence**

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What is This?

Identifying Instructional Targets for Early Childhood via Authentic Assessment:

Alignment of Professional Standards and Practice-Based Evidence

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Now at middle age, the field of Early Childhood Intervention (ECI) and its professionals have demonstrated a unique capacity to develop their own practice-based evidence (PBE) and professional standards to forge solutions to challenging professional practice dilemmas. This innovative capacity is no more evident than in designing and implementing individualized linkages among assessment/instruction/progress evaluation for all children, particularly those with delays and disabilities. In this article, the authors advocate for the overarching purpose of assessment in ECI—to identify instructional targets and to plan beneficial programs for young children with special needs in inclusive, natural environments. The authors highlight major developments that have changed their professional practices since the passage of PL 99-457; PBE that supports and promotes these practices and the linkage among assessment, instruction, and progress evaluation; and critical issues for future policy, practice, and research.

Keywords: *authentic assessment; Early Childhood Intervention; instructional targets; PL 99-457*

Twenty five years ago, a dream came true. The passage of the Education of the Handicapped Act (P.L. 94-142) in 1975 had mandated a free and appropriate public education for all children with disabilities. However, the laws of individual states determined whether young children below the age of 6 were included in this mandate. In

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1986, PL 99-457 extended the mandate to age 3 (to be fully implemented by 1990-1991), and the mandate from birth was realized in 1991.

Prior to 1986, the field of Early Childhood Intervention (ECI) consisted primarily of points of excellence across the nation in programs developed through the Handicapped Children's Early Education Program. These "model demonstration" projects received federal funding to develop early intervention programs for particular populations of children or to develop a model of service delivery. Many of these projects also were funded to replicate their models in other parts of the country. However, with the establishment of a national mandate for locally delivered services for children with disabilities from birth, it became clear that extensive preparations were necessary.

Central to this mandate, practitioners were now required to develop Individualized Education Plans (IEPs) for children from 3 through 5 years of age and Individualized Family Service Plans (IFSPs) for children from birth to age 3. The requirement of identifying specific intervention plans for our youngest children required extensive preparation and development and, in conjunction with other influences, led to a fundamental reimagining of proper and practical assessment practices for our unique interdisciplinary field.

In this article, we emphasize the overarching purpose for assessment in ECI—*to identify instructional targets as a basis for planning beneficial programs for young children with special needs in inclusive, natural environments.* We highlight major developments that have changed our professional practices since the passage of PL 99-457; practice-based evidence (PBE) that supports and promotes these practices and the linkage among assessment, instruction, and progress evaluation; and critical issues for future policy, practice, and research.

What Has Happened Since 1986?

Children are receiving services! What seemed like a daunting task in 1986 has come to pass: Young children with disabilities are receiving effective services. For most, these services are being provided in inclusive settings and natural environments. The practice of including young children with disabilities in typical settings with their peers has been a foundation of ECI which predates the mandate for services for all children. Research findings have demonstrated the benefits of including young children with disabilities in natural settings with their peers (Buysee & Bailey, 1993; Odom, 2000). Providing educational services for children with disabilities in the least restrictive environment is, in fact, mandated by the Individuals With Disabilities Education Act (IDEA) and is monitored to ensure that inclusive services are being provided by the states. Similarly, for infants and toddlers who receive services through Part C of IDEA, services must be provided in natural/typical environments.

The provision of services in inclusive settings influences how assessment and instruction are planned and implemented. Naturalistic instructional approaches that embed individualized supports and instructional strategies within the context of everyday classroom activities and home routines are universally accepted as recommended and evidence-based practice (EBP) for ECI (Wolery, 2005). Similarly, *assessment should be conducted through*

ongoing observation of the child engaged in typical activities and routines. Assessment information should be immediately helpful to teachers and other providers as they work to *identify functional learning targets* that are matched to the child's skills and guide systematic intervention.

Professional practice standards. Arguably, the paramount influence on ECI since 1986 has been the joint statements on recommended professional practice by our professional organizations, especially the National Association for the Education of Young Children (NAEYC) and the Division for Early Childhood (DEC) of the Council for Exceptional Children. NAEYC and DEC have jointly endorsed *inclusion* as a recommended practice (Copple & Bredekamp, 2009; DEC/NAEYC, 2009; Sandall, Hemmeter, Smith, & McLean, 2005). Both professional organizations emphasize specific and effective practices that integrate individualized assessment, curriculum, and progress evaluation (Copple & Bredekamp, 2009; DEC, 2007; NAEYC/NASDE, 2003; Sandall et al., 2005).

Because of its primacy, DEC has published recommended practices specific to *authentic assessment* (Neisworth & Bagnato, 1996, 2005). The DEC recommendations include 46 assessment practices that have been validated by DEC members, parents, and professionals (McLean, Snyder, Smith, & Sandall, 2002). Eight standards for developmentally appropriate assessment serve not only as the foundation for the development of the practices but also as a practice guide today for selecting and using specific assessment methods and materials (see Bagnato, Neisworth, & Pretti-Frontczak, 2010). The eight standards for developmentally appropriate and authentic assessment procedures include the following: (a) *acceptability*—social worth and detection of socially desired competencies, (b) *authenticity*—natural observation methods and contexts, (c) *collaboration*—parent–professional teamwork, (d) *evidence*—disability design/evidence base; (e) *multifactors*—synthesis of ecological data, (f) *sensitivity*—fine content/measurement gradations, (g) *universality*—equitable design/individual accommodations, and (h) *utility*—usefulness for intervention based on functional, teachable competencies.

Since 1986, the emerging ECI field has exemplified the uniqueness of policy and practices regarding how best to help *all* young children, and especially those who are at risk for or have identified developmental delays/disabilities. ECI connotes inclusive care and education and the urgency to intervene early by emphasizing the development of integrated service "systems" through a continuum of prevention to intervention supports. ECI underscores the overarching purpose of assessment—the design of individual plans for care, instruction, and therapy. The alignment of the PBE and our professional standards since 1986 promotes efforts to link assessment to individualized instruction/intervention to performance evaluation (Bagnato et al., 2010).

What Has Research Shown Us About Assessment to Identify Instructional Targets?

With the rise of "EBP" in medicine over the past 15 years, EBP has influenced all human service fields, including education. Yet, while much of the EBP emphasizes randomized clinical trials and experimental–control group research as the presumed "gold-standard,"

Table 1
Five Major Developments Since 1986 in the
Methodology of Assessment in ECI Based on PBE

Development based on PBE	Definition
Authentic assessment	Ongoing observations and documentation in everyday settings and routines to identify functional capabilities and needs
Curriculum-based assessment	Assessments that facilitate individualized goal-planning and performance/progress monitoring through a linkage to curricular objectives and teaching strategies
Functional content and objectives	Curricular content and competencies that enable a child to actively participate and engage in real-life, everyday tasks and to promote success and personal independence
Curriculum alignment with early learning standards and outcomes	Crosswalk among developmental and functional competencies within the curriculum and state and federal early learning standards, including academics
Individually designed targets for instruction in inclusive and natural environments	Modifications of instructional targets (curricular goals and objectives) and teaching strategies based on ongoing assessment for the purpose of promoting child progress

Note: ECI = Early Childhood Intervention; PBE = practice-based evidence.

researchers in the fields of disabilities, ECI, and clinical psychology have argued for a much more generalizable concept of *PBE*. PBE emphasizes *research that is conducted in real-world settings with real-world challenges* (vs. contrived, laboratory-like circumstances) to generate the most applicable methodologies that can be used with confidence in community settings for *individual* children. Since 1986, early intervention researchers have conducted numerous PBE studies that field-validate the efficacy of assessment practices to identify instructional targets to promote inclusion.

Through 25 years of PBE, five important developments have emerged in our methodology to link assessment, intervention, and progress evaluation: (a) authentic assessment; (b) curriculum-based measurement; (c) functional curriculum content and objectives; (d) curriculum alignment with early learning standards, outcomes, and indicators; and (e) individually designed intervention targets. The operational features of each of these five elements to link assessment and instruction are summarized in Table 1.

Authentic assessment. The importance of authentic assessment has become clear within the past 25 years as best matching the philosophy, purposes, and practices of ECI. The need to make assessment of young children more developmentally appropriate, representative, accurate, functional, and strengths based, especially for children with disabilities, has led to a professional sanctioning of observation-based assessment (i.e., authentic assessment) over conventional testing (Bagnato, 2007; Neisworth & Bagnato, 2004, 2005). As defined by Bagnato and Yeh-Ho (2006), "Authentic assessment refers to the systematic recording of developmental observations over time about the naturally occurring behaviors and functional competencies of young children in daily routines by familiar and knowledgeable caregivers in the child's life" (p. 16).

Bagnato and colleagues (Bagnato, Macy, Salaway, & Lehman, 2007; Bagnato, McKeating-Esterle, Fevola, Bortolamasi, & Neisworth, 2008; Macy & Bagnato, 2010) have summarized

the research literature in the ECI field to demonstrate the primacy of authentic assessment procedures, including team decision-making formats, over conventional testing to fulfill the purposes for assessment in ECI, especially linking to individualized program planning and performance/progress monitoring. Moreover, Bagnato and colleagues (2010) published the results of a national consumer social validity study, based on an Internet survey of nearly 1,500 interdisciplinary professionals, who rated the developmentally appropriate quality of conventional and authentic assessment measures to meet ECI purposes. Rating more than 150 measures on the 8 DEC standards, consumers confirmed the higher quality and effectiveness of authentic curriculum-based assessment measures to best fulfill ECI purposes, especially individualized program planning.

Curriculum-based measurement. Even before 1986, it was clear to many involved in ECI that the standardized, norm-referenced tests and testing procedures used to determine service eligibility were fundamentally inadequate and flawed for informing instruction. Bricker (2002) described the beginnings of the instrument, which eventually became the *Assessment, Evaluation and Programming System for Infants and Children*, as the result of "a strong and urgent need for some alternative to using either standardized, norm-referenced tests or home-made tests with questionable reliability and validity" (pp. 1-2). There was clearly a need for an instrument that could inform the process of identifying goals and learning targets for IEPs and IFSPs.

Criterion-referenced instruments and curriculum-based measurement that identified developmental sequences and hierarchies of functional skills were developed to guide the identification of appropriate goals and objectives. Eventually some of these instruments became curriculum-based assessments as curriculum components were added to assist in identifying not only targets but also strategies for instruction. When *assessment and instruction are aligned through common objectives*, we can have confidence in the appropriateness of the goals and the potential effectiveness of the focus of instructional methods.

Functional curriculum content and objectives. Instructional objectives that are most likely to promote a child's increased competency and successful inclusion in typical environments *are socially valued, functional, strength based, universal, and generalizable.*

Not all developmental curricular objectives are socially valued (seen as worthwhile). Matching geometric forms in a form-board, placing pegs in a pegboard, and standing in line are all teachable objectives, but they are not valued as worthwhile in their contribution to a child's development and, certainly, not social participation. Instructional targets that promote social engagement such as communicating to peers and adults and sharing are worthwhile competencies to be fostered.

Worthwhile objectives must be functional. They must enable the child to accomplish important everyday tasks that are building blocks for inclusion and a scaffold for more complex skill development. Again, initiating social interactions, communicating needs, and cooperating in play with peers are examples of important current functional skills as well as building blocks for more mature behaviors.

Authentic assessment clearly meets the utility standard for quality assessment in ECI, namely, a focus on teachable, functional competencies that informs what and how to teach. One of the operational features is that the content and competencies sampled by authentic

assessments must be aligned with the content and competencies contained in ECI curricula. Curricula used in ECI have been field-validated for individualized program planning and most often include strategies designed for instruction and therapy (Bagnato et al., 2010).

Curricular objectives as effective instructional targets highlight each child's areas of strength—their assets as foundational building blocks to promote the acquisition of less well-developed skills. Skills that can be demonstrated consistently and independently can be paired with emerging skills—competency objectives that can be displayed only when physically or verbally prompted by adults. Eventually, the display of such related skills will become much more consistent and automatic.

Objectives that are universally designed provide opportunities for *all children*, despite the extent of their disabilities, to interact with and respond to people and things in the environment by using any response mode that is available to them (e.g., gestures, assistive devices) and to have those skills reinforced (Darragh, 2007). The following are a few examples of universally designed competencies that do not dictate a required response mode and that are also functional and meet the other attributes of effective targets: gets across the room, activates a simple or mechanical toy, initiates a social interaction, and communicates a need. Note that it is the *what*—the function—that is specified (e.g. getting across the room), rather than the how—the mode of response.

Finally, instructional targets must be generalizable. They must do two things: allow the child to function effectively across settings and promote skill development across related domains of functioning (Pretti-Frontczak, Barr, Macy, & Carter, 2003; Pretti-Frontczak & Bricker, 2004). Thus, competencies that pair together naturally and "braid" developmental competencies are preferred, such as waiting, sharing, taking turns, following directions, getting along with others, and communicating in social games. Not only are these instructional targets naturally related in their occurrences, but they also serve as building blocks for early school success and align well with early learning and academic content standards and indicators. Children will experience optimal results when intentional teaching focuses on skills that can transfer between contexts and, importantly, over time.

Curricular alignment with early learning standards, outcomes, and indicators. Federal legislation and policy have combined in recent years to heighten the influence of early learning standards in early childhood programs. Following the passage of No Child Left Behind in 2001, an early childhood initiative, *Good Start, Grow Smart* (GSGS), was introduced as the next step in education reform. The goal of GSGS was to ensure that young children are ready to learn when they start school. Through this legislation, states were encouraged to develop early learning standards to guide instruction.

With the reauthorization of IDEA in 2004, each state was required to establish a performance plan that documents the state's implementation of Parts B and C of IDEA. Among other things, all programs serving preschool or infant/toddler-aged children with disabilities under IDEA are now required to report child progress from entry to exit for all children for each of three child outcome areas: (a) positive social and emotional skills, (b) acquisition and use of knowledge and skills, and (c) use of appropriate behaviors to meet their needs (Hebbeler & Barton, 2007). Currently, all states have identified early learning standards for preschool programs, and more than half of the states also have identified early learning standards for programs for infants and toddlers (National Research Council, 2008;

Scott-Little, Kagan, Frelow, & Reid, 2009). All states must also report annually on the progress of children receiving early intervention or early childhood special education services relative to the three child outcomes specified under IDEA. In addition, Head Start programs are required to promote school readiness for enrolled children through assessment and teaching that is based on the domains of the Head Start Child Development and Early Learning Framework. This system of early learning standards and outcomes has developed rapidly. Unfortunately, the various requirements that are in place across the country for early childhood programs have resulted in a complex and duplicative system (Schultz, Kagan, & Shore, 2009). The need for a coherent system of standards, curriculum, and assessments to facilitate utility by early childhood programs has been identified (Harbin, Rous, & McLean, 2005; Schultz et al., 2009) but not yet addressed.

Individually designed instructional targets. We have the unique opportunity in our field to work one-on-one with families and their children. Arguably, one of the best features of IDEA is individualization. Cook and Schirmer (2003) asked, "What is so special about special education?" Specially designed instruction is one of the things that makes our field unique. Think of going to a tailor and having measurements taken to create a one-of-a-kind garment, as opposed to obtaining a garment off-the-rack that was mass produced for a large population. Individualized, "tailored" instruction means adapting content (curriculum), methodology, and/or delivery of instruction to (a) address the unique needs of an eligible child that can result from the child's disability and (b) ensure access of the child to the general curriculum. Individualized and ongoing assessment in everyday settings allows the collection of representative data on each child's learning targets. Information collected from monitoring individual child progress toward learning targets will inform intentional instruction. The result is instruction that is uniquely tailored to each child's needs. Early intervention is dedicated to promoting *individual* progress and outcomes, not group outcomes; this is what makes our field unique.

What Are Critical Issues for Future Policy, Practice, and Research?

Finally, we summarize essential professional issues for our integrated fields that may well influence policy, practices, and research involving the implementation and sustainability of the linkage between assessment, instruction, and performance evaluation. In Table 2, we summarize, for easy reference by professionals, five critical issues or challenges and take-home points facing the field that must be resolved to truly integrate assessment and instruction through developmentally appropriate and authentic methods: using portable technologies, creating unified early learning standards, eliminating high-stakes testing in ECI, preparing qualified personnel, and solving the scalability of instruction in inclusive settings.

Portable technology for ongoing authentic assessment. With the expanded use of miniature computer technology into the classroom and community settings, professionals can now ensure that natural data on children's competencies can be collected unobtrusively across everyday settings and routines in an efficient and economical manner. Realization of the promise of authentic assessment depends on our program's infusing the use of

Table 2
Critical Future Issues About Assessment to
Identify Instructional Targets for Inclusion

Issue	Take-home point
Portable computer technology for authentic assessment	Infuse the ongoing use of computer netbooks, tablets, and digital videos into home and classroom settings to capture evidence of progress
Unified early learning standards/outcomes	Create unified early learning standards, expected outcomes, indicators (0 to 8 years) across early childhood programs to promote intraindividual progress within an integrated and inclusive ECI system
High-stakes testing for accountability	Motivate policy makers, researchers, and practitioners to reach an agreement on policies and practices that eliminate the high-stakes element in ECI program accountability in favor of ongoing curricular assessment during intervention to document intraindividual progress
Preparing qualified professionals	Provide professionals with ongoing and in situ professional development. High-quality inclusion is not possible with untrained personnel
Scalability of individualized instruction	Solving the dilemma of providing individually designed instruction for children in group settings at a time when practitioners are expected to do more with less time and fewer resources

Note: ECI = Early Childhood Intervention.

responsive, computer-based methods, such as computer netbooks and tablets, into home and classroom settings to enable all caregivers to record and archive authentic observational data and to use computer software to identify individualized functional objectives for curriculum planning and instruction/intervention (Buzhardt et al., 2010; Ledoux, Yoder, & Hanes, 2010; Powell, Diamond, & Koehler, 2010). With expanded use, video and observational data can be combined to provide "snapshots" as evidence of the specific progress of children, even those with severe disabilities who show small increments of skill development.

Unified early learning standards/outcomes. The movement across the states to develop early learning standards for all children has been an important milestone in our field. Early learning standards align with curricular domains and objectives and underscore for professionals and parents the expected outcomes for all types of early care and education programs, particularly for children with delays/disabilities in inclusive settings. However, unified standards are the critical issue and urgent need because redundant and even competing standards and indicators within the serving system contribute to fragmented services and supports.

Nevertheless, in our judgment, it is critical that state standards drive the creation of federal standards and indicators, not the reverse. In this way, federal mandates can promote the creation of a *unified set of early learning standards*, expected outcomes, and indicators across the inclusive ECI system of programs (e.g., Early Head Start/Head Start, Early Intervention, public and private early care and education) that also respect regional customs and priorities. Unified standards and indicators will enable professionals to implement authentic, curriculum-based assessment for *all children* in an individualized manner to promote

intraindividual progress—the hallmark of prevention and intervention in early childhood. Unified standards can serve as a catalyst to create an integrated 0 to 8 ECI system.

High-stakes testing for accountability. The concepts of "high-stakes" and "testing" are antithetical to high-quality ECI and to recommended practices in our interdisciplinary field. Our unified professional organizations (e.g., NAEYC, DEC, Head Start) must work to motivate government representatives and policy makers to collaborate with parents, researchers, and practitioners to reach agreement on policies and practices that eliminate the high-stakes element in ECI program accountability and promote more individualized approaches using ongoing observational assessment during intervention to monitor child progress; moreover, ongoing assessment can formatively highlight programmatic areas needing improvement.

We must eliminate high-stakes testing from ECI and promote the collection of companion data on programmatic variables, such as type and intensity of intervention and response to intervention *over time* to promote *intraindividual* child progress, rather than group progress in ECI; this can help to bridge the essential distinction between school-age and unacceptable preschool policies and practices.

Preparing qualified professionals. Universities in conjunction with state departments of education must resolve how to best prepare teachers and interdisciplinary professionals to work with young children and their families. Distance learning, on-site community-based training, and mentoring approaches with master teachers in situ instead of university-centered preparation proves to be the critical issue; we must ensure that early childhood teachers can receive credit and high-quality training toward a degree or for ongoing professional development provided more responsively in the community, with greater participation of professional mentors in the field.

Our solutions must provide professionals with ongoing and enhanced professional development. High-quality inclusion is not possible with untrained personnel. Data from the National Early Intervention Longitudinal Study showed that fewer than half of the ECI practitioners had academic training in the field (Hebbeler et al., 2007). Recently, a study by Snyder, Hemmeter, Sandall, and McLean (2007) demonstrated the effectiveness of on-site coaching for increasing the frequency with which teachers of young children with disabilities identified individual learning targets and embedded intervention in typical classroom activities.

Scalability of individualized instruction. Perhaps one of our most challenging issues is how to effectively promote the use of individually designed instruction for children in inclusive classroom settings at a time when practitioners are expected to do more with less time and fewer resources. With unified early learning standards and evidence-based intervention methods, professionals are often at a loss to meet diverse child needs while following approaches that have been conducted in in-authentic settings and under in-authentic conditions. Also, the often competing demands for accountability on early literacy, social-behavioral competencies, and *functional skills* toward typical performance are often at odds with the reality of the severity of the child's disabilities. We require a "meeting of minds"

to resolve the scalability dilemma and to meet individual and group needs within inclusive classrooms for the benefit of all children.

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