

Meeting the Need: Proposed Early Childhood Special Education Intensive Intervention Competencies for Pre-Service Preparation

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ABSTRACT

Improving outcomes for young children with high-intensity needs requires a high-quality workforce trained in equitable, intensive, individualized instructional practices and supports incorporating culturally and linguistically responsive evidence-based practices (Gunn, 2020) and developmentally appropriate practices (DAP; NAEYC, 2021) Nationally recommended practices (Division of Early Childhood [DEC], 2014) and teacher preparation standards (DEC, 2020) provide the frameworks for early childhood special education training. However, guidance on intensifying individualized instructional practices and supports is needed. The intensive intervention taxonomy (Fuchs et al., 2017) offers educators guidance on improving the effectiveness and intensity of interventions for K-12 students for whom current approaches are unsuccessful. However, more guidance is needed on intensifying instruction in early childhood (0-8 years old). To offer support to early intervention/early childhood special education (EI/ECSE) education preparation programs, we offer an adapted version of the taxonomy that is transformed into competencies that EI/ECSE educators with expertise in supporting young children with high-intensity needs. We ground these competencies in a strengths-based (Wehmeyer, 2019), culturally responsive approach to learning and instruction (Gay, 2010). Next, we aligned these competencies with critical features of early childhood (e.g., naturalistic instruction, family partnerships, DAP). We offer these competencies and a sample program of study to ensure EI/ECSE educators are equipped with intensification competencies through their pre-service preparation to support all young children, including those with high-intensity support needs.

KEYWORDS

Early childhood special education; intensive intervention; developmentally appropriate practice; preservice teacher preparation; data-based decision-making

Early childhood educator preparation programs equip educators to teach and support all young children accessing supports and services through early intervention (EI), early childhood unified/blended education (blended), early childhood (EC), and early childhood special education (ECSE) focused pre-service educator programs. Specifically, educators prepared in all of these licensure areas must be equipped to provide responsive, reciprocal interaction and instruction (DEC, 2020) to young children who require support and services across multiple developmental domains (e.g., young children with multiple disabilities, intellectual disability, developmental disability, autism, behavioral support needs), as well as children who require intensive intervention in one developmental domain (e.g., children with complex communication support needs; Horn et al., 2019). While diverse workforce training pathways exist through EI, blended, EC, and ECSE programs, all are guided by national preparation standards such as the EI/ECSE Standards (DEC, 2020) and the Early Childhood Educators (ECE) Professional Standards and Competencies (NAEYC, 2020).

National Preparation Standards and Initiatives

National professional preparation standards specifically articulate the skills edu-

cators need to serve all young children through learning opportunities highlighting children's strengths and areas of need (DEC, 2020; NAEYC, 2020). Standards articulate broad domains in which educators can display knowledge and skills (Harbin et al., 2005). Standards for supporting joyful and equitable learning opportunities for all young children, including children with disabilities, are further defined in standards produced by early childhood professional organizations (DEC, 2020; NAEYC, 2020). One specific strategy named in these standards includes data-based decision-making (DEC, 2020).

Additional national educational initiatives influencing educator preparation programs also promoted data-based decision-making as fundamental to improving school outcomes (e.g., Every Student Succeeds Act, 2015). Although professional preparation standards and national initiatives have emphasized skills designed to support all young children, including children with disabilities, teachers' experiences suggest data-based decision-making is not commonplace in educational settings today. Teachers rarely engage with data (Datnow & Hubbard, 2016), lack data literacy (i.e., the knowledge and skills to interpret data; Datnow & Hubbard, 2016), and rarely access training on data literacy (Mandinach et al., 2013). Limited data-based decision-making skills may be further sustained in ECSE preservice teacher (PST) preparation given few early learning and development state standards reference young children with disabilities and developmental delays (Bruder & Ferreira, 2021).

Trends in Early Educator Preparation

Educator training for ECSE PSTs historically moved to blended training models to provide knowledge, skills, dispositions, and competencies needed

to support all young children, including those with and without disabilities and support needs (see Mickelson et al., 2023 for a historical review). Recent data, however, suggests training all ECSE PSTs to support all young children may have been an aspirational goal that has resulted in the absence of critical training components such as meaningful field experiences and content expertise for the diversity of strengths and high-intensity support needs (LaMontagne et al., 2002; Mickelson, 2013; Piper, 2007). Further, while blended training is a conceptual emphasis, there is limited evidentiary support for how to enact competencies, experiences, and training to develop high-quality educators who can support the diversity of young children with and without disabilities to guide current practice (Mickelson et al., 2022).

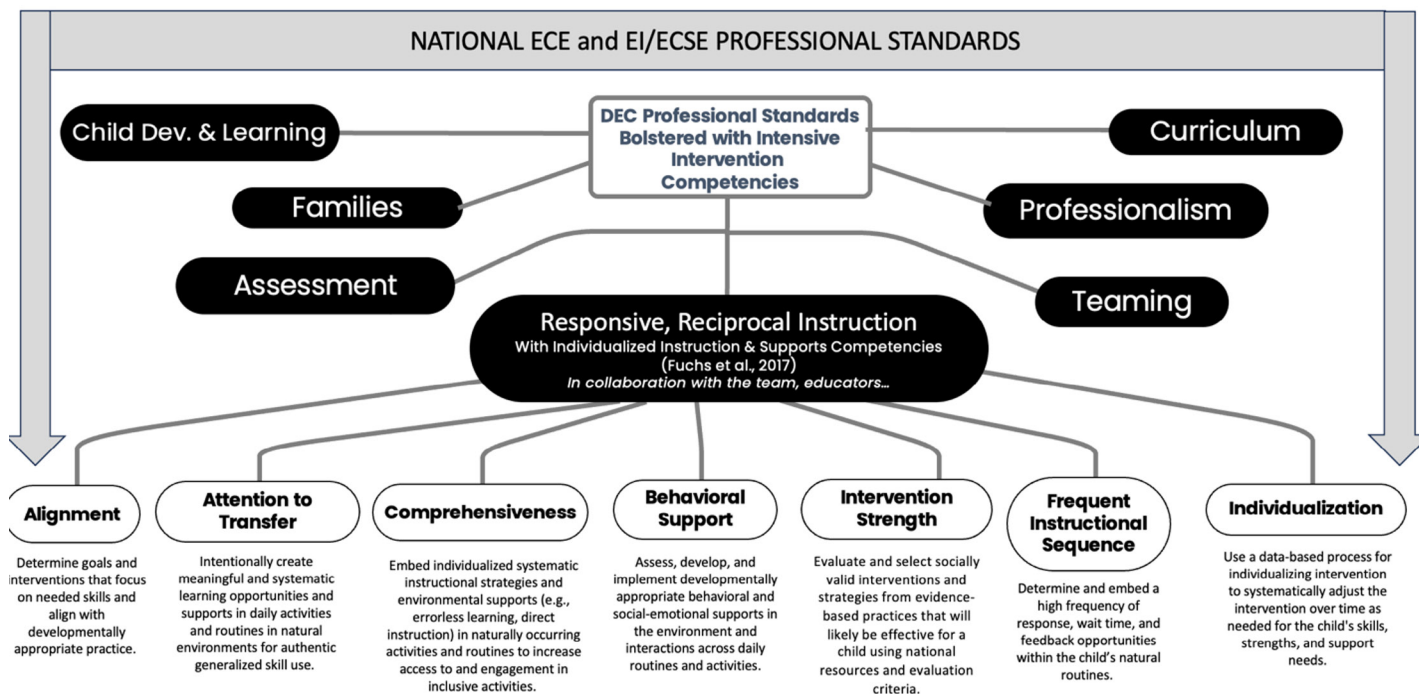
There is room to revise and supplement the well-intentioned ECSE PST program organization, national initiatives, and professional preparation standards in their application to prepare a subset of the ECSE workforce with expertise specifically in supporting young children with high-intensity needs. Although current preparation trends and standards suggest supporting young children with high-intensity needs through data-based individualization is a relative area of need in the field (Bruder & Ferreira, 2021), there is an opportunity to leverage and adapt existing K-12 frameworks (e.g., Fuchs et al., 2017) to provide ECSE pre-service teachers (PSTs) learning opportunities that develop the necessary skillset for acquiring the expertise needed to improve outcomes with and for children with high-intensity needs.

Considerations of leveraging existing frameworks to prepare these experts align with recent calls to action to (a) reframe ways of training ECSE PSTs through blended programming (Mickel-

son et al., 2022); (b) create early learning standards to include children with disabilities (Bruder & Ferreira, 2021); and (c) conceptualize educating young children with disabilities in inclusive environments as a form of justice and equity (Pugach et al., 2020; Wahman et al., 2023). There is a fundamental need for a high-quality workforce that integrates equitable, intensive, individualized data-based intervention incorporating culturally and linguistically responsive evidence-based practices (Gunn et al., 2017; 2020), developmentally appropriate practices (DEC/NAEYC, 2009), and data-based intervention to improve outcomes for young children (Carta, 2019).

Purpose and Audience

In the remainder of this article, we posit one way to transform ECSE PST education is to explicitly integrate data-based decision-making and intensification frameworks into existing ECSE PST professional preparation standards to train experts to address the specific learning strengths and needs of young children with high-intensity needs, which we believe can address the need for equitable and inclusive teacher education (Mickelson et al., 2022; Pugach et al., 2020). To address the need for improved data literacy and data-based decision-making for young learners with high-intensity support needs (Carta, 2019), we propose an approach to teaching intensification competencies for ECSE teacher preparation programs. This paper aims to share seven key intensification competencies through a focused program of study. First, we situate intensive individualized instruction and support within critical early learning multi-tiered and universal systems of support. Next, to adequately reflect and respond to the rich and diverse group of children with high-intensity support needs, we outline the need and ways in which a program can ground instruction

FIGURE 1: ECE and EI/ECSE Professional Competencies

in these competencies in a strengths-based (Wehmeyer, 2019), culturally responsive and sustaining (Gay, 2010), and intensified (Fuchs et al., 2017) approach.

Following, we offer these competencies along with an illustration of their alignment with the national preparation instructional standard (Standard 6; DEC, 2020), the National Center for Intensive Intervention Taxonomy (Fuchs et al., 2017), the DEC Recommended Practices (2014), and Developmentally Appropriate Practice (NAEYC, 2022). Finally, we articulate an example program of study with activities that explicitly teach and evaluate these competencies in a preparation program training EI/ECSE and EC educators.

CENTERING EXPERT TRAINING IN PROFESSIONAL STANDARDS AND EXISTING FRAMEWORKS

National and state standards represent the breadth of skills PSTs must acquire, focusing on collaborative, child-focused

instruction that promotes learning (DEC, 2020; NAEYC, 2020). The EI/ECSE preparation standards (DEC, 2020) note six key areas that align with DEC Recommended Practices (2014) for high quality early learning experiences: (1) child development and learning, (2) family collaboration and partnership, (3) collaboration and teaming, (4) child observation, documentation and assessment, (5) knowledge, application, and integration of meaningful learning, (6) responsive and reciprocal interactions and instruction, and (7) professionalism (ECPC, 2020). The content within *Standard 6. Using Responsive and Reciprocal Interactions, Interventions, and Instruction* emphasizes systematic, embedded instruction across developmental areas (DEC, 2020) for each and every young learner. The question becomes, what does it look like for a PST to demonstrate these standards when individualizing instruction for a young child with high-intensity needs? Explicit competencies in intensive and individualized instruction can guide preparation

programs in articulating what delivering intensive intervention that is developmentally and culturally appropriate for young children with high-intensity needs can look like within Standard 6. Figure 1 depicts the seven proposed competencies for Standard 6.

Teaching Across the Continuum

There are evidentiary universal designs and tiered systems of support for young children with and without disabilities that guide educators in planning and implementing individualized support. For instance, the Pyramid Model (Fox et al., 2003) is an evidence-based, tiered model to support young children's social-emotional competence through universal, targeted, and individualized support across early childhood ages and contexts (Hemmeter et al., 2016). Strategies for engaging in individualized instruction and supports in the context of universal design for learning (Lohmann et al., 2023), response to intervention (Greenwood et al., 2011), and the Building Blocks framework (Sandall et

al., 2019) also support systematic efforts to intensify supports and instruction for young children with and without disabilities. Educators need more guidance on how to use data-based individualization (DBI) to intensify instruction and supports for young children (Datnow & Hubbard, 2016; Mandinach & Schildkamp, 2021). In other words, we need to establish processes for engaging in DBI that are integrated into known evidence-based frameworks and systems to support the learning of young children with high intensity support needs (Al Otaiba et al., 2019).

KEY ASPECTS OF EXPERT TRAINING IN HIGH-INTENSITY NEEDS Strengths-Based, Culturally Sustaining Foundation

Expert training grounded in culturally responsive, sustaining, and strengths-based approaches centers intensive intervention and instruction around utilizing children's strengths as levers for growth. A strengths-based approach celebrates the child and their unique capabilities and characteristics (Niemic, 2017) by viewing them as resourceful and resilient rather than just their disability (Saleebey, 2013). A strengths-based approach uses existing frameworks and resources, such as the social model of disability (Harry & Klinger, 2014) and the Communication Bill of Rights (Brady et al., 2016), by sharing and reiterating these concepts in classes and seminars to ensure PSTs understand and can apply these concepts to their teaching. Another approach to improve EC educators' expectations and attitudes is learning from people with lived experiences, particularly those whose identities have been multiply marginalized as panel guests, seminar speakers, or consultants for their expertise to be leveraged as knowledge generation (Hancock et al., 2021; Beneke & Love, 2022).

Another important aspect of recognizing and building on children's strengths is honoring their cultural identities. As such, these competencies require applying DAP using a sociocultural framework (Rogoff, 2003) paired with culturally responsive teaching (Gay, 2010) throughout coursework, field experiences, and assignments. Culturally sustaining teaching is evidence-based and values the child and family and their beliefs, attitudes, interests, knowledge, and skills, which connects teaching meaningfully to children's and families' lived experiences. Culturally sustaining teaching practices are aligned with the intensification competencies in coursework and fieldwork by having PSTs (a) examine their own culture; (b) acquire knowledge of family cultures; (c) build culturally sustaining practices; and (d) evaluate how they sustained and supported the child's cultural or linguistic expression (Beneke & Love, 2022; Scott et al., 2017).

Intensive Intervention

Another important aspect of instruction for learners with high intensity support needs is using data to inform instruction. Historically, "experimental teaching" used data to inform instruction (Burello et al., 1973; Deno & Mirkin, 1977). Personalized approaches to intervention, recently identified as DBI within special education, involve continually monitoring student responsiveness to evidence-based interventions and systematically introducing adaptations until the student achieves acceptable performance levels (Lemons et al., 2017). This process has empirically developed over time and is currently recognized as an intensive intervention (see Danielson & Rosenquist, 2014; Fuchs et al., 2014). Specifically, evidence-based practices (EBPs) are recommended as the basis for instruction and procedures intensified in response to student-level data (McLe-

sky et al., 2017). The emphasis of DBI on improving learning and behavioral outcomes continues to show promise for students with disabilities who have persistent needs (e.g., Jung et al., 2018).

The National Center for Intensive Intervention (NCII) presents an intensive intervention taxonomy that guides educators in developing, selecting, and adapting EBPs to promote positive outcomes for young children with persistent learning and behavioral challenges. The taxonomy of intensive intervention is at the foundation of the DBI process and is recommended for use to intensify interventions (Fuchs et al., 2017). The taxonomy includes seven dimensions: (1) intervention strength based on research, (2) frequency dosage, (3) behavioral (or academic) support, (4) comprehensiveness, (5) alignment to targeted need, (6) attention to transfer, and (7) individualization. The taxonomy emphasizes that behavioral support should be considered alongside academic intervention for synergistic effects. This is especially critical for early childhood, as these skills influence one another as children develop and can be addressed more quickly in the early years (Arnold, 1997). Although this model was developed for K-12 academic intervention, it is highly relevant for learners of all ages and skill domains (Jung et al., 2018).

ECSE EXPERT INTENSIVE INTERVENTION COMPETENCIES

Expert PST training includes introducing seven competencies that align with the NCII framework to the pre-existing EI/ECSE Personnel Standard 6: *Using Responsive and Reciprocal Interactions, Interventions, and Instruction* (DEC, 2020). Figure 1 displays these competencies in further detail for the reader. Each of these competencies was created by adapting the NCII Intensification Elements (Fuchs & Malone, 2017) to

TABLE 1: Crosswalk of Instructional Practice Guidance and Personnel Preparation Standards with Proposed ECSE Intensive Intervention (II) Competencies for A Young Child with High-Intensity Needs

INSTRUCTIONAL PRACTICE GUIDANCE		PERSONNEL PREPARATION STANDARDS		
Individualized Intensified Intervention Taxonomy (NCII)	DEC Rec. Practices (2014)	Developmentally Appropriate Practice Guidance (NAEYC)	Professional Preparation Standards for EI/ECSE Educators (DEC, 2020)	State Blended Educator Preparation (KSDE)
COMPETENCY 1. INTERVENTION STRENGTH: Evaluate and select socially valid interventions and strategies from evidence-based practices that will likely be effective for a child using national resources and evaluation criteria.				
How well the program works for students with intensive intervention needs, expressed in terms of effect sizes	INS6. Systematic instructional strategies with fidelity		Identify systematic, responsive, and intentional evidence-based practices and use such practices with fidelity...	2.2.7 Developmentally appropriate & research-based practices
COMPETENCY 2. FREQUENCY OF INSTRUCTIONAL SEQUENCE (DOSAGE): Determine and embed a high frequency of response, wait time, and feedback opportunities within the child's natural routines.				
The number of opportunities a student has to respond and receive corrective feedback	INS10. Implement the frequency, intensity, & duration of instruction needed INS7. Use explicit feedback and consequences		Use responsive interactions, interventions, and instruction with sufficient intensity and types of support across activities, routines...	
COMPETENCY 3. ALIGNMENT WITH DAP: Determine goals and interventions that focus on needed skills and align with developmentally appropriate practice.				
How well the program (a) addresses the target student's full set of academic skill deficits, (a) does not address skills the target student has already mastered, and (c) incorporates a meaningful focus on grade-appropriate curricular standards	A4. Conduct assessments in all areas INS4. Plan for and provide the level of support needed INS2. Identify skills to target for instruction, with the family	E. Build on individual children's funds of knowledge, interests, languages, and experiences. B3. (Educators Target) identified learning goals and applicable early learning standards...		3.1.7 Designs, implements, and evaluates curriculum in alignment with standards
COMPETENCY 4. ATTENTION TO TRANSFER: Intentionally create meaningful and systematic learning opportunities and supports in daily activities and routines in natural environments for authentic generalized skill use.				
The extent to which an intervention is designed to help students (a) transfer the skills they learn to other formats and contexts and (b) realize connections between mastered and related skills	A7. Obtain information about the child's skills in daily activities and routines in natural environments			6.1.10 Identify and apply learning accommodations for children with diverse needs
COMPETENCY 5. COMPREHENSIVENESS: Embed individualized systematic instructional strategies and environmental supports (e.g., errorless learning, direct instruction) in naturally occurring activities and routines to increase access to and engagement in inclusive activities.				
The number of explicit instruction principles the intervention incorporates,	INS6. Use systematic instructional strategies with fidelity INS4. Plan for and provide the level of support needed for the child to learn	Make meaningful connections a priority in the learning experiences they provide each child.	... identify systematic, responsive, and intentional evidence-based practices and use such practices with fidelity to support young children's learning and development across all developmental and academic content domains	6.1.8 Provide integrated systemic approach to meeting the needs of all children, including struggling (learners)

BEHAVIORAL SUPPORT: Assess, develop, and implement developmentally appropriate behavioral and social-emotional supports in the environment and interactions across daily routines and activities.

The extent to which the program incorporates (a) self-regulation and executive function components and (b) behavioral principles to minimize nonproductive behavior	INS1. Identify child's strengths, preferences, and interests	C. A system is in place to collect, make sense of, and use observations, documentation, and assessment	Promote young children's social and emotional competence and communication, and proactively plan and implement function-based interventions to prevent and address challenging behaviors.	1.3.8 Applies principles of effective classroom management to establish clear rules and standards of behavior
	INT1. Promote social-emotional development			
	E3. Modify and adapt the physical, social, and temporal environments			

INDIVIDUALIZATION: Use a data-based process for individualizing intervention to systematically adjust the intervention over time as needed for the child's skills, strengths, and support needs

A validated, data-based process for individualizing intervention, with which the special educator systematically adjusts an intensive intervention platform over time to address the student's complex learning needs	A10. Use assessment tools with sufficient sensitivity to detect child progress, especially for the child with significant support needs	B. Use their knowledge of each child and family to make learning experiences meaningful, accessible, and responsive	Plan for, adapt, and improve approaches to interactions, interventions, and instruction based on multiple sources of data across a range of natural environments and inclusive settings.	5.1.9 Designs and implements developmentally appropriate lessons & techniques to evaluate the effectiveness
	INS3. Gather and use data to inform decisions about individualized instruction.	B4. Individualize teaching strategies to meet the specific needs of individual children, including children with disabilities		5.1.13 Adjusts instruction based on assessment data

Note. Each proposed competency spans the aligned instructional practice guidance (NCII, DEC RPs, DAP) and Personnel Preparation Standards (DEC, 2020; KSDE) from left to right to indicate to indicate what knowledge, skills, and dispositions are required to serve young children with high-intensity needs in ways that address or use these standards or practices. The recommended practices and standards are abbreviated to include the most relevant aspect that overlaps with the proposed competency.

support DBI when focused explicitly on individualized instruction and support. These elements were adapted to (a) identify competencies ECSE educators should demonstrate to serve young children with high-intensity support needs; (b) build a curriculum of coursework and fieldwork experiences around these competencies; and (c) empower future ECSE teachers with skills to individualize and intensify instruction and supports for young children with high-intensity support needs. As displayed in Table 1, we developed the ECSE Intensive Instruction competencies for birth through 8 years old through analysis of alignment with the NCII taxonomy, National Preparation Standards (DEC, 2020), DAP, and DEC Recommended Practices (RPs). To illustrate how to consider alignment with state standards for preparation programs that require state rather than national standards, we provided Kansas state standards to support individualizing the ECSE expert training in high-intensity needs to readers. Al-

though this exemplar has been provided, national preparation standards should be utilized following ECPC guidelines.

ECSE expert educators should demonstrate these competencies to at least one young child with intensive instruction and support needs during their preparation so they can have experiential learning with cyclical opportunities for feedback and rehearsal necessary to equip them as experts. We acknowledge that all students are different and only one student may be insufficient in learning the diverse strengths and needs of young children; however, through the application of these knowledge, skills, and dispositions represented within these competencies, we believe PSTs will be equipped for the data-based individualization process individualized to their future students.

Within the table, each proposed competency spans the aligned instructional practice guidance (NCII, DEC RPs, DAP) and Personnel Preparation Standards (DEC, 2020; KSDE, 2015) from

left to right to indicate what knowledge, skills, and dispositions are required to serve young children with high-intensity needs in ways that address or use these standards or practices. While there is substantial overlap between these, the competencies we propose differ in a few critical ways from existing guidance. First, these are targeted for demonstration and use with one child, even through group-based delivery in natural settings, to highlight how ECSE expert teachers need to deliver individualized instruction and support systematically within and across activities to individual children. This focus on one child emphasizes the need to ensure expert PSTs can adequately support young children with high-intensity needs across all areas to ensure they do not get overlooked in different activities, inclusive environments, and contexts (Dingel et al., 2004). Second, some cells are blank because there are gaps in the existing models/standards or frameworks, where no singular set encompasses all aspects of the NCII model

in a developmentally appropriate way for young learners. Third, and finally, the competencies differ from standards, recommended practices, and developmentally appropriate practice guidance because they represent observable and descriptive skills (e.g., explicit instruction, opportunities to respond) that PSTs can practice and demonstrate on which they can be assessed through fieldwork and coursework (Dingel et al., 2004).

The resulting competencies adapt the NCII taxonomy to ECSE and include (a) intervention strength based on research and family perspectives; (b) frequent instructional sequence (dosage); (c) behavioral support; (d) comprehensiveness; (e) alignment with DAP; (f) attention to transfer in natural environments; and (g) individualization. Below, we articulate each competency, critical skills within each, and our approach to adapting them to support young children in the context of ECSE educator training. To identify the foundation of the competencies from NCII taxonomy on intensifying intervention, we have maintained the language of their taxonomy to the greatest extent possible, even when that language may represent ableist structures such as the medical model of disability deficit thinking (e.g., the term dosage). We added contextual information where necessary for early childhood (i.e., “dosage” from NCLII is “frequent instructional sequence.” Although many competencies have overlapping features (i.e., intervention strength and data-based individualization), we highlight primary alignment for each. Each competency begins with a core aspect of EI/ECSE: partnership with families and interdisciplinary team members. Below, we specifically articulate the competencies and alignment with DEC EI/ECSE Standards (DEC, 2020) and NCII Taxonomy, given the focus on children with disabilities and high-intensity needs.

As noted in Figure 1, the national

professional standards are over-arching these aims, while each of the following competencies are specifically designed for enhancing EI/ECSE Standard 6 (DEC, 2020). Further, some exemplar skills and dispositions from DAP and RP guidelines were integrated in each competency to provide tangible skills that could be measured by educator preparation programs during candidate and program evaluation measures. A summary of these skills and dispositions within each competency can be found in Table 1 and the narrative text below. As the reader moves through the remainder of the article, we encourage references to Figure 1 as a global framing of the professional standards. Table 1 should be used as an in-depth reference to explore each competency and associated skills and dispositions within the professional preparation standards (Figure 1; final two columns of Table 1) to support integration with instructional practice guidance (first three columns of Table 1) from NCII, DEC, and NAYEC to develop expertise in young children with high-intensity needs.

ECSE II Competency 1. Intervention Strength

In collaboration with the team, educators will evaluate and select socially valid interventions and strategies from evidence-based practices that will likely be effective for a child using national resources and evaluation criteria. This competency aligns with DEC INS6 (DEC, 2014). Educators are guided to select and use systematic instructional strategies based on the evidence (empirical, clinical) demonstrating the likelihood of positive outcomes for a specific child. Like the NCII taxonomy, ECSE PSTs learn to select from practices with empirical evidence. Traditional evaluation of effect size estimates to determine intervention strength may be uncommon in the ECSE literature for two reasons:

(1) limited access to effect sizes from single case research, and (2) historical exclusion of learners from marginalized groups in studies (Steinbrenner et al., 2020). Packaged programs or interventions most likely to be evaluated in a randomized control trial are minimally available due to the limited inclusion of young learners with high-intensity needs. Instead, children’s idiographic needs often require individualized combinations of discrete interaction practices (i.e., opportunities to respond, natural reinforcement; Ford et al., 2022) and strategies (i.e., visual supports; Zimmerman et al., 2019). Empirical evidence should be combined with child and family input, preferences, and clinical judgment to ensure instructional decisions center on child and family priorities.

ECSE II Competency 2. Frequent Instructional Sequence (Dosage)

In collaboration with the team, educators will determine and embed a high frequency of response, wait time, and feedback opportunities within the child’s natural routines. For young children with disabilities, opportunities to respond (OTRs) must be embedded within and across their daily routines and natural contexts (DEC INS10, DEC 2014). While the NCII Taxonomy incorporates OTRs with other dosage elements (instructional group size, duration, number of sessions; Fuchs et al., 2017), we propose maintaining dosage within ECSE primarily through OTRs for the focal skill within natural routines, which aligns with empirical work demonstrating the number of OTRs delivered across different instructional contexts and delivery dimensions (i.e., group size, session duration) can produce desired growth (Van Camp et al., 2020). We added the critical component of wait time to ensure an OTR is effectively presented with time to process and develop a response, which can improve

children's accuracy (Doyle et al., 1990). Last, in alignment with NCII, we include natural and positive feedback.

ECSE II Competency 3. Alignment with DAP

In collaboration with the team, educators will determine goals and interventions that focus on needed skills and align with DAP. The NCII taxonomy incorporates alignment with academic content and focuses on developing new and necessary skills. For ECSE, we propose rather than academic content, in the absence of a grade-level general education curriculum and concerning the multi-domain focus of EI/ECSE, we align with DAP and apply the curriculum they develop for all young learners. Specifically, for children with high-intensity needs, alignment with standards (B3) builds on children's "funds of knowledge" (i.e., what they already know and contribute to the learning experience). In addition, we specify these goals should be developed in collaboration with the family (INS 2. With family, identify skills to target). We also supplement the NCII element with specific DEC RPs for Assessment (A4. Assess all areas of development and behavior to learn about strengths, needs, preferences, and interests), Environment (E4), and Instruction (INS5. Embed instruction within and across routines; INS6. Use systematic instructional strategies).

ECSE II Competency 4. Attention to Transfer

In collaboration with the team, educators will intentionally create meaningful and systematic learning opportunities and supports in daily activities and routines in natural environments for authentic generalized skill use. Attention to transfer and generalization are inherent aspects of critical EI/ECSE developmental practice. The ECSE II competency closely aligns with the NCII taxonomy element and connects with DEC

RP within Assessment (A7. Obtain information about skills in daily activities), Environment (provide services in natural and inclusive environments), and Instruction (INS2. Identify socially meaningful skills; INS4. accommodations and support needed to participate; INS5. Embed instruction within and across routines). Finally, attention to transfer was adapted for ECSE with the addition generalized skill use in natural environments.

ECSE II Competency 5. Comprehensiveness

In collaboration with the team, educators will embed individualized systematic instructional strategies and environmental supports (e.g., errorless learning, direct instruction) in naturally occurring activities and routines to increase access to and engagement in inclusive activities. Though explicit instruction is often used for academic skills in K-12 instruction (Hughes et al., 2017), the principles of explicit instruction, such as the systematic delivery of simple instructions, modeling responses, and fading supports, are also core components of systematic embedded, individualized instruction for young children (Riccomini et al., 2017). Within RPs, these practices align with using systematic instructional strategies with fidelity (INS6). Providing ECSE PSTs comprehensive instruction in various effective systematic instructional or environmental procedures will support them in the critical individualization of EBPs needed to support the diverse array of young children in EC (Ledford et al., 2016).

ECSE II Competency 6. Behavioral Support

In collaboration with the team, educators will assess, develop, and implement developmentally appropriate behavioral and social-emotional supports in the environment and interactions across daily routines and activities. This competen-

cy remains close to the original NCII taxonomy; rather than focusing solely on executive functioning and self-regulation, we concentrate on social-emotional competence and communication skills. Access to high-quality social-emotional intervention centered on children's cultural, linguistic, and racial identities is a critical form of justice in early childhood contexts (Wahman et al., 2023). Further, young children's behavioral performance is critically linked to their communication and language skills (Chow et al., 2020), thus necessitating behavioral support to address skills in tandem as they develop in young children: social-emotional competence, language, and communication skills and prosocial behaviors. The competency aligns closely with DEC RPs for Instruction (INS1. Contingent responding and social-emotional development; INS3. Supporting communication development; INS9. functional assessment), Environment (E3. Ensure the physical, social, and temporal environment promotes access and participation) and Family (F4. Developing plans and choosing outcomes meaningful to the family).

ECSE II Competency 7. Individualization

In collaboration with the team, educators will use a data-based process for individualizing intervention to systematically adjust the intervention over time for the child's skills, strengths, and support needs. While individualization based on progress monitoring is inherent to quality early education, more frequent data collection (i.e., daily, weekly, as opposed to quarterly) and individualization is necessary for individualized support. Within RPs, these ideas are represented within Assessment (A10. Use tools with sufficient sensitivity; A7. Uses clinical reasoning and assessment for child's current levels; A9 Uses systematic, ongoing assessment to plan activities and monitor progress) and Instruction (Ins1,

FIGURE 2: Program of Study Case Example

Semester 1	Semester 2	Semester 3
<p><u>Overview of Early Childhood and Early Childhood Special Education</u></p> <ul style="list-style-type: none"> Introduce Developmentally Appropriate Practice (<i>Alignment with DAP</i>) Introduce DEC Recommended Practices (<i>ALL</i>) Introduce ECSE II within Tiered Systems of Support (<i>ALL</i>) Natural Routines and Environments for Young Learners (<i>Alignment with DAP, Comprehensiveness, Attention to Transfer</i>) Teach Evidence-Based Practice Process incorporating learner preferences (<i>Intervention Strength</i>) <p><u>Assessment Methods in Early Childhood Education</u></p> <ul style="list-style-type: none"> Measure Behavior within Natural Environments via Authentic Assessment (<i>Alignment with DAP</i>) Understand environmental contingencies (<i>Intervention Strength, Behavioral Support</i>) Daily Progress-Monitoring on individualized goals (<i>Individualization</i>) Ecological Congruence Assessment (<i>Attention to Transfer</i>) Communication Bill of Rights (Brady et al., 2016; <i>Attention to Transfer, Alignment with DAP</i>) Assignment on Selecting Appropriate Data-Based Decision-Making Approach (Kumm et al., 2018; <i>Individualization</i>) 	<p><u>Curriculum and Methods for the Learner in Early Childhood Education</u></p> <ul style="list-style-type: none"> Incorporate intensive instruction in lessons for individual children through case studies and observations, (<i>Comprehensiveness</i>) Emphasize antecedent-based interventions within daily routines and natural environments, leveraging national resources (e.g., AFIRM Modules for Toddlers; Steinbrenner et al., 2020; <i>Behavioral Support</i>). Examples across a child’s day and curricular approach (e.g., Montessori) or environment (<i>Individualization, Attention to Transfer</i>). <p><u>Supporting Children with Significant Learning and Behavioral Support Needs</u></p> <ul style="list-style-type: none"> Focus on environment and high-quality instruction (Love & Beneke, 2021; <i>Behavioral Support</i>). Explicit case study and practice in worksite of all 7 competencies (<i>ALL</i>) Select EBPs and strategies using national resources (e.g., Leko et al., 2019) and input from people with lived experience (<i>Alignment, Attention to Transfer, Intervention Strength, Individualization, Love and Beneke, 2021</i>). 	<p><u>Family and Interprofessional Collaboration in Special Education</u></p> <ul style="list-style-type: none"> Routines-based interviewing (McWilliam et al., 2009) with families of young children with disabilities and educators serving children in inclusive settings (<i>Attention to Transfer</i>). Integrate learner and family culture and preferences in intervention selection and implementation (<i>Alignment with DAP, Attention to Transfer, Intervention Strength</i>)
Semester 4	Semester 5	Semester 6
<p><u>Preschool and Kindergarten Methods</u></p> <ul style="list-style-type: none"> Activity Matrix: Child-level opportunities to respond (OTRs) within natural routines (task directions at the child’s language level and response options via the child’s communication mode; <i>Frequent Instructional Sequence</i>). Intervention plans with feasible and reliable measures of intervention delivery (<i>Individualization</i>) <p><u>Infant/Toddler Methods</u></p> <ul style="list-style-type: none"> Activity Matrix & Data Collection: Embed and maximize learning opportunities through play that honors the child’s unique interests, strengths, and cultural practices (Love & Beneke, 2021; <i>Alignment</i>). Use child-level opportunities to respond (OTRs) within natural routines (<i>Frequent Instructional Sequence</i>). Family Partner Project: Support other educators and caregivers in selecting effective practices from national resources and clinical and family expertise (<i>Intervention Strength, Frequent Instructional Sequence</i>). 	<p><u>Preschool-Kindergarten Practicum</u></p> <ul style="list-style-type: none"> Task analyze and take data on various opportunities within family and school routines where a child naturally needs to use a focal skill (<i>Instructional Sequence, Alignment with DAP, Attention to Transfer</i>). Systematic self-reflection and data collection on the number of opportunities they presented, (2) duration of wait time, and (3) feedback provided (<i>Frequent Instructional Sequence</i>). <p><u>Communication Assessment & Supports</u></p> <ul style="list-style-type: none"> Student Communication Profile and Assessment across form-function-content-context to develop a communication matrix (<i>Frequent Instructional Sequence; Attention to Transfer, Comprehensiveness, Behavioral support</i>) Communication Skills Instruction and Support Plan (<i>Alignment; Intervention Strength Behavioral Support</i>) 	<p><u>Masters Project Embedded within Infant/Toddler Practicum</u></p> <ul style="list-style-type: none"> Partnership with a family and education team to engage in the complete DBI process in alignment with DAP (<i>Alignment with DAP</i>) Co-develop a goal and identify individualized instruction and support needs (<i>Frequent Instructional Sequence</i>) through RBI (<i>Comprehensiveness</i>), eco-behavioral analysis (<i>Attention To Transfer</i>), child preference, and communication support (<i>Behavioral Support</i>) Use practical instructional approaches (<i>Intervention Strength</i>) Collect data; and evaluate and modify instruction based on child progress (<i>Individualization</i>). Communicate data with the family and educators to gather their input on progress and adaptations and build data-based literacy (<i>ALL</i>).

Identify each child’s strengths, preferences, and interests). This concept is also represented across DAP (Individualizing teaching strategies and knowledge of the child and family; D. Effectively implements a comprehensive curriculum with individualized goal attainment). We operationalize that this competency requires PSTs to collect individualized data via different sampling methods (Lane et al., 2014) across developmental domains and analyze time-series graphs.

CASE STUDY: OPPORTUNITIES FOR PSTS TO PRACTICE AND DEMONSTRATE ECSE II COMPETENCIES

The following is a case example of how these competencies (*explicit focal competencies are italicized in parentheses*) can be applied in preparation programs to support candidates in developing skills related to data-based

individualization. This is a program of study for an accredited initial licensure-leading blended program (0-5 years old) that utilizes both state and national standards (DEC, 2020). We aim to share how we explicitly link the competencies to practice and demonstrate within and across courses for other pre-service educator preparation instructors to consider these and other ways to embed the competencies within their programs and help bring developmentally appropriate intensive intervention to all young children with high-intensity needs.

FUTURE DIRECTIONS

There is an increasing need for a high-quality workforce equipped to create enriching, joyful, culturally relevant, and effective learning experiences for all young children with and without high-intensity support needs. By Integrating DEC Professional Preparation Standards, DEC RPs, DAP, and National

Center for Intensive Intervention (NCII) Framework into these ECSE Intensive Intervention competencies, PSTs may acquire skills and dispositions required for high-quality teaching of children with disabilities and developmental delays. Although these competencies are grounded in empirical support (Fuchs et al., 2017) and national guidance (DEC, 2020), empirical studies via formative and summative assessment are needed to evaluate the effects of training PSTs to acquire these competencies (see Robertson et al., 2012; Scott et al., 2017 for examples). We hope that educators equipping educators in any early intervention, early childhood special education, or blended program with these competencies will result in a community of ECSE educators who can provide intensive instruction and support for the children who may benefit from it as a form of ensuring equitable access to high-quality teaching and improved outcomes.

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