

# Preparing Occupational Therapists for Effective Family-Centered Best Practice in Early Intervention

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The State University of New York (SUNY) Downstate's occupational therapy (OT) Program has worked over the last decade and a half providing advanced training in early intervention (EI) through 3 OT programs for practicing and preservice occupational therapists. There are many challenges in the preparation of entry-level practitioners to work effectively using family-centered best practices. This article describes a family partnership experience (FPE), which is part of SUNY Downstate's advanced training in EI. This article outlines the evolution of our FPE through 3 advanced training programs. In these FPEs, the OT students spend time with families who receive EI during their daily lives. Students complete assignments to identify the families' priorities and concerns, understand roles and routines, and assist families to access community resources. Through this FPE, students learn about the family's perspective. This article presents quantitative and qualitative data of the FPE through students' report in course evaluations, pre- and post-self-assessed competency, and informal interviews over the 3 higher education OT programs. **Key words:** *early intervention, education, embedded coaching, family-centered best practice, occupational therapy*

**T**EACHING FUTURE occupational therapy (OT) practitioners to work in early intervention (EI) has long been an academic challenge. The philosophy of entry-level OT education has traditionally focused on

client-centered practices over the years (Law, 1998). Early intervention, on the contrary, has emphasized the importance of including the child's family in the intervention across disciplines. However, the way in which EI professionals engage the family in their interventions with children has evolved with research demonstrating the importance of early interventionists working closely within the context of the family (Division for Early Childhood, 2014). Entry-level OT education programs promote specific intervention strategies across the life span and spend little time focusing on this specialized area of practice with infants, toddlers, and their families (Case-Smith et al., 2007; Handley-More, Wall, Orentlicher, & Hollenbeck, 2013). The literature describes aspects of EI best practices that focus on EI professionals collaborating with families when working with infants and toddlers with disabilities in their homes; however, there are different terms that have been used interchangeably, which include

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family-centered, routines-based, relationship-based, participation-based, and embedded coaching (American Occupational Therapy Association [AOTA], 2010; Dunst, 2015; Handley-More et al., 2013; Jennings, Hanline, & Woods, 2012; Keilty, 2016; McWilliams, Casey, & Sims, 2009; Watson & Neilsen Gatti, 2012). In the New York City Early Intervention Program (2018), early interventionists are expected to engage in embedded coaching with families, which is a combination of embedded interventions and collaborative coaching where interventionists collaborate with families through respecting the family's style and culture to build on the child's and family's capacities, interests, and strengths within their goals, concerns, priorities, resources, and routine activities (Keilty, 2016). Interventionists use observation, coaching, and feedback to families to support, enhance, and build ongoing communication and collaboration with the EI team members, including the family, wherever children receive EI services (in the home, a center-based EI program, a facility, a childcare center, or other location requested by the family).

It has been well documented that EI professionals across disciplines need advanced training to work effectively within the family system (AOTA, 2010, 2014; Bruder & Dunst, 2005; Campbell, Chiarello, Wilcox, & Milbourne, 2009; Chiarello & Effgen, 2006; Handley-More et al., 2013; Jennings et al., 2012; Stayton, 2015). However, not all early interventionists know how to coach parents and caregivers (Friedman & Woods, 2012; Meadan, Douglas, Kammes, & Schraml-Block, 2018). Innovative strategies that allow preservice interventionists direct experience with families are recommended for effective preparation of therapists to work collaboratively with families from diverse backgrounds in their homes and with professionals across disciplines in EI (AOTA, 2014; Campbell et al., 2009; Case-Smith et al., 2007; Catalano, Chiariello, Long, & Weaver, 2015; Stayton, 2015).

Curriculum in entry-level OT education programs typically includes a rich back-

ground in human development across the life span, neurology, and anatomy; infant mental health; activity, behavioral, and environmental analysis; and occupational performance to prepare for practice in EI (AOTA, 2010; Clark & Kingsley, 2013). However, evidence over the years suggests that entry-level training may not be adequate for the occupational therapist entering the field of EI to work effectively with young children and their families, because their clinical experiences include patients across the life span, leaving little exposure to infants and toddlers with and without disabilities and their families (Bruder & Dunst, 2005; Case-Smith et al., 2007; Chiarello & Effgen, 2006; Handley-More et al., 2013; Stayton, 2015). According to a survey conducted by Chiarello and Effgen (2006), families expect EI providers to come with a basic skill set regarding knowledge of the EI system, as well as a commitment to provide effective interventions with the child and the family. Providing effective interventions also requires that EI providers appreciate the child, actively engage the family, and share intervention information with the multidisciplinary team. Although research demonstrates the importance of families with improving child outcomes, EI providers across disciplines including occupational therapists continue to struggle with this basic, yet essential skill set (Bruder & Dunst, 2005; Elenko, 2016; Guralnick & Bruder, 2016; Meadan et al., 2018).

The SUNY Downstate OT program has worked over the last decade and a half to address this gap in OT preparation through the development and progression of three EI training programs that build upon each other and emphasize the family unit. A family partnership chart outlines the curriculum of these programs and highlights our focus ensuring that students have direct experience with families in their homes, coined The Family Partnership Experience (FPE).

The initial program secured federal funding for an advanced training program in 2003 for the development of an early intervention certificate program (EICP) to prepare

practicing occupational therapists who wanted to work in EI (U.S. Department of Education, Office of Special Education [2003–2009] Grant #H325A030062). Although the EICP was successful in better preparing currently practicing occupational therapists to work with infants with disabilities and their families in 2008, the federal government changed its funding to support preservice (entry-level) training of EI professionals. Therefore, the OT Program secured federal funding (U.S. Department of Education, Office of Special Education [2008–2013] #HR325A03006) to develop the early intervention specialization program (EISP) for preservice occupational therapists, which was incorporated into the entry-level master of science OT curriculum.

To further enhance the OT student's experiences with infants with disabilities and their families and multidisciplinary professionals, an academic partnership was formed with the New York City Department of Health and Mental Hygiene, Bureau of Early Intervention (BEI) with other city interprofessional higher education programs to provide future interventionists with advanced interdisciplinary education and intensive clinical training in this specialty area of EI. The goal of this partnership has been to focus on family-focused best practice strategies such as embedded coaching (Friedman & Woods, 2012; Keilty, 2016; Meadan et al., 2018). Therefore, an elective program called the specialization in early intervention (SEI) for a selected group of entry-level OT students was incorporated into the OT program master of science curriculum. The other programs include five City University of New York programs: Early Childhood Special Education (Brooklyn College and Queens College), Speech-Language Pathology (SLP; Lehman College and Brooklyn College), and Social Work (SW; Hunter College). Embedded coaching strategies, as well as interdisciplinary experiences with the five programs in the NYC BEI academic partnership, are incorporated into the current SEI.

Although the curriculum of the five EI training programs varies, students from differ-

ent disciplines (e.g., OT, SLP, EC SE, SW) in each of the programs emphasize content recommended by the Workgroup on Principles and Practices in Natural Environments (2008) that developed *Key Principles for Providing Early Intervention Services in Natural Environments*. Specifically, the following principles are incorporated into all of the EI training programs: (1) Infants and toddlers learn best through everyday experiences and interactions with familiar people in familiar contexts; (2) All families, with the necessary supports and resources, can enhance their children's learning and development; (3) The primary role of a service provider in EI is to work with and support family members and caregivers in children's lives; (4) The EI process, from initial contacts through transition, must be dynamic and individualized to reflect the child's and family members' preferences, learning styles, and cultural beliefs; (5) Individualized family service plan outcomes must be functional and based on children's and families' needs and family-identified priorities; (6) The family's priorities, needs, and interests are addressed most appropriately by a primary provider who represents and receives team and community support; and (7) Interventions with young children and family members must be based on explicit principles, validated practices, best available research, and relevant laws and regulations.

## THE FAMILY PARTNERSHIP EXPERIENCE

All three university programs (practicing and preservice) have successfully incorporated clinical experiences that require students to engage with families in their homes as part of each program's curriculum through the FPE. This family exposure ensures that OT students obtain an in-depth understanding of the perspectives and experiences of families receiving EI services and provides students with opportunities to observe infants with and without disabilities in their natural settings and apply these family-centered best practices. The initial EI program, EICP, focused on preparing practicing OT providers

whereas two more recent programs, EISP and SEL, focused on preservice OT students. The challenges students faced with the FPE in all three programs differed. Although we learned from each experience, student engagement with infants and their families required different assignments to be completed during the FPE. These assignments are continuously evolving and changing with each successive program due to unique resources and situations that occur. Each year we reevaluate the needs of those students and how best to address incorporating these experiences for them. A description of the FPE in each training program is described in the following sections.

### **Early intervention certificate program, 2003–2009**

The EICP program (2003–2009) focused on preparing practicing occupational therapists ( $N = 75$ ). Of these occupational therapists, 40% of them worked in practice areas other than pediatrics. Recruitment of families was through early childhood agencies, and families were given a gift card for their participation. The EICP students followed the assigned family for 1 year of the program and completed 100 hr to finish the following four assignments. First, they were required to interview families about their roles, routines, and interests using the *Activities and Routines—Families, Priorities and Concerns* form (Campbell, 2005; McWilliams et al., 2009) to learn what was most meaningful to them. Second, in collaboration with the family, identify important areas of concern for them from the interview. The student selected at least one of these family-reported concerns and helped them with what was identified. Third, students developed educational materials to help the family with something that they found challenging to do on their own or with which their current therapist had been unable to help. The fourth assignment was to either use this information to help families access desired community resources or to help with something else in the community that was challenging for the

family. Examples included (1) helping a parent who was returning to work to find a day care for his or her child with a developmental disability including compiling information, developing interview questions for the parent pertaining to his or her child's needs, and going on visits to potential programs with the family, and (2) helping a family engage in dining out experiences with a child with multiple sensory processing issues by providing education in predining sensory input, dining out activities, and a behavioral plan. The focus is for the OT student and the family to collaborate on strategies to access these community resources in order to develop strategies to make it easier and more enjoyable in the future.

### ***Family routines and outings***

Students were encouraged during their FPE visits to engage in family routines as they naturally occurred at home or in the community. Students experienced “hanging out” during routine household activities, as well as accompanying families to doctor visits, waiting in line for Woman, Infant, and Children food program, or attending a community library or mommy-and-me programs. They often engaged with the family in their process of accessing the community. This may have included managing strollers or equipment to taking various modes of public or private transportation. Often, the experiences were typical family things that families do, and other times they had a family with a child with a unique diagnosis and many limitations. They observed families not knowing or avoiding their time together, or alternate caregivers engaging in family routines. Sometimes, a stay at home mom, overwhelmed with a newly diagnosed child with Down's syndrome, needed help coordinating her schedule of numerous medical appointments and daily routines. Other times, a family with twins, one who has autism, wants to find a class that can benefit both children, and they are at a loss to find a place that would be inclusive for all. All of these experiences helped them view the family in a different light and see not

only the typical family challenges but also the added day-to-day challenges of having a child with developmental delays.

Although many of the families engaged in family routines throughout the day, some were overwhelmed by the added burden of having a child receiving EI on top of the typical family routines. The FPE broadened students' perspectives and made them think beyond what they learned in their OT education when they engaged with families. Furthermore, this gave OT students a place to practice coaching strategies and build effective communication and interaction with caregivers, none of which was part of their entry-level education.

### **Early intervention specialization program, 2008–2013**

The EISP students were preservice master's-level OT students and completed all EISP requirements before they graduated from the OT program. The students were assigned a family to follow for three semesters, completing as many hours over those semesters as mutually agreed upon with the family. Students completed a family log to document and reflect on their experiences. On average, students completed 8–12 hr each semester with the family. They also completed the family interview and subsequent assignments as described previously. The biggest challenge was finding families who were able to participate and continue seeing the students through this time. Many families were transitioning out of EI during this time and that made it difficult for students as the family's needs were changing, as well as scheduling.

For the preservice OT students, this FPE was eye-opening. Through their visits, they not only saw the challenges families face in their day-to-day routines but they had the opportunity to engage directly with families to problem solve situations. The students were more open minded and collaboratively engaged with families. This experience allowed students to use their observations to practice coaching and help families more with what families truly needed rather than a therapeutic agenda. These were novice occupational ther-

apists developing skills needed as they begin their careers.

### **Specialization in early intervention, 2014 to present**

The current SEI program continues to require that the students participate in the FPE. The first cohort of students began with the families in the summer semester of their second year in the OT program. Families were recruited through local early childhood agencies. Unfortunately, recruiting and retaining families were challenging due to the transition into preschool, difficulty with scheduling, and frequent cancellations. It became a challenge to try to find new families to participate and then for students to fit them into their schedules as they got busier with more intense coursework. One student was able to find a family when she began her first pediatric clinical internship. The student began to engage with the family by acting as their clinician, understanding their therapeutic needs, and getting to know them as a family at the same time. Feedback obtained from the students at the end of the program indicated that many students felt spending nontherapy time helped students understand life from the family's perspective. Therefore, for the next cohort, the FPE was completed during spring semester of the second year in the OT program simultaneously with their pediatric clinical internship.

Along with their pediatric clinical supervisor, the SEI OT student chose a family who was willing to volunteer. Students participate on an ongoing basis in typical family routines and activities in addition to participating in regular scheduled therapy visits. Students complete the same assignments as described in the previous section. The students maintain an ongoing family process log of all their family visits and contacts, and this is the basis for discussion in the SEI courses. This gave faculty an opportunity to engage in didactic learning and reflect on what students were experiencing together. The time to engage in reflection is essential to this process and allows the students to discuss in an open forum with their fellow SEI classmates. In

reflection, students can take the time to process their clinical interactions and observations in order to return to families with a better understanding. Students also share ideas that they can bring back to the families.

At the end of the students' pediatric clinical placement and their family partnership time, the SEI student asks the family to complete *The Measure of Processes of Care (MPOC): A Means to Assess Family-Centred Behaviours of Health Care Providers* (King, Rosenbaum, & King, 1995), which assesses the family-centeredness of the practitioner. This helps students reflect on their own behaviors and skills as they begin their full-time clinical placement, one of which is in an early childhood setting. This provided an evaluation of the student's family centeredness only and not the families' viewpoints about the FPE. Unfortunately, no other data from the families were obtained. In the future, data collection will include participating families' perspectives as a vital understanding of the FPE.

## EVALUATION OF THE FPE

Throughout each of these three higher education OT programs, both quantitative and qualitative measures were obtained through course evaluations, pre- and post-self-assessed EI competency tool, and informal interviews with students to determine the importance of their clinical experience in the FPE.

### Quantitative data

The OT students course evaluations throughout each of the programs ( $N = 33$ ) unanimously responded that they "strongly

agreed" with the importance of their experience with the FPE.

Pre- and post-self-assessed EI competencies of preservice students assessed change in their understanding of family-centered best practices. Specifically, students in the preservice, entry-level master of science OT program, students in the EISP program, and students in the current SEI program completed a Self-Assessed Competency Pretest. This pretest included 10 major concepts consisting of 31 items that measured their knowledge of *the Key Principles for Providing Early Intervention Services in Natural Environments* (Workgroup on Principles and Practices in Natural Environments, 2008). Students completed both measures before beginning the specific EI program and again as a posttest after completing all program requirements.

Item 5 on the pre/posttest is intended to evaluate student's competency with understanding and applying family-centered intervention principles. This item asks students to rate their level of competency using a 5-point scale (1 = *I have never heard of this competency* through 5 = *I have experienced this many times, can apply it, and have refined my skills in this area*) for the following statements: (1) Demonstrate ability to incorporate family into treatment sessions; (2) Acknowledge cultural values of family members and their relationship to intervention strategies; and (3) Demonstrate ability to work effectively with families from diverse cultural and linguistic backgrounds. Tables 1 and 2 provide the total means for the Item 5 pre/posttests, as well as the means for the three individual items.

**Table 1.** Total Pre-/Post-Self-Assessed Competency Scores for Competency 5

Program	<i>n</i>	Pretest <i>M</i> (SD)	Posttest <i>M</i> (SD)
EISP, four cohorts	22	3.81 (1.05)	13.0 (.79)
SEI, one cohort	11	4.27 (1.27)	13.1 (.7)

*Note.* EISP = early intervention specialization program; SEI = specialization in early intervention.

**Table 2.** Pre-/Post–Self-Assessed Competency Scores for Three Family Competencies

	<i>n</i>	Competency 5.1		Competency 5.2		Competency 5.3	
		Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Program		<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>
EISP, four cohorts	22	1.4	4.7	1.1	4.3	1.3	3.8
SEI, one cohort	11	1.5	4.6	1.5	4.6	1.4	4.4

*Note.* EISP = early intervention specialization program; SEI = specialization in early intervention.

**Qualitative data**

Although specific course assignments for their FPE varied across the three OT programs, students from all three OT programs recognized the value and richness of their experiences with families as part of FPE requirement. Students’ valuable insights and feedback lead curriculum and fieldwork changes to improve the quality of their experiences with the FPE. Key findings are reported in the subsequent sections.

**Understanding family experiences**

Students across all three OT training programs regardless of their prior experiences as an occupational therapist reported that their participation with families directly in their homes through the FPE taught them a great deal about families’ daily routines. For example, one practicing occupational therapist in the EICP stated: “As an occupational therapist, I thought I had an understanding of what was happening in the home when I wasn’t there until this experience with families. It was eye opening for me.”

Similarly, a preservice student in the EISP with no direct experience with families with infants reported:

I think the family experience was the best thing we did. There is no better way to really see how overwhelmed families are when we aren’t there, but to spend that time with them. They have struggles just doing regular day to day things, and we expect a lot from them- unnecessarily.

One student (5) in the SEI program doing her pediatric clinical internship was allowed

to observe one of the children from the clinic in his home. She too saw the added value of working with this child in his home and the clinic, as she said, “I was able to put it all together for my understanding of EI and working with families.”

Another student (8) in the SEI program saw the importance of this experience linking theory to practice as she stated,

So many concepts are taught to us in the OT program and they don’t make sense until you do them. Understanding families’ roles and routines, and then thinking how to embed our interventions into their lives is challenging. This experience helped me think outside the box, and I will be able to do that more when I am an occupational therapist.

Although experiences with families were valuable in contributing to OT students’ understanding of practice with family-centered care, there were challenges with working with infants and toddlers and their families in their homes.

**Challenges with scheduling transitions**

Challenges to scheduling home visits with families were voiced by several students. For example, an EISP student who wanted to be more supportive to the family stated,

I had a great family, but we had so much trouble scheduling our time. Then the child aged out and it was impossible. I think it would have been better if the child were younger, so I had more time.

Similarly, a SEI student recognized the mother being too overwhelmed to actually

take advantage of how she could support her and the child as she said,

I had a family assigned, and the mom was so overwhelmed. I think I could have helped her as a mom, but she just wasn't able to coordinate me coming over.

Challenges with EI transitions were expressed by many students who began with a family, but then the child transitioned out of EI to preschool. Family time became more precious for the families and scheduling became more challenging. As one SEI student stated,

I started working with a family, and it was going well then the child transitioned to preschool, mom kept cancelling, and it just didn't work anymore.

### ***Recruitment of families***

Networking to recruit families was equally shared by all involved. Students, EI agencies, and EI providers reported that recruitment of families was a consistent challenge. Agencies were reluctant to ask families to do more than they already were involved in. Flyers were disseminated and families did respond. Often, they accepted initially but then never called back. Word of mouth or personal connections were the best because families trusted whomever asked them directly. Eventually, we realized that experiences with families were crucial whether they had a child in EI or not. Family life needs to be understood, and many of the students were young and had no prior experiences with children let alone families. One SEI (9) student said,

I was lucky, my mom is a physical therapist who works in EI. She was able to ask one of the families she has worked with for a year, and they didn't hesitate to say yes because they know and trust her.

Whereas another SEI (2) student shared,

I ended up doing my FPE with my sister's friend who had an 8-month-old baby. She didn't really understand why I needed to hang out with them, or the assignments, but went along with it because she was a friend of the family.

In summary, the OT students' ability to participate in the FPE allowed them to spend time with families during their most vulnerable stage, and they learned to empathize with families' needs, concerns, and overall lives. Students saw what the day-to-day lives of families of young children with and without disabilities are like. It gave them the ability to look at the bigger picture and understand the many daily routines families engaged in. These experiences provided them opportunities to reflect upon and plan how to better embed intervention strategies into families already existing routines, rather than add new stress to their lives by adding another layer of intervention that may be just an add-one and unrelated to what families really want or need to support their children. Furthermore, although there were benefits to having students participate with family routines in their homes, there continue to be challenges with getting OT students into the home setting. This is a struggle that needs to be addressed to ensure that students have these enriching experiences of understanding families to prepare them to work effectively in EI in the future.

### **DISCUSSION**

Demands of entry-level higher education are growing in many health arenas, but the core of EI practice remains consistent. The family unit is our client and if we can help the family as a unit, the child within the context of that family may benefit. Research shows that supporting parents in helping their children builds a strong foundation for their children's future learning, behavior, and development (Center on the Developing Child at Harvard University, 2016). Entry-level traditional programs in higher education have been successful in teaching students to be providers of strategies that work with the individual child but continue to fall short in looking at the bigger picture of the child within their family. This is especially true in home-based EI, when occupational therapists enter a family's home.



Early interventionists continue to struggle with knowing what truly goes on when leaving their home, and how to best support them with their caregiver strategies. Early intervention providers often still come in with our agenda of what we think families should do with their children, although research indicates that this is not an effective approach for the families or their children (Keilty, 2016). It is necessary for early interventionists, including occupational therapists, to incorporate what will help the child and the family in their natural routines for the best outcome. Engaging preservice early interventionists across disciplines with families directly in their homes through internships such as the FPE is an effective teaching strategy that gets to the heart of the family. Through the SUNY Downstate FPE, we confirmed that students improved on their family-centered competencies based on the qualitative and quantitative data presented. To prepare the university's OT students to apply the principles of family-centered practices, we developed the FPE program to incorporate family experiences into their entry-level higher education program. The competencies developed for this program allow students to spend time directly with infants and their families. Qualitative data from the participating students show that this time spent with families allowed students to build empathy for families and embed interventions into families' daily routines. This aligns with higher education program recommendations in EI (Keilty, 2016). Important lessons were learned from implementing the FPE program. First, some preservice OT students and families encountered scheduling conflicts. An additional lesson learned was how crucial it is to seek new ways to recruit families in EI. Seeking feedback and suggestions from families about their experiences with FPE going forward will provide us with invaluable suggestions and ideas that could help us overcome scheduling and recruitment challenges. Overall, the impact that participating families had on SUNY Downstate's preservice OT students outweighs these challenges, and the program

will continue to seek ways to work around scheduling conflicts and recruitment to ensure that the OT students have access to time with families. The increase in means for the self-reported competency scores suggests that many of the preservice OT students increased their understanding of how to incorporate the family's priorities and the family's cultural values into treatment sessions. This provided hands-on and authentic opportunities for university's OT students to link their knowledge of current research and theories of EI with their direct work with families in EI. Although the standard deviations of the means are a bit wide, our students' direct experience with diverse families in their natural environment provides an authentic way to enhance student learning and understanding of best practice in EI. Going forward, the SUNY Downstate's SEI program will continue to adapt the FPE for preservice OT students and participating families.

## CONCLUSION

The FPE presented in this article as it evolved through SUNY Downstate's three advanced training programs is a model of one strategy to provide students with hands-on direct experiences with families. As the research on family-centered practice suggests, preservice early interventionists need to be prepared during preservice before they engage with young children and their families. Data from the SUNY Downstate training programs support the students' experiences through a variety of quality assurance measures. The specialty of EI requires early interventionists to understand families and their daily routines in order to provide this best practice. Educators need to address the challenges of scheduling and transitions, as well as network to find families to collaborate and engage in these opportunities with preservice students being trained in EI. Affording opportunities in as many ways possible is necessary to create a quality EI workforce prepared to meet these challenges that families bring into entry-level higher education programs.

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