

CONCEPTUAL ARTICLE

Early Childhood Special Education Stars: A Five-Point Model for Addressing the Teacher Shortage

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There is currently a crisis-level shortage of qualified early childhood educators, including early childhood special educators. Teacher preparation programs must address the shortage through effective teacher recruitment, training, and retention strategies. We recommend a five-point STARS model that includes: (a) Supplemental funding during field placements, (b) Teacher preparation that leads to early childhood education and early childhood special education dual licensure, (c) Advocacy at the local, state, and national levels, (d) Relationships between teacher training programs and local public and private early learning centers, and (e) Supportive and ongoing mentoring for in-service early childhood special educators. This manuscript provides an overview of this STARS model with specific recommendations for teacher educators.

Keywords: Early childhood special education, Teacher preparation, Teacher shortage

INTRODUCTION

There is currently a crisis-level shortage of qualified early childhood educators (Schaack et al., 2021), including early childhood special educators trained to teach preschool children with disabilities receiving services under Part B, Section 619 of IDEA (Peyton et al., 2018). While the shortage of certified teachers existed previously, the 2019 coronavirus (COVID-19) pandemic exacerbated the problem, with a higher than normal number of teachers leaving the profession either for retirement or to pursue a different career (Carver-Thomas et al., 2022). This shortage of teachers is leading to students being taught by teachers without state teacher certification (Carver-Thomas et al., 2022; Peyton & Acosta, 2022) and higher student caseloads for special educators (Peyton & Acosta, 2022).

At the same time that this shortage is occurring, there are increased expectations for young children to enter kindergarten with academic skills such as foundational knowledge in early literacy and numeracy, necessitating that all early childhood educators are well prepared for their roles (Cho & Couse, 2008; Cook & Coley, 2017). Many preschoolers with disabilities, including

children with intellectual and developmental disabilities, spend the majority of their school day in the inclusive classroom (Zabeli & Gjelaj, 2020). Therefore, it is vital that their teachers are fully qualified for their roles and stay in those positions for several years.

Teacher preparation programs must proactively and comprehensively address the early childhood special education teacher shortage through the implementation of effective teacher recruitment, training, and retention strategies. In order to achieve this goal, we recommend a five-point STARS model (Figure 1) that includes: (a) **S**upplemental funding during field placements, (b) **T**eacher preparation that leads to early childhood education and early childhood special education dual licensure, (c) **A**dvocacy at the local, state, and national levels, (d) **R**elationships between teacher training programs and local public and private early learning centers, and (e) **S**upportive and ongoing mentoring for in-service early childhood special educators. This manuscript provides an overview of this STARS model with specific recommendations of how teacher educators can use this model to address the teacher shortage crisis.

Figure 1

ECSE Stars Model



Supplemental Funding During Field Placements

The "S" in the STARS model focuses on supplemental funding during field placement. Traditionally, teacher preparation programs have culminated with a student teaching experience that lasts for one semester and allows teacher candidates to demonstrate their mastery of best practices in classroom instruction (Greenberg et al., 2011). Because these field experiences generally require full time, unpaid work, teacher candidates often must take out additional student loans to pay their bills during their student teaching (Meltzer, 2022). This expectation for unpaid labor has been challenging for many college students (Thompson & Russell, 2017) but is even more so now with the increasing number of nontraditional students attending college (Remenick, 2019). The National Center for Education Statistics (1993) defines a non-traditional undergraduate student as one who meets one of more of the following characteristics: (a) older than the traditional 18-22 year old college student, (b) attending college part-time, (c) independence from parental support, (d) working full time, (e) having dependents, (f) being a single parent, and (g) having received a GED.

One solution for addressing this challenge is through field placements that include payment for teachers. For pre-service teachers, this model is often referred to as teacher residencies (Goodwin et al., 2018; Henning, 2018; Zugelder et al., 2021). In addition to the financial benefits to teacher candidates, teacher residency programs that last for the entire school year have been found to result in teachers who are better prepared for teaching in their own classrooms (Mazzye et al., 2023) and are more likely to stay in the classroom for several years (Goodwin et al., 2018). Fallona and Johnson (2019) suggested that schools consider using funding from Title II, Part A of the Every Student Succeeds Act (ESSA) to fund teacher residencies. These federal funds are allocated for ensuring that all students have access to highly qualified teachers and up to two percent of a state's ESSA funds may be used for this purpose (U.S. Department of Education, 2016). To make this funding use possible, teacher preparation programs must work in collaboration with local school districts.

For universities or communities that do not have teacher residency programs, there are other options to provide supplemental funding during pre-service field experiences. For example, teacher candidates may be allowed to student teach in the school for a certain number of hours each week and count those paid experiences towards their student teaching. Candidates and universities can pursue grant funding to cover the tuition and living expenses of candidates. And, some states, such as Colorado, are now providing financial support to student teachers (Meltzer, 2022).

Teacher preparation programs can also increase the opportunities for paid field work by developing and offering university-based alternative certification programs. This pathway to teacher licensure offers training and support to in-service teacher candidates who are acting as the teacher of record in a classroom while pursuing teacher training (Bowling & Ball, 2018). Approximately 20% of teachers receive training through alternative pathways, such as alternative certification programs (National Center for Education Statistics, 2022). These pathways may be especially appealing to non-traditional students who already have a bachelor's degree in another field and seek an income while gaining teacher licensure.

Teacher Preparation Leading to Dual Licensure

The "T" in the STARS model focuses on teacher preparation leading to dual licensure. Early childhood teachers who are explicitly trained in both developmentally appropriate early childhood practices and special education strategies are better able to support the various academic, communication, and social-emotional needs of the young children they teach. Nutbrown (2021) argues that well-trained and highly qualified early childhood educators are vital for the success of young children. Early childhood teachers must be prepared to meet the needs of all learners. In recent years, several states have launched universal preschool programs. At this time, approximately a dozen states and the District of Columbia offer universal preschool or prekindergarten programs or are in the process of developing such programs (Guevara, 2023). Many states (e.g., Colorado, Florida, Virginia) utilize community-based preschool programs to meet the demand. Traditionally, teachers in these private early childhood centers may have minimal or training in inclusive practices (Education Law Center, 2010) but must be prepared to support children with disabilities in their private school classroom due to universal preschool mandates.

Many early childhood teachers have reported feeling unprepared for meeting diverse student needs in the inclusive classroom (Chadwell et al., 2020; Majoko, 2016). Teachers' feelings about, and preparedness for, inclusion directly impacts the learning success of children in inclusive classrooms (Tiwari et al., 2015). Teachers with dual teacher licensure have more positive attitudes towards inclusive practices and teaching students with disabilities (Kirksey et al., 2022).

In addition, teachers' self-reported perceptions of preparedness for teaching have been directly correlated with their attrition rates, with teachers who report feeling more prepared being more likely to stay in the classroom (DeAngelis et al., 2013). Inclusive classroom teachers who are also trained to teach students with disabilities are more likely to remain in the classroom, even when they are supporting a large number of children with disabilities, than are their colleagues without special education training (Gilmour & Wehby, 2020). To address this feeling of not being prepared to support learning needs, we recommend that all early childhood educators are dually certified in both early childhood education and special education.

Universities that have implemented dual licensure programs have found that graduates are more prepared for meeting the needs of all learners in the inclusive classroom (Anderson et al., 2015; Kent & Giles, 2016; Kerns, 1996; Kirksey et al., 2022). Additionally, students with disabilities who are taught by dually certified teachers have been found to have better academic outcomes compared to their peers taught by teachers with one type of teacher certification (Kirksey et al., 2022).

Recent research has also found that the type of licensure held by a teacher candidate's cooperating teacher impacts the likelihood of the candidate's eventual teaching position, with candidates who were mentored by a teacher with a special education endorsement being more likely to become special educators themselves (Theobald et al., 2021). With this in mind, the authors recommend that teacher preparation programs ensure candidates are paired with

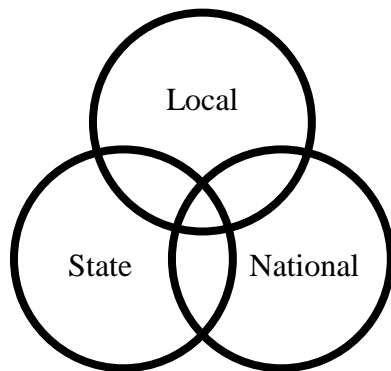
cooperating teachers who hold licensure in special education or early childhood special education. Based on the existing research, we recommend university teacher preparation programs offer dual licensure programs include explicit training and field experiences in both general and special education (Fallona & Johnson, 2019). To do this, early childhood education and special education programs must work in collaboration to support and train teacher candidates.

Advocacy at the local, state, and national levels

The "A" in the STARS model focuses on advocacy at the local, state, and national levels. The Merriam-Webster dictionary (2023) defines advocacy as the process of supporting a cause. Teacher education programs are uniquely positioned to advocate for the best interests of current and future teachers in their communities, as well as at the state and national levels. Recent research indicated that teacher educators perceive advocacy to be a critical part of their roles (Akin-Sabuncu, 2022). Teacher educators' participation in advocacy efforts is vital because most legislators do not have a background, nor expertise, in education issues (McLaughlin et al., 2016). Teacher educators can engage in advocacy in a number of ways at the local, state, and national levels, with overlapping work in various areas (Figure 2).

Figure 2

Advocacy at Three Levels



Advocacy must begin at the local level, within schools and districts, as well as the community as a whole. In the local schools, this local advocacy can take many forms including (a) formal and informal conversations with community stakeholders about best practices in education (Fisher & Miller, 2021), (b) mentoring colleagues (Dubetz & deJong, 2011), (c) sharing resources with teachers and administrators that may lead to changes that will better meet student needs (Murawski & Hughes, 2021), and (d) using social media to engage in discussions about education policies (Fisher & Miller, 2021). Teacher educators should lead these advocacy efforts and should support teacher candidates in learning advocacy skills. Within their communities, teacher educators can advocate for policy changes through writing open letters published online

(Garahan, 2019). Finally, in their own teacher education courses, they can advocate for children and teachers by encouraging a variety of student viewpoints and selecting diverse course materials (Dubetz & deJong, 2011).

At the state level, teacher educators can collaborate with faculty from other teacher preparation programs throughout the state to create, and advocate for, policies that support pre-service and in-service teachers. In many states, teacher preparation programs join forces through involvement in Collaboration for Effective Educator Development, Accountability, and Reform (CEEDAR) initiatives, which are aimed at meeting the unique needs of special education professionals in the state (CEEDAR, 2023). In addition, ECSE teachers can engage in state-level advocacy through contacting elected officials regarding current and upcoming legislation that impacts young children and their families (Council for Exceptional Children, 2023).

On the national level, advocacy may be accomplished through participation in advocacy groups. The field of early childhood education offers several professional organizations that engage in advocacy efforts, such as (a) the National Association for the Education of Young Children (NAEYC), (b) the National Association of Early Childhood Teacher Educators (NAECTE), and (c) the National Child Care Association (NCCA). In the field of special education, there are several groups including (a) the Council for Exceptional Children (CEC), (b) the CEC Teacher Education Division (TED), and (c) the Higher Education Consortium for Special Education (HECSE).

NAEYC is a professional organization with approximately 60,000 members and focuses on ensuring high quality outcomes for children between birth and age eight (NAEYC, 2023a). NAEYC works at both the national and state levels to support legislation to benefit young children through (a) providing members with information, (b) publishing position statements, (c) publishing letters and official comments on policies, (d) connecting early childhood educators with legislators, and (e) launching the America for Early Ed initiative (NAEYC, 2023b). NAECTE is composed of teacher educators who prepare people to work in early childhood classrooms and engage in advocacy efforts through the publication of position statements and conference presentations (NAECTE, 2023). The National Child Care Association includes members from childcare centers of all sizes and provides members with information and tools to engage in advocacy efforts that support young children (National Child Care Association, 2021).

CEC is the primary professional organization for the field of special education and has a robust policy and advocacy agenda that includes keeping members updated on national policies, supporting members in writing letters to Congress, publishing position statements, and hosting a Legislative Summit in Washington D.C. each year (Council for Exceptional Children, 2023). For example, advocacy may include becoming active in a professional organization like the Division for Early Childhood of the Council for Exceptional Children (DEC). DEC advocacy efforts focus on professionals serving young children birth to age eight with disabilities. Like DEC, TED is a subdivision of CEC. TED builds upon the work of CEC by emailing members weekly updates about policies related to special education and teacher preparation, endorsing legislation that benefits teacher preparation efforts, and offering a Special Education Legislative Summit Short Course on policy to selected members each summer (Teacher Education Division, 2023). HECSE is an organization that was founded to support communication between programs

offering doctoral programs in special education and currently engages in organized advocacy at the national level to support legislation that benefits children with disabilities and their teachers (HECSE, 2022).

Relationships between teacher training programs and early learning centers

The "R" in the STARS model focuses on relationships between teacher training programs and early learning centers. A fourth way that teacher education programs can address the early childhood special education teacher shortage is through relationships with local early learning centers. There are a variety of ways in which these partnerships can be formed and teacher preparation programs, as well as the area schools, must determine the model that is best for them.

Darling-Hammond (2017) discussed a teacher training model used at one Australian university in which university faculty collaborated with teachers and teacher candidates in a school. Together, they engaged in lesson planning, curriculum development, and research. This type of partnership model can support university faculty in staying connected to the classroom, while providing pre-service teacher candidates with highly supported field experiences and in-service educators the opportunity to continue their own professional development.

Rummel et al. (2022) shared about a partnership in which a school identified a need, specifically social-emotional learning, and reached out to the local university-based teacher education program to gain support and training to address this need. The university faculty used recent research to guide the support they provided and were able to conduct their own research, making the partnership beneficial to both parties. By building schools' and teachers' capacity to address their own needs through explicit training, teacher education programs can reduce teacher retention as teachers who feel confident in their abilities are more likely to remain in their teaching positions (Bland et al., 2014).

A third way that schools and universities can partner is through the use of grow-your-own (GYO) programs that support schools in identifying local community members who may be interested in becoming teachers and providing them the training to enter the teacher workforce (Jackson & Wake, 2022). GYO programs commonly include high school students, paraprofessionals, parents, and other community members with an interest in the teaching profession (Gist et al., 2019) and remove many of the barriers that prevent these teacher candidates from receiving traditional teacher preparation (Garcia, 2022). Identified teacher candidates complete their teacher training at a partner university and are then employed in a partner school. The school may employ the teacher candidate or provide financial assistance during their teacher training (Garcia, 2022). In addition to increasing the teacher pipeline, the use of GYO programs also increases the number of diverse candidates entering the teacher workforce (Bianco & Marin-Paris, 2019; Jackson & Wake, 2022), as well as the retention rate of teachers prepared in this manner (Gist et al., 2019). Through participation in GYO programs, university teacher preparation programs can support local schools in recruiting early childhood special educators to work in their schools.

Regardless of the structure of the university-learning center partnership, there are several components that help ensure a successful endeavor. First, all involved parties must have a shared vision for the partnership; everyone should agree on the purpose and the goals for collaboration (Day, 2022; Farah, 2019). Second, there must be a benefit in the partnership for all parties; if one party does not receive a benefit from the collaboration, they are likely to not fully engage (Day, 2022). Mutually beneficial partnerships ensure success. Thirdly, both organizations must trust one another and the decisions made by the other party (Rummel et al., 2022).

Supportive and Ongoing Mentoring and Coaching

The final "S" in the STARS model focuses on supportive and ongoing mentoring and coaching. While partnerships between teacher preparation programs and public schools can support pre-service teachers, these relationships can also be a means of addressing teacher attrition by offering needed training to in-service teachers. University teacher preparation programs can, and should, be involved in ensuring that teachers receive ongoing support and mentoring once they begin their careers. Teacher coaching and mentoring is a form of job-embedded professional development that is tailored to unique teacher needs (Kraft et al., 2018). Teacher mentors and coaches can support pre-service and in-service teachers by providing both instructional and emotional supports tailored to the needs of the teacher (Becker et al., 2019). Recent research (Keiler et al., 2020) found that more experienced teachers benefited the most from the feedback provided via teacher coaching, indicating that this mentoring process should be ongoing throughout a teacher's entire career.

Mentoring and coaching programs for current teachers impact teacher instructional success in the classroom (Jackson et al., 2019; Mok & Staub, 2021). In addition, ongoing teacher coaching increases teacher retention rates (DeAngelis et al., 2013; Jackson et al., 2019). With this in mind, we recommend that university teacher preparation programs are actively partnering with graduates, as well as area schools, to provide this mentoring and coaching.

Another way that universities may support school-based coaching and mentoring is by providing specific training to mentors to enhance their content knowledge, as well as their knowledge of effective mentoring and coaching. Cornelius et al. (2020) found that mentors who receive specialized instruction are effective at mentoring teacher candidates. Similarly, Melton et al., (2019) found that cooperating teachers who receive explicit training on mentoring are more effective at supporting pre-service and novice teachers.

The research is clear that ongoing mentoring and coaching has a positive impact on both teacher effectiveness and teacher retention. Additionally, the literature has identified the aspects of effective teacher mentoring and coaching. Figure 3 provides a brief overview of these components.

Figure 3*Components of Effective Teacher Mentoring and Coaching*

Component	Support in the Literature
<p>Personalized The mentor/coach offers supports that are uniquely designed to support the individual needs and goals of the teacher. Even if the mentor/coach is supporting multiple teachers, the supports provided will differ for each teacher.</p>	Akin, 2016; Elek & Page, 2019; Hui, 2020; Randolph et al., 2019
<p>Observations Effective mentoring/coaching models include three stages for each observation: (a) a meeting before the observation to discuss what will be taught and set goals for the observation itself, (b) the observation, and (c) a meeting after the observation to discuss what the mentor/coach observed.</p>	Hui, 2020; Kraft et al., 2018
<p>Teacher Reflection On an ongoing basis, the teacher and mentor/coach reflect on the instruction that is occurring in the classroom. They identify what is going well and issues/concerns that may need to be addressed</p>	Elek & Page, 2019; Sutton et al., 2021; Taylor et al., 2022; Wetzel et al., 2017; Wetzel et al., 2019
<p>Collaborative problem solving Mentor/coach and teacher work together to identify potential solutions to the challenges that arise in the teacher's classroom</p>	Wetzel et al., 2019
<p>Emotional support Mentor/coach engages in active listening to the teacher and uses what is heard to support the teacher's needs, while building their self-confidence and self-reliance as a teacher.</p>	Becker et al., 2019
<p>Instructional support Mentor/coach aids teacher in lesson planning and offers explicit feedback on instructional practices.</p>	Becker et al., 2019; Elek & Page, 2019; Randolph et al., 2019; Randolph et al., 2020; Shanks, 2017; Taylor et al., 2022
<p>Explicit modeling Mentor/coach explicitly models best teaching practices for the teacher. The teacher can watch the mentor/coach engage in the teaching practice and then try it themselves, while receiving feedback</p>	Taylor et al., 2022

CONCLUSION

There is a crisis-level shortage of early childhood special education teachers. Teacher preparation programs must respond to our workforce shortage in ways that will address this crisis by increasing the pipeline and improving the retention rates of teachers entering the field. The

STARS model presents ideas to ameliorate the crisis. By focusing on the five strategies in the ECSE STARS model, we can address the challenges that face early childhood special education. We posit that the teacher shortage can be reduced through combining these five effective strategies: (a) Supplemental funding during field placements, (b) Teacher preparation that leads to early childhood education and early childhood special education dual licensure, (c) Advocacy at the local, state, and national levels, (d) Relationships between teacher training programs and local public and private early learning centers, and (e) Supportive and ongoing mentoring for in-service early childhood special educators.

The key to success for addressing the early childhood special education teacher shortage is not inventing something new, but instead creating a comprehensive approach to the teacher shortage by combining research-supported strategies through the use of the Early Childhood Special Education STARS model. The comprehensive approach involves collaborations within and outside traditional boundaries to create a seamless system of pathways for teacher recruitment, training, and retention. The STARS model is a path for addressing our national teacher shortage.

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