# Amplifying Parent and Guardian Voices When Navigating Special Education Services

# Katie E. Hildebrand

Bookend Seminar, April 12, 2023

Katie E. Hildebrand is Assistant Professor of Education at Juniata College.

During the 2021-2022 school year, 14.7% of students were identified for special education services.<sup>1</sup> To be eligible for special education resources, students undergo a multi-faceted evaluation and qualify for services under the federal legislation known as the Individuals with Disabilities Education Act (IDEA). While educational professionals and administrators have experience navigating the special education assessment process, families are often unfamiliar with the process and find this system complicated and overwhelming. To ensure that children and youth with special needs receive appropriate services, parents and guardians, along with their child or youth, must be involved in the process to share information and have their voices heard. I want to examine how educational professionals can best support parents and guardians in advocating and partnering through a complex educational and legal process. This review of the recent literature reveals the barriers families face, and I outline several strategies that can be shared with pre-service educational professionals in teacher education programs and in-service educators. Strategies include a more comprehensive, interdisciplinary approach focused on active participation, collaboration, and technology. Yet, to first provide context, let me share a brief overview of the current landscape of special education and a summary of the special education assessment process.

# THE CURRENT LANDSCAPE OF SPECIAL EDUCATION

The landscape of special education is ever-changing. Although IDEA (formerly known as the Education for All Handicapped Children Act, or EHA) was enacted in 1975, several iterations have passed since then. In brief, the purpose of this law is to ensure that all children and youth with special needs receive a "free and appropriate public education (FAPE)." IDEA defines FAPE as services that (1) are free and provided by the district at no charge to parents and guardians; (2) meet state guidelines; and (3) follow a student's individualized education program (IEP).<sup>2</sup> A multi-disciplinary team helps to create and implement the IEP; the team includes parents/guardians, the general and special education teachers, administrators, as well as others invested in the child's welfare. While all members of this team are key

players, the special education teacher often oversees implementation and is often most familiar with best teaching practices.

A special education teacher has a vast number of responsibilities; this includes effectively designing and delivering instruction, creating and implementing reliable and valid assessments, managing behaviors, and collaborating with other educational professionals and families. Collectively, this is a large undertaking, so it is of no surprise that the United States currently experiences a national shortage of special education teachers. The shortage arises from a number of factors, including the job itself, working conditions, compensation, attrition, as well as other complicated issues. This complexity compromises the purpose of special education, which is to support students with special needs and provide them with an equal educational opportunity.<sup>3</sup>

#### THE SPECIAL EDUCATION ASSESSMENT PROCESS

To determine if students qualify for special education, the evaluation team uses a multi-faceted approach. The overarching purpose of the special education assessment process is to determine if students have unique and special needs and are entitled for additional services and supports that enable them to reach their full potential. This complex process is driven by IDEA. This law outlines procedures and timelines that schools must follow to protect all individuals involved. Specifically, to be eligible for special education services, students must meet the following: (1) be identified as having one of the thirteen categories of disabilities included within IDEA (e.g., specific learning disability, intellectual disability, emotional disturbance); and (2) need special education services to help them progress toward educational goals.<sup>4</sup> The educational goals often include academic and/or functional goals that are defined through the team and based on the student's individual needs. Academic goals may focus on reading and/or math, while functional goals tend to address social skills and/or life skills (e.g., self-care, navigating transportation, cooking). While timelines may differ slightly from state to state, in Pennsylvania, a comprehensive evaluation report must be presented to the parents or guardians within sixty calendar days from the start of the process.<sup>5</sup>

If the student is eligible for special education services, the multidisciplinary team works collaboratively to develop an IEP. The IEP is often referred to as the "curriculum road map for special education" and is a thorough, written document that details a student's educational needs and describes services that the district must provide.<sup>6</sup> Each IEP is individualized and unique and should never take a one-size-fits-all approach. The team plans the student's program by focusing on strengths and needs. It begins by reviewing data from the eligibility and evaluation processes to determine what additional information is needed. Once it gathers the data, the team collectively drafts the document. According to special education timelines in Pennsylvania, a draft of the IEP must be shared with the families within

thirty calendar days of the completion of the Evaluation Report. Throughout this process, it is important that parent and guardian voices are present and represented during the development of the Evaluation Report and IEP. Unfortunately, parents and guardians report that this does not always happen.<sup>7</sup>

Not only does IDEA legislation stipulate timelines, it also specifies requirements for the content of the IEP. The IEP contains critical information that guides the student's education for one calendar year. The content in the IEP includes, but is not limited to, details on the following: (1) present levels of academic and/or functional performance; (2) measurable annual goals; (3) a statement of how progress toward annual goals will be measured; (4) a description of related services (e.g., speech and language services, occupational therapy, physical therapy) and/or supplementary aids and services (e.g., assistive technology, modified curriculum, accommodations); (5) specially designed instruction; (6) an explanation as to when and why the student will not participate in the general education classroom; (7) accommodations necessary during state and districtwide assessments; and (8) dates of services, required modifications, and the frequency, duration, and location of supports.<sup>8</sup> Once the IEP is officially signed and implemented, it is considered a legal document that must be followed.

# THE REALITIES OF PARENTAL PARTICIPATION

Families know their child or youth best and must have the opportunity to express concerns, ask questions, and articulate goals for their child or youth. Yet, despite participation being part of the law, parents and guardians report a number of concerns and barriers that prohibit them from being full and active participants in their child's or youth's IEP.<sup>9</sup> Here are several quotes I have heard directly from parents and guardians:

- "I don't want my kid labeled."
- "Why does this take so long?"
- "I refuse to have him/her/them tested."
- "My child will never go to a self-contained classroom."
- "My first criticism of the process has to do with the documentation and some of the highly technical language baked into this assessment process. Much of the terminology was unnecessarily burdensome and intimidating."
- "I never felt that any individual I dealt with in our case had anything but the best interests of our son in mind. However, I could also see the potential for this process to become quite opaque. The role of the individual educator and other professionals in making this work for kids can't be understated. Work together, and always with the best interests of the kid."<sup>10</sup>

Despite the legal framework outlined above and dictated by the federal government, what emerges from these quotes are the realities of families who are often unfamiliar with the purpose of the evaluation and the process itself. Educational professionals must pause and consider how to remedy this to ensure family members understand this complicated process. Perhaps more importantly, they must build trust and partnerships so there is equal participation and so that parent voices are heard and incorporated into their child's or youth's educational program. A further examination of the literature reveals additional barriers that make this process less transparent and more complicated. These barriers include obstacles such as a predetermination of placement, navigating unfamiliar territory, and a lack of communication.

Jo Nell Wood, Nikki Murdick, and Amanda Wood point out that parents and guardians report feeling as though there is a pre-determination of placement.<sup>11</sup> Examples of these violations include a completed IEP without any family input; the district avoiding incorporating family input when provided; and the school implementing a one-size-fits-all approach, which is problematic when we know that children and youth with special needs have a range of abilities and needs. When this happens, parents and guardians feel as though they are under-involved in the process and are simply invited to comment, at best. This is contrary to IDEA guidelines and opposite of what educational professionals should strive for in this process. Students and families face a number of social hurdles, and access to education should not be one of them.

Parents and guardians also compare this process to an unknown world where there is often a lack of communication throughout the process and parents are often confronted with a complex legal landscape.<sup>12</sup> Furthermore, families indicate that educational professionals use terminology, jargon, and acronyms that further muddle the ability of parents to effectively understand and communicate their understandings of their children. Terms such as IEP, IDEA, and FAPE are code to families and contribute to a communication breakdown and an imbalance of power. This is a common criticism of special education in general, and for diverse parents of students with special needs, this becomes even more problematic.<sup>13</sup> Families report that tensions arise and a lack of trust ensues, which erodes the ability of the team from understanding the student and creating a collaborative process that will allow the student to thrive in their new educational landscape.<sup>14</sup> Although the law indicates that this process should be bidirectional in nature, to parents and guardians it often feels like a one-way street or a top-down approach.

Educational professionals also need to remember that when a parent or guardian first learns that their child or youth has a special need, a variety of feelings may arise. Vulnerability often emerges, and educational professionals must handle this sensitively. Families need time and support when absorbing this new information so that they can be equal partners. Families desire to be part of the process, and research indicates that family involvement helps to ensure that students receive a high-quality education.<sup>15</sup> A recent study points out that parents are experts too; while educational professionals have expertise in the field, families--based on their experience--can share historical knowledge and recommendations that can be helpful when devising the plan.<sup>16</sup> Without parental voice, inappropriate programs could be created for vulnerable groups of students, which certainly must be avoided.<sup>17</sup>

# ADDRESSING BARRIERS AND CREATING OPPORTUNITY

The special education assessment process is complex and challenging to those unfamiliar with the process. There are many ways we can better support in-service teachers, pre-service teachers, administrators, and other educational professionals to amplify parent and guardian voices to ensure these stakeholders have an active role in the process. Three strategies to consider include family engagement, interdisciplinary collaboration, and virtual and mixed-reality simulations. The literature suggests that these strategies are important in the overall process of family engagement and communication, which is the foundation on which the broader collaborative process rests.

#### Family Engagement and Communication

Family involvement positively impacts student success.<sup>18</sup> Yet, it is not enough for families to simply be involved in schools; families need to be engaged.<sup>19</sup> Research suggests that children and youth fare better developmentally when their family is actively involved in their educational programming.<sup>20</sup> The National Association for the Education of Young Children (NAEYC) describes six principles for effective family engagement: (1) families actively partake in the decision-making and goal-setting processes; (2) there is two-way communication; (3) the engagement process is reciprocal; (4) programs support learning activities for home and community; (5) families participate in decisions about programs; and (6) programs support educational professionals to engage with families. When this happens, community, trust, and relationships are built.

When applying the above principles and findings to the family experience throughout the special education assessment process, family engagement should ideally occur prior to any discussion of formal special education. In fact, it should occur as soon as the child begins any type of formal schooling. As a result, the special education assessment process would be less contentious because relationships and trust would have been established and, importantly, maintained. That said, educational professionals must remember that families desire the opportunity to share aspirations and fears and if the assessment process were more collaborative in nature, family engagement would build a more-informed program for the child or youth.<sup>21</sup> Ultimately, this would lead to a higher quality education.

In a recent study, Timberly L. Baker and colleagues conducted conversations with parents and educational professionals on how to move from family involvement to family engagement. Both parties

identified barriers that hindered communication and found solutions to foster family engagement. Through their discussions, they identified five themes that would facilitate family engagement. This included "providing opportunities for involvement, improving communication, welcoming families into the building, time conflicts or making time, and moving from involvement to engagement."<sup>22</sup>

While all themes in this study are important, improving communication emerges as especially relevant within the special education assessment process. As Andrew M. Markelz and David F. Bateman suggest always keeping families informed, making sure communication is bidirectional, and sharing positive observations with families that occur during the school day. Furthermore, educational professionals should make a good-faith effort throughout the process and consider all outside information that families bring in. For instance, it is possible that families may have had an Independent Educational Evaluation (IEE) conducted through an outside educational agency. These data provide additional information and potential insight that help the process and, ultimately, the child or youth.<sup>23</sup>

One potential strategy to promote effective family-teacher communication is an active listening strategy entitled "LAFF don't CRY."<sup>24</sup> McNaughton and colleagues developed the following mnemonic:

- L Listen, empathize and communicate respect.
- A Ask questions and ask permission to take notes.
- F Focus on the issues.
- F Find a first step.

#### DON'T

- C Criticize people who aren't present.
- R React hastily and promise something you can't deliver.
- Y Yakety-yak-yak.

When educational professionals are confronted with a problem or faced with conflict, the LAFF active listening strategy may be employed to promote positive communication and build trust. The "L" allows voices to be heard and respected. The "A," specifically asking questions, allows the educational professional to gather information, while asking to take notes also helps to build trust. When one is reminded to "focus on the issues" we can avoid tangents and get to the root of the issue by staying focused. The second "F" or "find a first step" highlights that we do not have to solve the problem in that moment but instead move one step closer toward a solution. The latter portion of the strategy, or the "DON'T," prompts educational professionals to avoid blaming others, swiftly arrive at a decision, and do all the talking.

The strategy can be utilized by in-service teachers and be shared with pre-service educational professionals such as special education teachers, general education teachers, and speech and language pathologists within their training program.<sup>25</sup> Across all studies, researchers have shown that educational professionals, once they learned this active listening strategy, increased their targeted communication skills. All of these elements can be helpful when navigating the special education assessment process with families.

# Interdisciplinary Collaboration

In 2017, the Collaboration for Effective Educator Development, Accountability and Reform (CEEDAR) and the Council for Exceptional Children (CEC) jointly published a series of high-leverage practices (HLP) essential for special education in-service teachers and special education pre-service teachers. These HLPs have evidence to suggest their effectiveness and are known in the field as best practices and focus on four aspects of practice including collaboration, assessment, social/emotional/behavioral, and instruction.<sup>26</sup> The HLPs related to collaboration are as follows:

- HLP 1: Collaborate with professionals to increase student success.
- HLP 2: Organize and facilitate effective meetings with professionals and families.
- HLP 3: Collaborate with families to support student learning and secure needed services.

In addition to being in HLPs, working collaboratively using a team-based model is also part of IDEA. IDEA requires that a collaborative approach is utilized throughout the eligibility process, IEP development, and IEP implementation.<sup>27</sup>

The type of collaboration described in the HLPs can be considered interdisciplinary, which refers to the myriad of educational professionals working together (e.g., special and general education teachers, school psychologists, and administrators), as well as with the family, to support the educational needs of the student. Family members include parents and guardians as well as the child or youth, when appropriate and should be considered part of the team. Borrowing from the social work literature, one promising conceptual model to draw upon when thinking about families as members of the collective team is Bronstein's interdisciplinary collaborative model.<sup>28</sup> Dillon and colleagues posit that it can be used to improve special education service delivery through the five components:

1. Interdependence occurs when the team relies on each other to fulfill goals.

- Newly created professional activities refer to the idea that working interdependently achieves more than when working independently; this also capitalizes on the expertise of each team member.
- 3. Flexibility requires that all members of the team, when working together, blur boundaries. This overlaps with interdependence, but extends interdependence by allowing for compromises.
- 4. Collective ownership of goals signifies a shared responsibility when designing, implementing, and achieving goals.
- 5. The process asks each member to reflect on their ability to work collaboratively.<sup>29</sup>

Using this model with family members as part of the team strengthens the outcomes for the child or youth and helps to fulfill the HLPs. Furthermore, Dillon and colleagues suggest that this model "…sets priorities, focuses professional energies and resources, and ensures that collaborative team members are working toward their common goals."<sup>30</sup> Marrying this interdisciplinary model with the HLPs is highly applicable to the special education assessment process as it reminds the team to collaborate with all members, including parents and guardians, which is central to building trust and achieving educational outcomes for the student.

# Mixed- or Virtual-Reality Simulations in Teacher Preparation Programs

Finally, one practical, and developing, approach to train pre-service teachers to work with families through the special education assessment process utilizes virtual reality. These advancements of technology simulate situations for pre-service teachers to navigate and often are utilized to develop best teaching practices as well as communication strategies that achieve student success. In 2008, Lisa Dieker and colleagues hypothesized that it was possible to use virtual classrooms to allow student teachers to practice critical teaching behaviors before they reached an actual classroom. This gave pre-service teachers an opportunity to move recently acquired knowledge (e.g., learning about communication strategies to use with families) to application (e.g., practicing communication strategies with families), which also facilitated student teacher educational goals and advancement.<sup>31</sup> Among the various mixed- or virtual-reality simulators is TeachLive<sup>TM</sup>, which was developed at University of Central Florida. TeachLive<sup>TM</sup> is considered to be a mixed-reality classroom. Ferrante describes this simulator as working from two directions. "On one end, a teacher views a screen on which a simulated classroom is projected. A motion-capture device and camera reads the teacher's movements. On the other end, an interactor controls the student avatars in the classroom, speaking through a microphone and using head-mounted and handheld controllers programmed to respond to certain movements."<sup>32</sup> This program gives pre-service teachers a variety of real-world experience before they ever enter a classroom full of students. Given the diversity of special education needs this may be an efficient way to introduce pre-service to the varying needs of students and programs as well as building out the communication strategies outlined in the previous section. As Ersozlu and colleagues note, "TeachLive<sup>TM</sup> has proven itself to be a genuine alternative for better preparing pre-service teachers for real-life classroom contexts."<sup>33</sup> In addition to providing more-authentic opportunities to practice critical teaching behaviors, using a virtual- or mixed-reality classroom allows for additional access to a classroom beyond the typical school day.<sup>34</sup> Furthermore, the program can introduce pre-service teachers to the rewarding experience of engaging with special needs students before they must decide whether they want to pursue special education as a career choice.

Not surprisingly, the use of mixed- or virtual-reality classrooms in teacher preparation programs in on the rise. In 2013, Dieker and colleagues reported that TeachLive<sup>TM</sup> was used at thirty-two universities, but as Glenna M. Billingsley and Brenda K. Scheuermann indicate the programs are not readily available to all, which limits their reach.<sup>35</sup> Yet, there is much promise to this practice, and its utility is limitless. As this technology develops there are opportunities for colleges like Juniata to invest in this technology or create collaborations with other universities to collectively engage with virtual classroom experiences.

#### CONCLUSION

The special education assessment process is complex and can be overwhelming to parents and guardians, who as the law states, must be equal participants through the entirety of the process. Yet, it is clear that families face barriers when navigating the system. Thus, it is critical that educational professionals support parents and guardians to ensure that their voices are heard and incorporated as the best interest of the child is central to everything that special education can do. To do so, educational professionals first must increase family involvement, strengthen family engagement, and guarantee that communication is bidirectional. Second, educational professionals must rely on an interdisciplinary approach that capitalizes on the expertise of all members. Finally, in teacher preparation programs, incorporating an innovative approach such as virtual- or mixed-reality simulators offers an increasingly expansive set of options for teacher training. As these technologies grow in their use, it is important to Juniata College as well as other colleges to engage in these types of authentic opportunities.

### NOTES

- Institute of Education Sciences, National Center for Education Statistics, *Digest of Education Statistics*, "Table 204.70: Number and percentage of children served under Individuals with Disabilities Education Act (IDEA), Part B, by age group and state or jurisdiction: Selected school years, 1990-91 through 2021-22." <u>https://nces.ed.gov/programs/digest/d22/tables/dt22\_204.70.asp</u>
- Mitchell L. Yell and David Bateman, "Defining Educational Benefit: An Update on the U.S. Supreme Court's Ruling in *Endrew F. v. Douglas County School District* (2017)," *TEACHING Exceptional Children* 52 (2020): 283-290. https://doi.org/10.1177/0040059920914259
- 3. Loretta Mason-Williams, Elizabeth Bettini, David Peyton, Alexandria Harvey, Michael Rosenberg, and Paul T. Sindelar, "Rethinking Shortages in Special Education: Making Good on the Promise of an Equal Opportunity for Students with Disabilities," *Teacher Education and Special Education* 43 (2020): 45-62.
- 4. Perry A. Zirke, "An Updated Primer of Special Education Law," *TEACHING Exceptional Children* 52 (2020): 261-265.
- 5. Pennsylvania Training and Technical Assistance Network (PATTAN), "Special Education Timelines" (2019): 1-8. https://www.pattan.net/publications/special-education-timelines/
- Jennifer A. Diliberto and Denise Brewer, "Six Tips for Successful IEP Meetings," *TEACHING Exceptional Children* 47 (2014): 128-135, <u>https://doi.org/10.1177/0040059914553205</u>; Kate MacLeod, Julie N. Causton, Mary Radel, and Patrick Radel, "Rethinking the Individualized Education Plan Process: Voices From the Other Side of the Table," *Disability and Society* 32 (2017): 381-400. DOI: 10.1080/09687599.2017.1294048
- PATTAN, "Special Education Timelines;" Robyn S. Hess, Amy M. Molina, and Elizabeth B. Kozleski, "Until Somebody Hears Me: Parent Voice and Advocacy in Special Educational Decision Making," *British Journal of Special Education* 33 (2006):148-157.
- 8. Yell and Bateman, "Defining Educational Benefit."
- Mitchell L. Yell, James Collins, Gerda Kumpiene, and David Bateman, "The Individualized Education Program: Procedural and Substantive Requirements," *TEACHING Exceptional Children* 52 (2020): 304-318. <u>https://doi.org/10.1177/0040059920906592</u>
- 10. These comments are shared with the speakers' permission.
- 11. Jo Nell Wood, Nikki Murdick, and Amanda Wood, (2022). "How to Avoid Predetermination of Student Eligibility, Services, and Placement," *DADD Online*, 70 (2022): 118.
- 12. Hess, Molina, and Kozleski,"Until Somebody Hears Me."
- 13. Lusa Lo, "Demystifying the IEP Process for Diverse Parents of Children with Disabilities," *TEACHING Exceptional Children* 44 (2012): 14-20.

- 14. Kate MacLeod, Julie N. Causton, Mary Radel, and Patrick Radel, "Rethinking the Individualized Education Plan Process: Voices from the Other Side of the Table," *Disability & Society* (2017): 32. DOI: 10.1080/09687599.2017.1294048
- 15. Samantha E. Goldman and Meghan M. Burke, "The Effectiveness of Interventions to Increase Parent Involvement in Special Education: A Systematic Literature Review and Meta-Analysis," *Exceptionality: A Special Education Journal* 25 (2017): 97-115. DOI: 10.1080/09362835.2016.1196444
- 16. MacLeod, et al., "Rethinking the Individualized Education Plan Process."
- 17. Meghan M. Burke, "Improving Parental Involvement: Training Special Education Advocates," *Journal of Disability Policy Studies* 23 (2013): 225-234. https://doi.org/10.1177/1044207311424910
- Joyce L. Epstein, "Ready or Not? Preparing Future Educators for School, Family, and Community Partnerships," *Teaching Education* 24 (2013): 115-118. https://doi.org/10.1080/10476210.2013.786887
- 19. Brian L. Danielson, "Family Engagement: How to Create an Inclusive School Community," in Ashlea L. Rineer-Hershey and Toni Mild, eds. *Contemporary Issues in Special Education* (Solana Beach, CA: Cognella, 2020), pp. 197-205.
- 20. Tyler E. Smith and S. Sheridan, "The Effects of Teacher Training on Teachers' Family-Engagement Practices, Attitudes, and Knowledge: A Meta-analysis," *Journal of Educational and Psychological Consultation* 29 (2019): 128-157.
- 21. Hess et al., "Until Somebody Hears Me."
- 22. Timberly L. Baker, Jillian Wise, Gwendolyn Kelley, and Russell J. Skiba, "Identifying Barriers: Creating Solutions to Improve Family Engagement," *School Community Journal* 26 (2016): 169.
- 23. Andrew M. Markelz and David F. Bateman, *The Essentials of Special Education Law* (Lanham, MD: Rowman & Littlefield, 2022).
- 24. David McNaughton, Dawn Hamlin, John McCarthy, Darlene Head-Reeves, and Mary Schreiner, "Learning to Listen: Teaching an Active Listening Strategy to Preservice Education Professionals," *Topics in Early Childhood Special Education* 27 (2008): 223–231. <u>https://doi.org/10.1177/0271121407311241</u>; David McNaughton and Brooks R. Vostal, "Using Active Listening to Improve Collaboration With Parents: The LAFF Don't CRY Strategy," *Intervention in School and Clinic* 45 (2010): 251-256. <u>https://doi.org/10.1177/1053451209353443</u>; Brooks R. Vostal, Alicia A. Mrachko, Meg Vostal, and Ashley McCoy, "Effects of Group Behavioral Skills Training on Teacher Candidates' Acquisition and Maintenance of Active Listening," *Journal of Behavioral Education* 31 (2022): 679-698.
- 25. McNaughton et al., "Learning to Listen;" Jennifer J. Thistle and David McNaughton, "Teaching Active Listening Skills to Pre-Service Speech-Language Pathologists: A First Step in Supporting Collaboration with Parents of Young Children who Require AAC," *Language, Speech, and Hearing Services in Schools* 46 (2015): 44-55; McNaughton and Vostal. "Using Active Listening to Improve Collaboration with Parents."

- 26. J. McLeskey, M-D Barringer, B. Billingsley, M. Brownell, D. Jackson, M. Kennedy, T. Lewis, L. Maheady, J. Rodriguez, M.C. Scheeler, J. Winn, and D. Ziegler, "Research Syntheses: Collaboration High-Leverage Practices," in *High-Leverage Practices in Special Education* (Arlington, VA: Council for Exceptional Children & CEEDAR Center, 2017), pp. 27-39.
- 27. Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (2004).
- 28. Laura R. Bronstein, "A Model for Interdisciplinary Collaboration," *Social Work* 48 (2003): 297-306. doi: 10.1093/sw/48.3.297.
- 29. Suzanna Dillon, Erika Armstrong, Leah Goudy, Hannah Reynolds, and Sara Scurry, "Improving Special Education Service Delivery Through Interdisciplinary Collaboration," *TEACHING Exceptional Children* 54 (2021): 36-43. <u>https://doi.org/10.1177/00400599211029671</u>
- Suzanna Dillon, Erika Armstrong, Leah Goudy, Hannah Reynolds, and Sara Scurry, "Improving Special Education Service Delivery Through Interdisciplinary Collaboration." *Teaching Exceptional Children* 54 (2021): 36-43. <u>https://doi.org/10.1177/00400599211029671</u>
- Lisa Dieker, Michael Hynes, Charles Hughes, and Eileen Smith, "Implications of Mixed Reality and Simulation Technologies on Special Education and Teacher Preparation," *Focus on Exceptional Children* 40 (2008): 1-20.
- 32. Deanna Ferrante, "Kickin' it New School: A Cutting-Edge Classroom Simulator at UCF is Helping Educators Become Better Teachers," *Pegasus: The Magazine of the University of Central Florida*, Spring 2017, <u>TLE TeachLivE is a mixed-reality classroom simulator that uses avatars. (ucf.edu)</u>
- 33. Zara Ersozlu, Susan Ledger, Alpay Ersozlu, Fiona Mayne, and Helen Wildy, "Mixed-Reality Learning Environments in Teacher Education: An Analysis of TeachLivE<sup>™</sup> Research," *Sage Open* 11 (2021): 8. DOI: 21582440211032155.
- Richard Lamb and Elisabeth Etopio, "Preservice Science Teacher Preparation Using Virtual Reality," Society for Information Technology & Teacher Education International Conference (Waynesville, NC: Association for the Advancement of Computing in Education, 2019), pp. 162-167.
- 35. Lisa A. Dieker, Jacqueline A. Rodriguez, Benjamin Lignugaris/Kraft, Michael C. Hynes, and Charles E. Hughes, "The Potential of Simulated Environments in Teacher Education: Current and Future Possibilities," *Teacher Education and Special Education* 37 (2013): 21-33. <u>https://doi.org/10.1177/0888406413512683</u>; Glenna M. Billingsley and Brenda K. Scheuermann, "Using Virtual Technology to Enhance Field Experiences for Pre-Service Special Education Teachers," *Teacher Education and Special Education* 37 (2014): 255-272. <u>https://doi.org/10.1177/0888406414530413</u>