Preparing Teacher Candidates for Successful Communication with Diverse Families Using Simulations

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Abstract

This study examined concerns that teacher candidates have about communicating with families and studied the use of three simulation techniques to enhance candidates' confidence and perception of preparedness for communicating with diverse families. Twenty-five teacher candidates in a senior-level education class participated in three simulation conditions: Peer-to-Peer role playing, parent actors, and technology-based simulation using avatars in TeachLivE™. Data were collected using surveys before, during, and after the simulation sessions. A t-test revealed that candidates felt more confident in their abilities after the simulations, and inspection of means revealed that the parent actors were found to be the most preferred simulation condition. Inductive analysis was used to establish themes in the qualitative responses, showing that candidates were most concerned about appearing confident and discussing difficult topics. Based on the findings, the authors recommend the inclusion of structured simulations involving parent and teacher interactions during teacher preparation programs.

Keywords: collaboration, parent simulation, teacher education, teacher preparation, preservice teacher, teacher candidate

Family-centered communication strategies allow teachers to communicate effectively with families to support the health, well-being, and success of children. Families and teachers need to be able to engage in reciprocal communication in order to work as a team to nurture and educate children (Watson, Kiekhefer, & Olshansky, 2006). Standards for Teacher Educators

from The Association of Teacher Educators (ATE) emphasize the importance of Cultural Competence (Standard 2) including an ability to "Apply cultural competence and promote social justice in teacher education…and foster a positive regard for individual students and their families regardless of differences such as culture, religion, gender, native language, sexual orientation, and varying abilities" (ATE, 2012, p. 4). These standards also highlight the value of Collaboration (Standard 6) as teacher educators are urged to "Collaborate regularly and in significant ways with relevant stakeholders to improve teaching, research, and student learning" (ATE, 2012, p. 6).

The Division for Early Childhood (DEC) of the Council for Exceptional Children echoes the National Association for the Education of Young Children's (NAEYC) sentiments by prioritizing family as well as teaming and collaboration in the educational programming and services for young children who have or are at risk for developmental delays and disabilities (DEC, 2014; NAEYC, 2010). Despite this ideal, there are preservice teachers who complete their programs without a formal opportunity to communicate or collaborate with diverse families, particularly as it relates to seemingly sensitive topics such as academic, behavioral, or social challenges of their child (Epstein & Sanders, 2006; Patte, 2011). The purpose of this study was to investigate ways to fill this gap in teacher education programs.

Background and Rationale

When parents are involved in their children's education, meaningful and positive outcomes include improved academic, social, and emotional performance (Dawson & Wymbs, 2016). Teachers play a key, front-line role in engaging and involving parents (Brody et al., 1999; Grolnick & Ryan, 1989; Jeynes, 2003, 2007). Many teacher education faculty agree on the value of preparing candidates to engage in meaningful family-professional partnerships (Kyzar et al.,

2019). Indeed, the education field has identified regular, effective communication and collaboration with families as a high leverage practice for general (Ball & Forzani, 2009) and special education (McKleskey et al., 2017) teachers. Based on the work of Ball and Forzani (2009), TeachingWorks states teachers need to be able to communicate with families regarding academic progress, behavior, or development and to ask for information or assistance from families (TeachingWorks, University of Michigan, High Leverage Practices). Additionally, the Council for Exceptional Children posits that teachers should be able to lead and participate in meetings with families, demonstrate active listening, solicit feedback, and foster consensus building through verbal and nonverbal communication (McKleskey et al., 2017). The InTASC Core Teaching Standards and Learning Progressions for Teachers also highlight the importance of collaboration between teachers and families, working with adults and the notion that these skills are needed to meet challenging goals for learners (2013).

Despite the recognition of the value and importance of communication and collaboration between families and teachers, this content is often not covered in preparation programs (Kyzar et al., 2019) and preservice teachers are rarely given a formal opportunity to take part in low or high stakes parent-teacher meetings, such as conferences and Individualized Education Program (IEP) meetings (Epstein & Sanders, 2006; Hiatt-Michael, 2006). Indeed, beginning teachers may often enter their classrooms with limited knowledge of how to make the environment parent-friendly, how to inform parents about what is happening in the classroom, or how to have collaborative and productive conversations with their students' parents and caregivers so that they believe that they are truly collaborative partners in learning (Ferrara & Ferrar, 2005). Candidates who have limited opportunities to practice professional communication and collaboration skills may feel unprepared which may lead to avoidance, errors, or even attrition

(Willemse et al., 2017). The field has expressed concern with the dearth of opportunities for teacher candidates to interact and communicate with parents and caregivers (Dotger et al., 2008). For educator preparation programs to ensure the delivery (and possible mastery) of these high leverage teaching practices in their graduates, programs often rely on coursework, in-class discussions, and other important, yet less realistic methods to prepare teacher candidates to communicate and collaborate with families. More realistic methods should be considered to facilitate the generalization of these skills from the college course and into the classroom environment (Accardo & Xin, 2017).

Using Simulations to Develop Teacher Candidate Communication and Collaboration Skills

Walker and Dotger state, "wisdom can't be told" (2012, p. 62), highlighting the notion that educator preparation programs cannot simply rely on talking about what to do when interacting with families during a conference or meeting. It may be more helpful to practice the fundamental capabilities of communication and collaboration between teachers and families in simulated environments, which resemble a more realistic experiences in the classroom. A simulation is an instructional technique that tries to represent certain aspects of reality so that participants can learn by doing and develop knowledge, understanding or skills (Cruz & Patterson, 2005). Simulations can take many forms, including Peer-to-Peer role playing, live actor role playing (such as standardized parent/caregiver simulations), as well as role playing using technology-based avatars. Each of these is described below.

Peer-to-Peer Role Playing. Teacher educators have successfully used peer role plays to help teacher candidates practice communication techniques in simulated parent conferences (Aich et al., 2017; McNaughton et al., 2007). When students take on both the parent role and the teacher role, they practice empathy and perspective taking (Rao & Stupans, 2012).

Parent/Adult Actor (non-peer). Teacher educators have examined the benefits of role playing for teacher candidates with individuals who are trained to act as "standardized parents," who present to teacher candidates a “case” during a simulated parent-teacher conference. Cases are selected because they are either prevalent or of critical importance for teacher candidates to consider (Dotger et al., 2008).

Technology Based Simulated (Mixed-Reality Environment). More recently, simulations using technology have been examined and provide “situations and participants who look like, feel like, and act like they would in real-life scenarios” (Dieker et al., 2014, p. 51). Researchers have begun to study the use of mixed reality technology-based simulations in educator preparation and have used these to develop a variety of teaching skills (Peterson-Ahmad, 2018; Ely et al., 2018). For example, Dawson and Lignugaris/Kraft (2017) found that teacher candidates improved foundational teaching skills by utilizing the virtual classroom TeachLivE™ and were mostly able to generalize their performance to real classroom settings. Driver et al. (2018) reported significant shifts in preservice teacher perceptions on their readiness to work in collaborative settings, as well as improvement in communication skills following the use of a TeachLivE™ simulation experience. Accardo and Xin (2017) utilized TeachLivE™ to promote teacher candidates’ collaboration with a parent avatar during a 504 plan conference leading to improved self-reflection and self-assessment in teacher candidates’ evaluation of their parental collaboration skills and ability to make appropriate instructional decisions during parent teacher conferences following the simulation, compared to candidates who did not engage in the simulation. Other fields have also successfully used TeachLivE™ as a simulation tool to improve professional communication behaviors when interacting with caregivers (Taylor et al,

2017) compared to more traditional methods of "talking about it" in coursework or clinical experiences.

Purpose of the Present Study

The purpose of the present study was threefold. First, we sought to identify teacher candidates' perceptions of their preparedness, including their skills, confidence, and areas of concern, related to communication and collaboration with diverse families. Second, we sought to compare three different parent-teacher simulation methods and examine their impact on candidate confidence and perception of preparedness to engage in such interactions as beginning teachers, as well as their rating of each of the simulation's effectiveness in impacting their own feelings, knowledge and skills. Finally, we ultimately wish to use these results to inform curriculum, leading to program improvement and the enhancement of teacher quality, particularly as it relates to candidate understanding, attitudes, and experiences in communicating and collaborating with parents and caregivers from diverse families.

We used the definition of families as "…any relatively stable group of people bound by ties of blood, marriage, adoption; or by any sexually expressive relationship; or who simply live together, and who are committed to and provide each other with economic and emotional support" (Schwartz & Scott, 2007, p. 3). Our definition of diverse family was adapted from Demo et al. (2000), who noted that each person within the family dynamic possesses individual differences which can be along the dimensions of race, ethnicity, gender, sexual orientation, socio-economic status, age, physical abilities, religious beliefs, or other ideologies. The families included in this study are fictional representations of families with common student challenges experienced in traditional school settings.

To meet these goals, we determined that teacher candidates should take part in structured experiences to learn and practice professional skills needed for success. Three parallel simulation methods were used to facilitate semi-realistic experiences whereby candidates practiced newly learned skills in a supportive, low stakes, and structured environment mimicking a meeting or conference between parent or caregiver and teacher. The three methods involved Peer-to-Peer interactions, candidate to parent actor interactions, and candidate to simulated parent-based interactions. Research questions included:

1. How do teacher candidates rate their preparedness (skills and confidence) for communicating and collaborating with diverse families? What concerns do they have?
2. What is the impact of simulation method on teacher candidates' confidence and perception of preparedness in their ability to communicate and engage in collaborative interaction with parents/caregivers?
3. What simulation method do teacher candidates judge to be most/least effective in preparing them to communicate and collaborate with parents/caregivers? What ongoing concerns do they have about engaging with diverse families?

Method

The parent-teacher simulations were a culminating experience in the undergraduate course titled: *Families, Schools and Communities*. This is a required course for all early childhood or combined early childhood/childhood majors, most of whom take it during their junior or senior years of college, concurrently with student teaching or in a previous semester. The course emphasizes the building of partnerships among parents, schools, and diverse communities, emphasizing collaboration and learning about family involvement strategies. This culminating simulation experience took place on a college campus across three different

medium-sized classrooms. Two rooms contained rows of 35 individual desks/chairs; the third was the TLE TeachLivE™ simulation lab, equipped with a large computer monitor placed in front of a table and chair where the "teacher" would sit facing the monitor. The entire study took place in one 3.5 hour window during normal class time.

Participants

Twenty-five teacher candidates participated in the study, comprised of 24 seniors and 1 junior. All were enrolled in an Early Childhood (n=13) or combined Early Childhood/Childhood Education (n=12) program at a medium-sized, master's granting public institution in western New York State. Three of the 25 participants were currently enrolled in student teaching at the same time as the *Families, Schools and Communities* course; others were scheduled to complete student teaching the following semester. Fifteen participants reported being employed in a setting where they could communicate with parents/families regularly (such as a childcare center, after-school program). Four participants reported that they communicated with families on topics about their child's academic or behavioral performance regularly; whereas nine reported only sometimes communicating about these topics. See Table 1 for additional participant information.

Table 1

Participant Information

Characteristic	N	%
Gender		
Male	0	0
Female	25	100 %
Major	13	52%
Early Childhood Ed	12	48%
Early Childhood/Child. Ed		
Class Year		
Junior	1	4%
Senior	24	96%
Student Teaching Status	3	12%
Currently enrolled	22	88%
Complete Next Semester		
Job experience w/ Parents/Families	15	60%

Research Design and& Procedures

We utilized a within group repeated measures design and employed counterbalancing to control for order effects by systematically varying the order of the three simulation conditions. A random assignment generator was used to assign the 25 candidates to one of the three groups to start. Each candidate was given a rotation schedule and took part in all three simulation methods

on the same day, rotating through each simulation room in small groups of 8 to 9 people. Each room had at least one researcher present who facilitated the session and distributed the surveys.

Surveys

Data were primarily collected using surveys before, during, and after the simulation sessions. The pretest Candidate Perception Survey gathered demographic information as well as additional items focusing on their feelings of preparedness and skill level in communicating and collaborating with parents/caregivers in their role as a future teacher. The survey included Likert-style items ranging from 1 (Strongly Agree) to 6 (Strongly Disagree) whereby a candidate who was highly confident in their skills in this area would mark a lower score on each item (such as 1 for Strongly Agree or 2 for Agree). The survey also included some open-ended prompts asking them to describe areas of concern, their past experience in working with families, and strategies they could use to facilitate productive communication with families.

Additionally, participants completed brief Candidate Post-Condition Debrief Forms at the end of each of the three simulation conditions. Questions aligned to pretest questions and used similar Likert-style items where they evaluated the extent to which that session helped build their skills and confidence related to working with, communicating and developing relationships with parents/caregivers. A score of 1 indicated that candidates strongly agreed that the session was helpful. A score of 6 indicated that candidates strongly disagreed that the session was helpful.

Finally, a posttest Candidate Perception Survey was administered at the completion of the entire simulation study (after all three conditions were experienced). It consisted of the same items on the pretest, but candidates were also asked to describe how their participation in parent-teacher simulation activities impacted their feelings of preparedness and confidence to facilitate communication with diverse families and to explain what they could have done to better prepare,

and if they had any additional concerns. The posttest survey also asked candidates to identify which of the three conditions was most and least helpful in preparing them to collaborate and communicate with diverse families and explain why.

Parent-Teacher Conference and Collaboration Scenarios

Teacher candidates were presented with a set of 12 scenarios involving a classroom teacher and a parent, guardian or caregiver. Each scenario described an academic, behavioral, social, and other familial challenge that set the occasion for the meeting between the two. Sample reasons for the meeting included the need to discuss an academic intervention, bullying prevention, excessive absences, unique parent requests, or other behavioral concerns. In some cases, the scenario stated that the parent/caregiver requested the meeting, in other cases it was initiated by the teacher. The topics or issues described in the scenarios were developed by the research team, gleaned from prior experience as well as by informal polling of our school-based clinical partners and their personal experiences.

Two levels of each scenario were developed: an "overview" version with only key information (names, age, overview of challenge or reason for meeting) as well as a more detailed version that provided more context and background about the parent/caregiver, including their characteristics or disposition during the meeting as well as any additional "life factors" that may influence the parent/caregiver's attitude, approval/disapproval, or level of concern. Examples of overview and detailed scenarios are provided in Table 2.

Table 2

Sample Simulation Scenarios

Scenarios	
Brief Scenario Overview	Detailed Scenario
Preschool child with specific food needs	You have a classroom of sixteen pre-school students who attend a full day program. One of your students Harper Johnson, has a very strict regime of foods her parents provide her. They send in a lunch daily for her and expect Harper to be offered "her" lunch if she refuses to eat what the school is providing. They request a daily written report of exactly what she was offered and what she ate for lunch and afternoon snack. Mom is a certified nutritionist and claims that Harper will become ill if she eats school provided food every day. She is insistent on knowing exactly what foods will be provided.
Child not doing homework. Caregiver is overwhelmed	During a parent teacher conference, the grandmother (who is the legal caregiver) of your student, Trevor Johnson, says that she does not know exactly what to do with her first-grade grandson at home anymore. She cannot control her grandson's behavior; she cannot force him to complete his homework. The grandmother is at a loss. She reports that she feels depressed and is overwhelmed trying to manage the household and keep track of Trevor. She has virtually no support system as she is single and raising her grandchildren. She is also worried about her own physical health. She reports that most evenings Trevor sits and plays videogames on his phone.
Child is confrontational, talking back and destroying property at least once a week	You have requested a conference because Max Jackson has been demonstrating disruptive behaviors in your preschool classroom. He is frequently not listening or following directions. At least once a week, he has been confrontational with you, talking back and destroying property. Both parents attend and appear apologetic and under a lot of stress. They share that Max has a brother who is diagnosed with a chronic medical condition that requires adult support for daily living skills. His parents admit that at times Max is left to 'fend for himself' while they take care of his brother.

Note: Twelve scenarios were created for this study. Details upon request.

The 25 teacher candidates received all the abbreviated scenarios a week in advance of the simulation sessions and were encouraged, but not required, to review them and prepare in any way they wanted. Preparation could include activities such as reviewing class notes, conducting research on various topics mentioned in the scenarios, or doing their own practice role playing outside of class. Candidates were not told which scenarios they would be assigned during the three conditions. The parent actors participated in a brief training session the week before the class, describing their role. They were provided with the more detailed version of the scenarios and encouraged to expound on the situation by adding details, reacting, and responding however they wanted; no formal script was provided beyond a suggestion of the parent's general attitude during the meeting (such as angry, unengaged, sensitive and overwhelmed, etc.). Similarly, the detailed scenarios were given to the TLE TeachLivE™ interactor in advance with comparable directives stated above. The sequence of the scenarios used were also counterbalanced across all three conditions so that all teacher candidates experienced scenarios 1-4 in the first rotation; all experienced scenarios 5-8 in the second rotation; and all experienced scenarios 9-12 in the third rotation.

Simulation Conditions

The independent variable for this study was the type of simulation condition experienced by the teacher candidate. Three simulation conditions took place simultaneously across three different rooms during the study: (1) *Peer, (2) Parent Actor*, and (3) *TeachLivE™*. The evening began in a large room where teacher candidates completed consent forms and the Candidate Perception Survey and received a folder with the list of partners and a personalized schedule showing the rooms to enter for each session. Candidates also learned if they were Partner A or Partner B, indicating the order that they would be functioning as the teacher during the evening.

The three small groups of candidates remained in each condition for approximately one hour, before they were prompted to rotate to the next session/room. In each room at least one researcher and/or facilitator monitored the time, administered the post-session debrief surveys, and conducted an oral "debrief" session after each parent-teacher interaction. The debrief was designed to be open-ended and allowed candidates to briefly reflect on (1) *What happened? What strategies did you use or see in use?* (2) *So what? What was significant or important in what happened?* (3) *Now what? How will this impact your actions in the future?* Candidates shared their answers aloud but were not provided formative feedback. In this study, there was no specific plan for coaching or instructional feedback from the researchers/facilitators.

For each scenario, interactions were timed by the facilitator not to exceed five minutes. Each session began with a very brief 1-minute introduction and about 25 minutes for the role playing of four scenarios with Partner A acting as the teacher and the other participants observing in a fishbowl technique. In some cases, the sessions were shorter if consensus was reached between the participants or if the simulated parent ended the session abruptly. Additionally, candidates were instructed that they could briefly "pause" the interaction to regroup, consult their notes, etc. After all candidates or pairs of candidates (in Peer Simulation Condition) completed their first interaction within the condition, they were given 15 minutes within the same condition, to collaborate and talk to their peers and plan any changes they would like to employ in a second round with the same parent. Then, the second round of simulations took place with Partner B taking the role of teacher (about 15 minutes) A three item Post-Session Debrief Survey was administered where candidates answered questions directly related to their experience in that condition, and this survey took about 3-4 minutes.

Peer Simulation Condition. The Peer Simulation condition took place between two teacher candidates role playing; one acted as a parent and one as a teacher. During this session Partner A took on the role of teacher and Partner B took on the role of family member. The non-interacting pairs waited and observed the pair "simulating" in a fishbowl format. The roles were then reversed whereby Partner B became the teacher and Partner A became the family member. In all cases, the peer playing the role of the parent/caregiver received a more detailed scenario described above.

Parent Actor Condition. The Parent Actor condition involved an actual parent, who role played the part of different parents or caregiver depending on the scenario, while the candidate played the role of the teacher. Each candidate had an opportunity to interact with the parent actor using one of the scenarios while their peers observed.

TLE TeachLivE™ Condition. The technology based TeachLivE™ simulation condition involved the use of a virtual simulator designed to be a fully immersive environment where the teacher candidate engaged with what appears to be an actual parent/caregiver, albeit an avatar, who was able to see, talk, and respond in real time. Each candidate played the role of the teacher and had an opportunity to interact with the parent avatar using one of the 12 scenarios while their peers observed. The avatar interactor was provided with the detailed scenarios in advance, and given the constraints of the avatar technology, the parent/caregiver was female in all cases. The responses and reactions of the parent/caregiver were controlled by a person known as a "digital puppeteer/improvisational voice actor" located at the University of Central Florida's Center for Research in Education Simulation Technology. The avatar appeared on a 65-inch screen directly across the table from the candidate, mimicking a "conference room" type atmosphere. Although the responses could not be formally scripted, the actor was aware of the scenario in advance and

knew the general disposition of the parent/caregiver (upset, angry, worried, overwhelmed, etc.). The actor was able to see and hear the candidate through a video camera.

Data Analysis

The research team analyzed candidate responses to the pretest-posttest Candidate Perception Surveys and Candidate Post-Condition Debrief Forms with a combination of descriptive and inferential statistics as well as qualitative analysis. Two researchers manually coded each open-ended verbatim response provided by candidate participants on the pre and post-survey items into the four following themes: (1) how candidates prepared for the sessions, (2) what they felt most concerned about, (3) what prior experience or knowledge may have helped their sense of preparedness and (4) specific strategies they could use to have productive communication with families. Our analysis was deductive, drawing on the framework of approximation of practice (Grossman et. al., 2009). Each rater applied a flat code frame to establish themes, using an inductive coding approach. After establishing the aforementioned specific themes, and to affirm accuracy and reliability of the coding, the research team compared the two independent coding decisions, and revised and/or recoded as necessary. Illustrative quotes were selected to substantiate each theme.

Results

Qualitative and quantitative data were analyzed to answer the research questions. The mean, standard deviation, range, and percent for each item on the pre and posttest Candidate Perception Survey are reported in Table 3 and Candidate Post-Condition Debrief Forms in Table 4. Themes and patterns of responding as well as candidate comments are shared below.

Table 3

Pretest-Posttest Survey Results Perception of Skill and Preparedness

	Pretest *n=25*			*Posttest* *n=24*		
Survey Item	*M*	*SD*	*Range*	*M*	*SD*	*Range*
I feel:						
…have the skills to ***work with*** *parents/caregivers to help them to support their child* ***academically****.*	2.44	0.7	1-4	1.58	0.57	1-3
…have the skills to ***work with*** *parents/caregivers to help them support their child* ***socially and emotionally****.*	2.16	0.67	1-3	1.50	0.65	1-3
…have the skills to create a ***welcoming and supportive environment*** *for parents/caregivers in my classroom.*	1.6	0.57	1-3	1.33	0.47	1-2
…can show ***empathy*** *for situations that parents/caregivers face in childrearing.*	1.72	0.53	1-3	1.13	0.33	1-2
…have the skills to ***build positive relationships*** *with parents/caregivers of my students*	1.56	0.5	1-2	1.29	0.45	1-2
…have the skills to ***communicate*** *with parents/caregivers to make them a partner in their child's education.*	2.32	0.68	1-3	1.58	0.57	1-3
…have the skills to ***invite*** *parents/caregivers to school events in support of their child's education.*	2.04	0.72	1-3	1.42	0.64	1-3

…am confident about ***communicating behavioral or academic challenges*** *that are negatively impacting learning/classroom environment to a parent.*	2.96	0.53	2-4	1.88	0.67	1-3
…am ***aware of strategies*** *that will facilitate* ***difficult conversations*** *with parents/caregivers*	2.92	0.69	2-4	1.50	0.65	1-3
…am comfortable ***using strategies*** *to facilitate* ***difficult conversations*** *with parents/caregivers.*	2.96	0.45	2-4	1.71	0.68	1-3
OVERALL	22.88	3.07		14.92	3.90	

Note: lower scores indicate higher levels of agreement, e.g., 1 for Strongly Agree, 2 for Agree, etc.)

*$p < .001$

Table 4

Candidate Post-Condition Form Rating of Helpfulness

	Parent Actor			*Peer-to-Peer*			*TeachLivE™*		
Survey Item	*M*	*SD*	*Range*	*M*	*SD*	*Range*	*M*	*SD*	*Range*
Participating in this Peer Simulation Conference activity helped to build my skills in working with parents /caregivers to help their child succeed.	1.29	0.46	1-2	1.32	0.48	1-2	1.78	0.90	1-4
Participating in this Peer Conference activity helped to build my skills in developing positive relationships with parents/caregivers of my students.	1.29	0.46	1-2	1.32	0.48	1-2	2.0	0.90	1-4
Participating in this Peer Conference activity helped to build my confidence in communicating behavioral or academic challenges that are negatively impacting learning/ classroom environment to a parent.	1.42	0.65	1-3	1.40	0.65	1-3	2.04	1.11	1-4
Overall	1.35	.053		1.35	0.53		1.94	0.97	

Ratings of Preparedness Overall

We examined how teacher candidates rated their preparedness (skills and confidence) for communicating and collaborating with diverse families as well as their concerns before and after the simulation sessions. Prior to the simulation activities, the areas where candidates appeared to feel most prepared were with dispositional skills (building positive relationships, creating welcoming and supportive environments, and showing empathy). On average, areas where candidates appeared to feel least prepared were knowledge and skill-based areas, including their awareness and use of specific strategies to facilitate difficult conversations, as well as their ability to communicate academic or behavioral challenges that negatively impact learning or the classroom environment. These same areas showed the biggest changes after the simulation sessions, whereby candidates' rating of their confidence, awareness, and comfort in using strategies to communicate saw the most growth, improving on average, more than one point on the 6-point scale on these items (e.g., from 3 "Somewhat Agree" to 2 "Agree"). This suggests that the simulation activities were successful in impacting candidates' confidence, awareness of strategies and comfort in using strategies in communicating with families. On average, total scores at pretest across the 10-item survey ($M = 22.88$, $SD = 3.07$) were higher than total scores at posttest, $M = 14.92$, $SD = 3.90$. This indicates that candidates felt more confident in their abilities to engage with parents/caregivers following the interventions. A t-test revealed that this difference was statistically significant, $t\,(23) = 2.07$, $p < .001$. See Table 3 for pretest and posttest survey results.

Following all simulation conditions, candidates were asked how the simulations helped their feelings of preparedness when communicating with families. Comments overwhelmingly

emphasized their feelings of confidence and preparedness for real world experiences as a future teacher. Candidates wrote:

- *I feel a lot better after this experience; it boosted my confidence level.*
- *Practicing having tough conversations with fake parents made me feel less scared because I learned different strategies to use.*
- *I think I am more prepared to deal with angry parents.*
- *It made me see that not all parents are the same.*
- *It gave me the chance to think of ideas on the spot. It kept me on my toes.*
- *It made me feel better seeing other people do it and practicing.*

To a lesser extent, candidates reported that the experiences gave them tools and an increased awareness of how and what they would say to parents:

- *I am more mindful of the language I will use with parents.*
- *Helped me learn how to communicate better and always address the good before the bad.*

Candidate Areas of Concern in Collaborating and Communicating with Families

Prior to the simulation sessions, all participants reported feelings of concern when communicating with families. The most frequently cited concern on the Candidate Perception Survey was engaging with either difficult or disagreeable parents/caregivers (n=10) or communicating with those who appear uninvolved or disinterested (n=5). Candidates also reported that discussing difficult topics and other behavioral challenges was an area of concern (n=6). Candidates wrote:

- *I am most concerned about working with parents that do not believe me.*
- *Some families have trouble believing that their child would indulge in such behavior*
- *I am most concerned about parents not listening to me.*

- *If there is a situation where parents are not doing what they need to be, I'm not sure how I would handle that.*

In addition, candidates' ability to appear professional and portray confidence and was also a concern (n=6), in some cases, specifically related to the academic content being discussed (n=2). Examples included comments such as:

- *I am most scared of coming off the wrong way or miscommunicating what I mean.*
- *I feel that I may be unconfident on certain content making me come off as unprofessional.*
- *I am concerned about being intimidated and being nervous and sounding like I don't know what I'm talking about.*
- *I am scared of conflict and not being able to hold my ground in a respectful, knowledgeable way.*

Candidate Ratings of Simulation Method Effectiveness and Helpfulness

To address research question 3, we examined the candidates' rating and reasoning of which simulation method they viewed as most and least effective on the Posttest Survey. Results are summarized in Tables 4 and 5. Over half of the candidates (n=13, 52%) rated the Parent Actor simulation method as the most effective. Eight candidates (32%) rated the TeachLivE™ simulation followed by three candidates who rated the Peer-to-Peer method as most effective (12%). One candidate reported that all methods were effective, but that TeachLivE™ "prepared her for the rest."

When asked which simulation method was least effective, 11 candidates (44%) chose Peer Interaction, nine candidates (36%) chose TeachLivE™, and one (4%) rated the Parent Actors as least effective (4%). Four candidates did not explicitly state which was least effective

because they expressed that no conditions were judged ineffective; in their opinion, all were helpful/effective. One individual did not complete these survey items.

When asked to provide a rationale for their effectiveness rating, of those candidates who reported the Parent Actor Condition (n=13) as the most helpful, candidates referenced the realistic nature of the interactions and the debriefing and follow up the actors provided after the session (solutions, advice, etc.). Some candidates also reported feeling more comfortable with the actors (compared to peers and avatar) and found the face-to-face interaction less stressful. Candidates noted:

- *They were experienced with situations like these and were willing to work with me on a solution.*
- *It was less intimidating. I understood what we needed to work on without being too focused on my nerves.*
- *Felt like a real parent-teacher conference. Actors did things unexpected and reactions weren't scripted.*
- *I was able to see their facial expressions and a real person*

Of those candidates who preferred the TeachLivE™ simulation condition (n=8), the majority found it to be more realistic, particularly when the parent avatar acted in a more challenging manner. Some candidates reported that although the TeachLivE™ simulation was intimidating or intense, they felt it was a good preparatory experience for a real, human interaction in the future. Candidates wrote:

- *TeachLivE™ was the most intense and I had to try very hard to remain calm and professional.*

- *TeachLivE™ was intimidating in a good way. It showed that there will be times when a parent doesn't want to hear you out.*
- *I think the TeachLivE™ was hard which was good because it prepared me for the rest.*

The two candidates who preferred the Peer Interaction simulation method stated that they felt more comfortable and less stressed in that situation. Additionally, they reported the realistic nature since they didn't know how the partner would respond. Comments included the following:

- *They give you real responses without going too easy or too hard on you.*
- *This felt the most realistic and useful.*

When asked to explain why a particular condition was rated as least helpful, candidates also explained their responses. Of the eleven who rated the Peer-to-Peer method the least helpful, ten reported that it was due to the setting being too informal and comfortable compared to others. Additionally, the peer who acted as the "parent" was often too nice or lacked experience and background to act as a real parent. Candidates explained:

- *It was nice to be both parent and teacher, but peers are nicer in certain scenarios.*
- *It felt more informal talking to peers.*
- *We weren't as experienced with these situations and how to react.*
- *I think peer simulations don't give you a real parent response because they just agree with you.*
- *Our peers feel what we are going through, so they won't be as hard on us.*

The nine candidates who found the TeachLivE™ condition to be the least helpful explained that this was mostly due to the parent avatar acting in a manner that they perceived as being mean, rude, or intimidating, reportedly impacting the candidates' confidence and anxiety

levels. Finally, some candidates (n=3) reported wanting more suggestions or advice following the interaction. Candidates wrote:

- *It was pretty intimidating.*
- *We were speaking to a screen…just not realistic.*
- *It made me feel less confident in my abilities.*
- *The parent was rude the whole time and we weren't given ways to go about it.*
- *It felt like most of the parent responses were too extreme.*
- *The parent was very hostile and didn't want to listen. I would've liked to hear some suggestions in talking to these parents.*

Only one candidate found the Parent Actor condition to be the least helpful, stating it was intimidating and less likely to help her.

Candidates were also asked to rate the helpfulness of each simulation method immediately following each condition using a Post-Session Debrief Form. Candidates indicated that all three conditions were helpful in refining their skills. However, the average scores for the Parent Actor (M = 1.33, SD = 0.53) and Peer-to-Peer (M = 1.35, SD = 0.53) conditions were more favorable than the TeachLivE™ condition (M = 1.94, SD = 0.97). Upon further examination of the results, Question 2 about developing positive relationships seemed to be the most useful in differentiating the groups. While the Parent Actor and Peer-to-Peer condition scores averaged at 1.30, the TeachLivE™ condition mean scores were less favorable (2.0). See Table 5 for details.

Table 5

Candidate Rating of Least and Most Effective Simulation Condition

Condition	Most effective		Least effective	
	n	%	n	%
Peer-to-Peer	3	12%	11	44%
Parent Actors	13	52%	1	4%
TeachLivE™	8	32%	9	36%
All Conditions were effective	1	4%	n/a	-
No Conditions judged ineffective	n/a	-	4	16%

It should be noted that although the overall purpose of the present study did not include a coaching or feedback model to improve teacher candidate performance, it may have inadvertently occurred during one or more of the simulation sessions. During the Parent Actor condition, two parent actors, a facilitator, and one research assistant were present in the room before, during, and after the sessions. On occasion, during some of the breaks between sessions, teacher candidates overtly requested input and casual discussions took place between the candidates, the parent actors, and researcher. This debrief included an informal analysis of the interaction and recommendations for future practice.

Discussion

The process of engaging in parent-teacher simulation was judged to be impactful for teacher candidates overall. Indeed, perception of skills and knowledge related to preparedness to interact with diverse families was positively influenced by the experience. Individual simulation methods appear to have some strengths as well as areas of potential improvement.

What appeared to be the most promising method based on candidate feedback was the Parent Actor simulation condition. Utilizing a parent volunteer who may have experience interacting with teachers on controversial or high stakes topics offers a realistic model. Peer-to-Peer simulations may not offer as realistic an experience to the teacher candidate. In addition, Peer-to-Peer sessions appeared to be the least influential and least preferred by candidates in this study, although they were reported as the "least stressful." Data regarding teacher candidate perception of the TeachLivE™ simulation method indicated that it provided realistic preparation for future interactions with families. However, there was some indication from participants that the TeachLivE™ experience was also intimidating or intense, based on the parent avatar interaction.

Recommendations for Future Research and Implications for Practice

The Peer-to-Peer simulation method may be useful early in a semester or program to provide a non-threatening opportunity for teacher candidates to practice family communication skills following a gradual release model (possibly beginning with Peer-to-Peer exchanges and working up to Parent Actor or TeachLivE™ later in the course or program). If using Peer-to-Peer simulations, more effective preparation protocols for peer actors would be necessary to assure that the simulations are more realistic. In future simulations, the research team plans to explore the use of TeachLivE™ with a graduated level of challenging parent/family behavior to give teacher candidates the opportunity to build their skills through a progression of scenarios. Additionally, it may be beneficial for teacher candidates to be made aware of the possibility that some interactions in the TeachLivE™ simulation will involve a parent/caregiver who is angry and/or disagreeable, thus allowing the candidate to prepare for potential interactions where challenging verbal and physical behaviors are present. Additional training to enhance teacher

candidate communication skills when dealing with confrontational or accusatory family interactions is also recommended.

An interesting variable uncovered during this research was the provision of meaningful feedback during the Parent Actor sessions. While this could be judged to be a limitation of the study, we feel that it offers insight into the value of a coaching/immediate feedback model, which did not occur during the other sessions. Further research utilizing a formal model of coaching and feedback following each simulation interaction will be studied to determine if the simulation type, the feedback model, or the combination of simulation type and feedback model is most impactful on teacher candidate confidence and perceptions of preparedness when interacting with families.

Conclusions

In conclusion, the researchers found that parent-teacher simulations impact teacher candidates' confidence and perception of preparedness to engage in collaborative interaction with diverse families. These results also indicate that the simulation methods used in this study presented participants with various challenges to be addressed in future research. Based on the findings, we recommend the inclusion of structured simulations involving parent and teacher interactions during teacher preparation programs. We also recommend that future research examine the impact of adding a coaching and immediate feedback component to simulations and study the impact it has on the preparedness and skill level of candidates.

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