



The influence of simulations on family engagement – prospective early childhood educators’ perceptions

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ABSTRACT

Nurturing experiences in preparation for prospective early childhood educators’ work with families during their training are critical for establishing empowering relationships. This article details a qualitative case study of 77 prospective early childhood educators engaged with the Parent, Family and Community Engagement Simulation. An electronic questionnaire exploring their beliefs regarding the use of the simulation was conducted at the Universidad Rey Juan Carlos (Spain). The results demonstrate the simulation can be a very effective classroom technique to provide students with the necessary competencies to engage with families effectively and promote school readiness. These results also suggest that the simulation provided important insights into how successful partnership occurs and how to strengthen relationships, helping students to reflect on the importance of family involvement.

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Introduction

Simulation technologies in higher education

Teacher preparation programmes are at the crossroads of tradition and innovation. Simulation is emerging to address education needs and move prospective educators forward into a new era of learning to establish empowering relationships with families. These simulation technologies have attracted the interest of higher education faculty members looking for ways to engage and provide high-quality field experiences for prospective educators. There has been interest in integrating simulations as a supported classroom technology on campus because they are effective pedagogical tools (Damassa & Sitko, 2010; Damewood, 2016) and have the potential to bring the classroom and the professional practice together (Badiee & Kaufman, 2015; Hopwood, Rooney, Boud, & Kelly, 2016).

Traditionally, early childhood education students in Spain receive didactic instruction in the college classroom setting and learn the art of teaching in their educational field experience. However, they are not provided with nurturing experiences in preparation for their work with families during their training. This challenge has teacher educators looking for new ways to expose students to real-world situations and prepare prospective early childhood educators for the early childhood education care environment (Paz-Albo Prieto, 2015). In fact, higher education institutions need to

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develop student-centred learning outcomes by adopting new approaches in the teaching-learning process that provide effective support and guidance to prospective teachers.

The use of simulators and simulation experiences has accelerated in education programmes as faculty realized that simulations engage students' higher-level skills and increase awareness of effective teaching skills (Knezek, Hopper, Christensen, Tyler-Wood, & Gibson, 2015). However, simulation in the education of early childhood educators is a new concept, and no real alternatives existed before the advent of the *Parent, Family and Community Engagement* (PFCE) Simulation. The PFCE Simulation, an interactive online simulation, is an example of a simulation-based learning that represents the actions and dynamics of a Head Start programme staff member's intake visit with a mother and her daughter and offers prospective educators transferable practice in boosting family engagement and school readiness practices.

Family involvement

There is a growing understanding of the importance of meaningful family engagement efforts to promote children's learning and development (Henrich, 2013; Office of Head Start National Center on Parent, Family and Community Engagement, 2011; Weiss, Caspe, & Lopez, 2006). The potential of simulation technologies in providing family-centred practices cannot be overstated. Family-centred practices encompass various factors, including building positive and goal-oriented relationships to make progress towards positive outcomes for families and children. The partnership between families and school is fundamental to children's success in school readiness. Key to this strong family-school relationship is communicating effectively (Paz-Albo Prieto, 2015) but what school readiness strategies can we use to partner with families to support children's learning? How can we integrate those strategies throughout early services?

Although PFCE strategies are individually tailored, an effective implementation in early childhood education programmes is essential to increase the potential for being successful in engaging parents, families and the community (Office of Head Start National Center on Parent, Family, and Community Engagement, n.d.). These strategies are aligned across four impact areas: Program Environment, Teaching and Learning, Family Partnerships and Community Partnerships (see U.S. Department of Health and Human Services, 2011, for more details) and they should be an integral component of teacher preparation programmes built on a strong collaboration between parents, careers and schools. Furthermore, fostering cooperation among them is important in helping to maximize children's benefit from early childhood provisions.

The importance of understanding family experiences through empathy, respect, communication and collaboration is also documented by recent studies (Paz-Albo Prieto, 2015; Vuorinen, Sandberg, Sheridan, & Williams, 2014). One key evaluation of over a decade of parent engagement efforts revealed that 'a systemic, integrated, and comprehensive approach to family engagement can help programs partner with families to prepare their children to learn and thrive' (Office of Head Start National Center on Parent, Family, and Community Engagement, n.d., p. 5). These partnerships enhance teacher-child and parent-child relationships, and children's school readiness. Building partnerships among families and school staff help prepare children and families for transitions. However, there is a need for providing schools and parents with the necessary support around the transition to school and help them build on their strengths to overcome challenges.

Why use the PFCE simulation

The PFCE Simulation (Figure 1) is an online interactive training that takes users to a virtual Head Start Program to practice relationship-building strategies that lead to positive change for children and families. Users conduct relationship-building conversations to learn how to partner with families to enhance children's school readiness. Although the PFCE Simulation was originally created for Head Start and Early Head Start staff members, it can be used by anyone who wants to work on practice



Figure 1. Screenshot from the PFCE Simulation.

building bonds with families in any early childhood setting. In Spain, the PFCE Simulation can be used in teacher education programmes, professional development for teachers and teacher educators, and programme approaches to providing early childhood care services.

The PFCE Simulation is a safe place to practice an interaction with a family to maximize parents and children's benefit from early childhood provisions. The better informed young students are about building positive goal-oriented relationships the greater the benefit to children they serve.

As the growing understanding of the importance of children's early years drives increasing attention to early childhood college education programmes, educators are seeking tools to teach effectively prospective educators. They always hope that the instruction received in the classroom will be effectively transferred to relevant situations in the real world. While prospective early childhood educators receive instructions regarding strategies for establishing empowering relationships with families, they are not provided with nurturing experiences that foster cooperation between parents, careers and preschools.

Purpose of the study

Although research has been conducted on family engagement efforts (Anderson, Aller, Piercy, & Roggman, 2015; Hurwitz, Lauricella, Hanson, Raden, & Wartella, 2015), it is helpful to understand more about the use of the PFCE Simulation as a tool for implementing best practices in teacher preparation programmes. More specifically, no studies have examined prospective early childhood educators' perceptions on the use of the PFCE Simulation in Spain as part of an educational intervention on fostering cooperation between parents, careers and schools. Therefore, the current study serves to explore whether simulated experiences can be effective in the undergraduate education programme by using an experimental design to examine the perceptions on the use of this technology in a sample of Spanish university students.

Method

Participants and procedure

All participants for the study were drawn from a sample of 97 college students attending two one-semester classes where the PFCE Simulation was adopted in the 2014 and the 2015 academic year at Universidad Rey Juan Carlos. None of the students had previous experience using the education simulation before participating in this study. A total of 77 out of 97 prospective early childhood

education (ECE) educators (72 female and 5 male) completed the questionnaire for an overall 79.38% participation rate. The 77 completed questionnaires served as the sample for the research study. The mean age for participants was 20.01 years ($SD = 3.412$). The age of our participants ranged from 18 to 45, although over 88% were between 18 and 22 years old.

During the second semester in the 2014 and the 2015 academic year, all students used the online PFCE Simulation as a regular part of their courses during a two-hour session. At the end of the session, students were invited to participate in the study by taking the survey instrument to assess overall perception of the simulation experience. Participation was completely voluntary and students could complete the online questionnaire via the link integrated in the university learning platform during the next few days after the session. To ensure confidentiality of the responses, *Encuestafacil.com* was used as the response collecting method because it guaranteed the anonymity of the recipients' responses under the international code of ethics ICC/ESOMAR. We received back a total of 77 completed questionnaires.

Instrument and data analysis

The instrument used for this study was a questionnaire designed by the primary investigator. This questionnaire was reviewed by a group of teacher educators and a senior analyst who were content experts, revised by the primary investigator based on their suggestions, and then pilot tested. The final version of the survey instrument developed consists of 16 items that also include demographic items and items that were included for forthcoming analyses. Scale items 4–13 were coded using a four-point Likert scale ranging from 'Strongly disagree' to 'Strongly agree'. For our analyses, 'Strongly disagree' was coded as 1, 'Disagree' as 2, 'Agree' as 3, and 'Strongly agree' as 4. Question 14 and 15 were presented as dichotomous (Yes–No). Lastly, an open question was also given so that students could tell us whether the PFCE Simulation was helpful for their learning.

Reliability analyses found that the data of the survey were internally consistent. The scale had a high level of internal consistency, as determined by a Cronbach's alpha of 0.848. This study used a qualitative design to obtain the students' perceptions regarding their experiences with the use of the PFCE Simulation, as an educational intervention experience in education curricula at higher education settings. Data analysis was undertaken using the Statistical Package for Social Sciences (SPSS 22.0). Descriptive statistics were calculated via means, standard deviations and percentages where appropriate.

Results

Prospective ECE educators' perceptions towards the educational experience are presented in [Table 1](#). One of the major findings was the participant's beliefs that using the simulator significantly enhanced

Table 1. Means and standard deviations of prospective ECE educators' responses.

Question items	Mean ($n = 77$)	SD ($n = 77$)
It helped to stimulate critical thinking.	3.30	0.563
It was a valuable learning experience.	3.52	0.576
It helped me better understand concepts.	3.44	0.618
The knowledge gained can be transferred to the real education setting.	3.62	0.563
It helped me acquire information on strategies for working with families and how to strengthen relationships.	3.69	0.568
It helped me gain a sense of families' varying needs and how these needs may be addressed.	3.25	0.566
It provided important insights into how successful partnership occurs.	3.25	0.566
It helped me reflect on the importance of family involvement.	3.53	0.598
It helped to develop a positive, yet realistic dispositions towards working with families.	3.38	0.563
It made me see the situation differently than I might have seen it before.	3.12	0.688

their classroom experience. In fact, more than 97% of the participants felt that using the PFCE Simulation helped them to reflect of the importance of family involvement and developed a positive, yet realistic dispositions towards working with families (98.7%), and provided them with opportunities to acquire information on strategies for working with families and how to strengthen those relationships (97.4%). Such important realizations by the students point to the PFCE simulation serving an important role in bringing careers closer to their higher education classroom.

As expected the use of the PFCE Simulation also helped to stimulate critical thinking (97.4%) and helped participants better understand concepts (96.2%), gaining a sense of families' varying needs and how these needs may be addressed (96.1%). Moreover, ECE prospective educators reported that the experience with the PFCE Simulation provided important insights into how successful partnership occurs (96.1%); it was considered a very valuable learning experience by 98.7% of the participants. Not only did the simulation increase the student's self-awareness, but it helped them develop a stronger understanding of family engagement.

Similarly, the simulation also had a significant impact on helping students learn. The use of the simulation is perceived by 87%, as a tool that helped them to see exposed situation from a different perspective, helping 98.7% of the participants to gain an understanding of the required knowledge of practice that can be transferred to a real, non-simulated educational setting. Surprisingly 98.7% ($SD = 0.114$) of the students indicated that the use of the PFCE Simulation was helpful for their learning and should be included in undergraduate programmes.

While an exhaustive review of the qualitative data generated during this study is impractical given the scope of this paper, an examination of the content suggests using the simulation helped ECE prospective educators to learn theory into practice bringing careers closer to their higher education classroom. The results suggest that using the simulation produced a more in-depth understanding of the importance of teacher–parent relationships in promoting the development of children and their families.

A review of their answers shows that students' engagement was high, and, perhaps, this enhanced student engagement resulted in student involvement in the more-rigorous aspects of this novel simulation experience. Specifically, the simulation helped students (1) engage effectively with families, (2) maintain 'real' conversations with families, (3) take decisions and visualize their outcomes, (4) reflect on the strategies for working with families, (5) acquire information on goal-oriented strategies for working with families and how to strengthen relationships for early learning setting, (6) observe partnership from a different perspective, (7) reflect on the feedback of their choices (8) and envision how to improve their communication skills in order to involve parents in the school and the development of children.

Discussion

This study was conducted to determine if simulations like the PFCE Simulation provide with a nurturing experience in preparation for participants work with families. Results of the research show that prospective ECE educators believe that the PFCE Simulation promotes active learning by helping them relate the course material to their own educational experiences both inside and outside the classroom. As expected, the use of simulations as the PFCE can be used to engage students in ways that are important for their academic and professional development as future educators. Badiie and Kaufman (2015) note that simulations are a valuable tool for preparing students for their teaching careers. Taken together, the results indicated that the use of the simulator were positive related to the practice of goal-oriented strategies in establishing strong family–school partnerships during the transition to school so they can use them in a real-world setting.

Clearly, the participants were engaged by the novel experience showing significantly positive attitudes towards learning. These results may suggest that the PFCE Simulation-based approach classroom promotes parent and family engagement as well as children's development, and it is a

necessary tool for implementing best practices in the higher education classroom (Damassa & Sitko, 2010).

Although no research exists on the use of the PFCE Simulation in which ECE prospective educators at the Bachelor's degree level engage, data from this study reflect the immersive technology leverage to provide formative personalized feedback about learner interaction in real time. The PFCE Simulation contributes to a pedagogy that encourages evidence-based teaching and learning, helping participants understand the importance of family involvement (Henrich, 2013; Weiss et al., 2006) and providing insights into how successful partnership occurs and how to strengthen those relationships. The simulation appears to be an excellent forum to use in helping students to develop their skills, and to learn about themselves and families. The simulation also proved to give students

Limitations

All studies have some degree of limitation. Although participants volunteer for the study, the courses participating in the study were not randomly selected. The chosen courses had an interest in using simulation to educate early childhood education students, and they had the equipment for the simulation required for the study. Not all universities may be prepared to begin their simulation programmes.

Another limitation of this research pertains to the number of participants. The study sample of 77 prospective teachers was very small. The research was limited to the education programmes at the Universidad Rey Juan Carlos and cannot lend to the generalizability of the results. Therefore, the results need to be interpreted carefully.

Conclusion

This study provides evidence that prospective early childhood educators are coalescing towards learning environments that leverage personalized experiences and academic support strategies intended to address the reality of their future education practice. Data suggest that the value of the PFCE Simulation tool for engaging prospective educators lies in the positive changes for families and children that come from effective implementation.

This PFCE Simulation enhances teacher preparation programmes and provides each participant with crucial insights about what areas need further attention in their partnerships with families. This is particularly compelling showing relevant benefits strongly connected to fostering cooperation among parents, careers and preschools. Though simulation is poised to have a profound impact on learning if approaches are designed and deployed effectively in the education curriculum, investing in high-quality teaching is still vital for promoting greater student success.

As there is continuing growth in the use of educational simulators by teacher training institutions, it is hoped that this study will motivate further studies of simulations to evaluate how can be best used in higher educational settings and to tease out the effect of the actual methodology and of the simulation practice. More research about the preparation of new education graduates for the reality of their own education practice is needed. However, what is most important for all teacher preparation programmes is that students are engaged in meaningful partnerships to support children's learning and development.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Jesús Paz-Albo is the Graduate Program Director of the MA in Educational Management at Universidad Rey Juan Carlos. His research interests focus on educational technologies, teacher education and educational leadership.

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