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The Poverty Simulation: Increasing Teacher Sensitivity for Students Living in Poverty

Abstract

Studies of children growing up in poverty describe increasingly devastating effects on many areas of development (e.g., cognitive, linguistic, socio-emotional, affective, psychomotor). Teachers need to be aware of these findings; they also need to develop empathy for their students living in poverty. One way to do this is to experience a poverty simulation wherein participants (i.e., teachers) learn what it is like to “walk in their students’ shoes.” This report describes the history of a poverty simulation in southeast Georgia. Analysis of quantitative data, collected via surveys administered before and after recent poverty simulations, revealed the following findings: increased teacher understanding of poverty, increased teacher recognition of their own biases toward their students and their families who live in poverty, and increased teacher empathy toward their students and their families who live in poverty. Findings also showed that teachers plan to apply their new understandings regarding poverty in their classrooms. Implications for practice, especially for teachers working in urban settings with poor children, are offered.

Keywords

poverty, poverty simulation, teacher empathy

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The Poverty Simulation: Increasing Teacher Sensitivity for Students Living in Poverty

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Studies regarding the effects of poverty on children abound, and it is important that teachers are informed about the research in this area. Teachers need to know that chronic poverty (lack of income and material possessions necessary to meet basic needs) affects every part of a child's being, including the "soul" (Jensen, 2009, p. 6). Additionally, and perhaps even more importantly, it is critical that teachers develop empathy (i.e., the ability to internalize and understand the feelings of another) for their students who live in poverty. One way to do this is to experience a poverty simulation wherein participants (i.e., teachers) "walk in their students' shoes" and learn what it is like to go hungry, face eviction, and/or suffer the stress of a single parent losing a job because the dilapidated car was repossessed and there was no other way to get to work.

Each of the authors of this article has been involved in the implementation of the Community Action Poverty Simulation (CAPS) (Missouri Community Action Network, 2016) for various audiences, dating from 2004 to the present. As community and school system leaders, the authors have also participated in multiple simulations conducted in the local school system and have insights to share about how this professional learning experience supports teachers in the Savannah-Chatham County Public School System (SCCPSS) in developing understandings needed to effectively

teach their students from low socio-economic backgrounds.

The purpose of this report is multifold: (a) to offer a brief review of the findings regarding the effects of poverty on children and their families, (b) to define simulation learning and its effectiveness, (c) to offer a history of poverty simulations in Chatham County, Georgia, (d) to describe SCCPSS Poverty Simulations, (e) to describe data collected about participant experiences, and (f) to offer a summary and conclusion with implications for practice.

EFFECTS OF POVERTY ON AREAS OF DEVELOPMENT

Tragically, it appears that there is a growing moral disconnect in the United States. Specifically, the numbers of children living in poverty are increasing as are the devastating effects of poverty on the developing mind/brain. Hair, Hanson, Wolfe, and Pollak (2015) found that poor children receive less cognitive stimulation at home than their wealthier peers and that the volume of gray matter in poor children was 8–10% lower than the gray matter of children growing up in middle to upper class families. Luby et al. (2013) found that the volume of the hippocampus and amygdala (parts of the brain that react to stress and process emotions) was smaller in poor children, and, according to Kwon (2015) and Stromberg (2013), poverty may be linked to a smaller brain surface area

and may cause a delay in the growth of brain tissue. Neuroscientist McEwen (2011) found that environmental stressors increase anxiety and, hence, decrease cognition, the ability to reason and remember or connect with the content being taught.

Furthermore, poverty affects children's ability to think in several additional ways that are likely to affect school performance. Poor nutrition (e.g., iron deficiencies) may cause disruptive behaviors and illness (Grantham-McGregor & Ani, 2001). For example, exposure to lead may result in poor working memory, short attention spans, and distractibility (Jensen, 2013). Academic performance (e.g., standardized test scores) is placed at risk because of chronic stressors (e.g., physical and emotional neglect and abuse), insecurity, and minimal resources to deal with these challenges (Hair et al., 2015). How can students be expected to master the concept of long division, for example, if they come to school every day hungry, afraid, angry, and perhaps sick because of the poverty conditions in which they and their families exist?

Because of the environmental stressors surrounding children growing up in poverty, linguistic development is affected also. According to Engle and Black (2008), Harkness (2015), and Roseberry-McKibbin (2012), there is a strong correlation between language development and children living in poverty. Factors such as poor verbal interaction in the home due to lack of time and resources, limited education, depression, and the constant struggle to make ends meet stifle meaningful verbal exchanges between children from under-resourced homes and the adults with whom they live. Rather than interactive, enriching conversations found in many middle-class homes with well-educated parents, language in the homes of children from low socio-economic backgrounds may mean simple, unidirectional commands and erroneous sentence structure.

Socio-emotional and physical areas of development also are affected by poverty.

According to Winer and Thompson (2016), three factors have a devastating effect on a child's developing social competence: poor education (especially that of the mother), low income, and maternal depression and negativity. Children living with these conditions are less able to develop empathy for others and more likely to be non-compliant in a social setting (e.g., school). Additionally, children living in poverty often have difficulty accessing healthy food and physical recreation or dental and medical care, resulting in obesity and chronic illnesses, such as asthma (Halfon & Newacheck, 1993) and diabetes (Hyman, 2010). Because poverty has the potential to negatively impact so many areas of the developing child—brain growth, thinking capabilities, language development, socio-emotional competencies, and physical health—poverty is a topic that all teachers should be prepared to address in the classroom.

In addition to a thorough knowledge of poverty and its effects on the developing child, teachers also need to develop empathy for their students who come to school hungry, dirty, ill-clothed, afraid, and/or angry, and who struggle with their families each day to survive. For teachers, empathy first begins with awareness of false stereotypes ingrained in American culture regarding the poor. For example, according to Gorski (2012), it is commonly believed that the poor are lazy and uninterested in education; in addition, it is also commonly believed that many are addicts and that their situation is their fault. A teacher holding biases like this will find it difficult to accommodate the learning needs of a student affected by an impoverished background. Teachers must examine their own value systems and move beyond any biases they may have toward the poor. They must also individualize instruction and hold high expectations for each child in their classroom. Another excellent strategy is for teachers to participate in a poverty simulation where they experience the simulated realities of students (and their families) living in poverty.

DEFINITION OF SIMULATION LEARNING

A simulation is a learning method that requires participants to take on a role that is usually unfamiliar to them and to attempt some type of problem solving task while remaining in that role. Simulations involve participants in making decisions when circumstances are not directly under their control; these are one-of-a-kind learning opportunities, dependent on the interplay between the participants and the conditions of the simulation (Anderson & Lawton, 1997). As a result, simulations are often grouped with higher order thinking skills activities (Shellman & Turan, 2006). Simulations as training paradigms are used in many different fields including aviation, business, corrections, education, health care, and medicine. The desired outcome of simulation learning activities is that participants become confident about making decisions in their own contexts because they have faced similar circumstances and, as a result, have developed skills for navigating comparable situations (Salas, Wildman, & Piccolo, 2009).

Simulations are used in the education of both children and adults. Because simulations mimic real-world scenarios, they are ideal for teaching and rehearsing the many options available in problem-solving situations and testing out the applications of different solutions in a safe, risk-free environment. Additionally, simulations are thought to be a more engaging form of instruction than other methods, such as lectures, which is another reason instructors at various levels seek to implement them (Hattie, 2009). This learning method is particularly useful for learners who work in groups or teams, as it has been found to be useful for increasing leadership and communication skills as well as adaptability, all of which strengthen teams working towards a common goal (Beaubien & Baker, 2004; Salas et al., 2009).

A significant drawback of simulation learning is the amount of time investment needed to plan an effective simulation. Because multiple

learners take on various roles and act on their own cognizance, a clear set of directions and procedures must also be written into any simulation that approaches the complexity of real-life scenarios. The advance planning required and careful preparation of simulation materials may be one reason why this type of learning activity is not observed more frequently. On the other hand, once a simulation has been developed, it is a very cost effective and simple learning strategy to implement. Because it is participant-centered and realistic, it can be an ideal method for building awareness and understanding as well as bridging potential gaps between theory and practice (Salas et al., 2009).

EFFECTIVENESS OF SIMULATION LEARNING

The time invested in planning and implementing a successful simulation learning experience merits scrutiny of the effectiveness of this method. Hattie's (2009) meta-analysis found that simulations have an effect size of 0.33 on learner achievement. Importantly, there was a significant discrepancy in the effectiveness of simulation in adult learning as compared to K–12 students; the effect size for adult learners jumped to 0.49, making simulations an especially useful mode of professional learning (Hattie, 2009). Because adult learners need to participate in order to learn effectively and transfer that learning to their own contexts (Fanning & Gaba, 2007), simulations are well suited to the needs of adult learners.

Simulations—which have clearly specified learning outcomes for concepts, interpersonal growth, problem solving, and decision-making—are likely to evoke learning gains in participants (Anderson & Lawton, 1997). Simulation learning enhances substantive knowledge and critical thinking on the topic of the simulation (Shellman & Turan, 2006). This finding is attributed to the correspondence simulations have with laboratory investigations in that they require participants to learn how and when to apply

knowledge by taking responsibility for their actions and the consequences these actions create (Shellman & Turan, 2006). Likewise, Vandsburger, Duncan-Daston, Akerson, and Dillon (2010) found that simulations about complex topics such as poverty enable participants to open their minds and temporarily suspend preconceived ideas in order to think critically about the topic and to achieve the goals of the simulation. Simulations have been found to impact the learning of both knowledge and skills in addition to impacting learner attitudes (Beaubien & Baker, 2004; Todd, de Guzman, & Zhang, 2011). For this reason, they are ideal for exposing participants to cultures and institutions with which they may not be familiar (Shellman & Turan, 2006).

Those who utilize simulation learning can reliably assess their effectiveness through the use of a pre- and post-test model. Items that assess learning objectives can be useful (Anderson & Lawton, 1997) on instruments that ask participants to rate their change in understanding prior to the simulation and after experiencing it (Shellman & Turan, 2006). An element critical to learning from a simulation activity is the opportunity participants have to reflect on the simulation and its implications for their work (Fanning & Gaba, 2007). The post-simulation debrief is one of the most important ways to reinforce learning from the simulation (Beaubien & Baker, 2004). A brief discussion at the conclusion of the simulation allows learners to identify the impact of the simulation on their understanding of the topic, probe the emotional impact of their learning, and generate ideas for applying the lessons of the simulation to their own contexts (Fanning & Gaba, 2007).

Interestingly, multiple researchers have examined the specific outcomes and issues associated with the use of the same poverty simulation materials used in the SCCPSS, the CAPS kit (Missouri Community Action Network, 2016). A common finding when examining the use of CAPS simulations is the transformative

nature of the learning attained through the poverty simulation. Transformative learning is a term that encompasses more than just the addition of new knowledge for an individual; it implies a change in both attitude and action. For example, Vandsburger et al. (2010) found that a poverty simulation, attended by college students, “created a paradigm shift in the way they related to the poor” (p. 311). Similarly, research conducted on poverty simulations that measured attitudes toward poverty and other outcomes (e.g., empathy, critical thinking, and civic engagement) found that holistic and enduring changes in terms of personal awareness and empathy about poverty occurred for many participants (Browne & Roll, 2016). Because college students come from backgrounds, which often do not include life experiences with poverty, the simulation provides the type of “disorienting dilemma” needed to stimulate transformational learning (Vandsburger et al., 2010).

Research has consistently demonstrated changes in understandings, attitudes, and beliefs about poverty as a result of participation in the simulation; however, the nature of these changes and the specific ideas associated with them are important to understand in order to ascertain when the use of a poverty simulation would be most beneficial. People who have not experienced life with insufficient financial resources often have difficulty understanding the range of emotions and stresses that are a regular part of the lived experience of persons from low-income backgrounds. Multiple researchers have noted that simulation participants have increased awareness regarding the feelings of shame, anger, and frustration as well as intense levels of daily stress associated with life in poverty circumstances (Steck, Engler, Ligon, Druen, & Cosgrove, 2011; Todd et al., 2011).

Attitudes about poverty and the individuals who experience it can also be impacted by participation in a poverty simulation. In a mixed-methods evaluation of the CAPS poverty

simulation used with college students, Todd et al. (2011) found that participants experienced a decrease in bias and negative stereotypes about those living in poverty. Browne and Roll (2016) recommend implementing steps prior to and after a poverty simulation that allow participants to voice insights about their participation in a poverty simulation; this reflective voicing of insights stimulates learning as a process, rather than an outcome, of the simulation experience, which results in greater changes of attitude.

One important belief that is often challenged through participation in the CAPS poverty simulation is the cause of poverty itself. Poverty can be logically seen to exist as the result of unwise individual choices or it can be understood as the result of systemic forces that make it difficult for all people to have equal access to opportunities that create and sustain financial stability. Participants experienced changes in their pre-conceived notions about the causes of poverty and gained an understanding of how difficult it can be to extricate oneself from life in poverty as a result of being exposed to the many obstacles to personal improvement inherent in low-income situations (Browne & Roll, 2016; Steck et al., 2011; Todd et al., 2011).

The research findings discussed in this brief literature review describe ways that poverty simulations have impacted college students. No research is known to have been conducted using the CAPS kit with practicing teachers, which makes this inquiry a valuable first step in the direction of understanding how participation in a poverty simulation may support teachers in developing greater sensitivity towards their students living in poverty.

HISTORY OF POVERTY SIMULATIONS IN CHATHAM COUNTY, GEORGIA

Poverty is a chronic obstacle for Chatham County families. According to the 2015 U.S. Census estimates, 13.5% of Americans live below the poverty line (Proctor, Semega, & Kollar 2016). Georgia ranks 42nd in the nation, with the 8th

worst poverty rate of 17.1%, meaning that about 1.7 million Georgians live at or below the poverty line; Chatham County's rate of poverty exceeds both the state and national averages, standing at 19.1% (United States Census Bureau, 2017). Approximately 30% of this county's children live in households whose financial resources put them at the poverty level. According to Kids Count Data Center, this equates to nearly 16,000 school-age children, most of whom attend school in the SCCPSS district (<http://datacenter.kidscount.org/>). Because of these data, the school district continues to support ongoing teacher education on topics related to understanding and appropriately addressing the needs of students living in economically disadvantaged situations.

The introduction of poverty simulations in Georgia began in 2003 at the level of the Cooperative Extension Agents associated with the University of Georgia (2004). The University of Georgia County Extension Agents program is funded by state and federal sources; their work includes research and community outreach tied to the missions of land grant state universities. A primary goal of the extension program is to create awareness of issues that affect the overall health of all Georgians; since poverty is an issue that directly affects the well-being of Georgia families, the Family and Consumer Science branch of the Cooperative Extension program has been heavily invested in educating the public about poverty and creating awareness and sensitization of the circumstances under which families with limited means must cope.

As a result of then-current data indicating significant poverty-associated issues for children and families, the Family and Consumer Sciences Division of the Cooperative Extension Program sought out programs that would have positive outcomes in community development, especially in areas that affect families and children. According to their 2003 report, 470 community leaders across the state of Georgia attended poverty simulations facilitated by the

Cooperative Extension Program (University of Georgia, 2004), and it was during this time that the Chatham County Cooperative Services Agent was introduced to the program and began planning to bring the program to the county.

City leaders of Savannah, Georgia were at the same time seeking new initiatives to acknowledge and address the growing issue of local poverty. The United Way of the Coastal Empire and the Savannah Youth Futures Authority were two local non-profit agencies that worked with the Chatham County Extension Agent to bring poverty simulations to the county. The first poverty simulation held in Savannah in the winter of 2004 included attendees who were elected officials, CEOs, community leaders, and other citizens interested in addressing issues of poverty impacting Chatham County. Also among the members of this inaugural group of poverty simulation participants was district leadership from SCCPSS. More than a dozen simulations occurred in Savannah between the years of 2004–2006.

With the creation of Step Up Savannah (n.d.), a local independent non-profit agency that “engages all sectors of the community to improve the economic mobility and financial stability of families in Savannah, Chatham County” (para. 1) in 2005, the responsibility and privilege of offering poverty simulations in the community shifted from the County Extension Agent to this local entity. From the years of 2005–2008, Step Up Savannah partnered multiple times with the school system to provide poverty simulations to educate school staff about issues affecting increasing numbers of students who were growing up in poverty until the school system procured its own kit and had enough staff trained in facilitating simulations. Step Up Savannah continues to conduct community-wide poverty simulations and provides multiple initiatives in financial education and workforce development.

DESCRIPTION OF SCCPSS POVERTY SIMULATIONS

The Professional Learning Department of SCCPSS currently owns two CAPS poverty simulation kits (Missouri Community Action Network, 2016) and conducts an average of four simulations per school year at various schools and for different audiences, including all teachers new to the district. Planning for a simulation happens far in advance of the actual date, since it takes time to gather the necessary personnel and arrange for site setup. An effective simulation requires about 30 staff members who facilitate the simulation and operate the various stations. District leaders implementing the simulation ensure that all staff members have gone through the simulation once as a participant prior to serving in the simulation. No two simulations happen exactly the same as the participants make individual choices during the simulation, which impact its outcomes, not to mention that group size also affects the simulation. Simulations have been hosted for groups as small as 25 and adapted for groups as large as 225.

Simulations are often conducted in school gymnasiums that offer the required space for a set up that involves 14 simulated community agencies and businesses lining the perimeter of the room as well as seating for participants in the simulation. The community agencies include a Social Services Department and Community Action and Interfaith Agencies. The public services available include schools, health care, and police. Businesses, such as a grocery store, pawnshop, mortgage company, bank, day care center, utility company, and quick cash store are also available for participants to access. There is also one employer in the simulated town of Realville and, when we have enough available staffers, a person who surreptitiously commits illegal activities throughout the course of the simulation, including theft and attempts to sell “drugs” (sugar packets).

Located in the center of the room are various configurations of chairs set up in family units of one to five persons. Each family unit receives a packet of information and supplies for the simulation that help them to understand their specific circumstances, including the financial resources available to them and what obstacles they might face, such as being unemployed, disabled, or newly released from jail. There are 26 total families (one for each letter of the alphabet), and they are composed of diverse situations and family compositions, including single adults, single parents, married parents, and unmarried adults who share housing, as well as a homeless shelter in which some participants begin the simulation.

The simulation runs from two and a half to three hours and begins with an orientation provided by the facilitators as well as a pre-simulation survey (see Appendix A). Participants are provided with the rationale for the simulation and basic information to get them started. The simulation works best when people in the family units do not previously know each other well; a short period is provided at the beginning for them to get acquainted and choose which roles in the family they each will play. The families have four 15-minute “weeks” to live with the circumstances of their situation. The directions for the simulation are simple: “Take care of your family, including making sure that your bills are paid, your family is fed, your children get to school, you get to work (or look for work) if possible, and you maintain your home.” A signal is given to begin and end each week, and families are given a “weekend” time to debrief with one another and strategize for the coming week. At the conclusion of the four weeks, a period of debriefing occurs where participants and staff members share their insights, feelings, and thoughts about how their experiences in the simulation inform their views on working with children from poverty backgrounds. A post-simulation survey (see Appendix B) is also given at the conclusion of the simulation.

Several obstacles are built into the poverty simulation that help participants to understand challenges of navigating life with insufficient financial means. One of these is the “Transportation Pass” which represents the cost, in time and money, of finding ways to get from home to the various places in the community. All adults in the simulation are required to provide a Transportation Pass whenever they visit a community agency or business, even if it is only to ask an informational question. While some families have a vehicle, many do not. The Transportation Pass represents the financial cost of obtaining and maintaining a vehicle or of riding the bus; it also represents the time that must be invested to walk from one station to the next. Reliable transportation is often a barrier for those living in poverty (Glaeser, Kahn, & Rappaport, 2008; Sanchez, 2008), which is why it is a feature included in the simulation.

Another type of obstacle that participants soon face is the lack of information. For example, while participants receive information on their family when they first get to the simulation, they are not introduced to the community agencies or businesses until after the first week of the simulation. The first week can be pretty frustrating for participants since they do not know where to go for their needs or even what is available, unless they take the time to read the signs posted above each station. What often happens, however, is a sort of paralysis that sets in when people become overwhelmed with how difficult it will be to try to take care of their new family’s needs without the resources they are so used to having.

By hosting simulations around the district, the Professional Learning Department of SCCPSS seeks to support teachers in better understanding the needs of students and their families as well as how to reliably respond to those needs when presented. Public education by its very nature includes children from all backgrounds, and equipping teachers with information and strategies that allow them to

be effective with all learners is a core value of the department. Follow up is available after the simulation, in the form of professional learning courses, both online and face-to-face, and coaching support on site. Additionally, the district employs social workers, school counselors, and parent facilitators who provide on-site support for teachers as well as students and families experiencing poverty. Like many other districts, there is also a district-level Homeless Liaison and a cadre of professionals in the Compensatory Education department that uses Title I funds to support students from disadvantaged backgrounds.

As the Professional Learning Department has become more comfortable with facilitating conversations about poverty, its effects on students in the school system, and the need for ongoing professional learning support on this topic, opportunities have arisen to share the knowledge and insights gained with entities beyond the school system. Collaboration with local agencies that provide poverty simulations for the general public, such as the two state universities in the county as well as non-profit organizations, is ongoing. Additionally, the school system partners with the National Youth-At-Risk Conference held in Savannah each year by providing a poverty simulation at the conference for interested participants. In a recent *Youth Today* report (Wallack, 2016), this conference simulation was recognized as a viable method for educating teachers and youth workers about the importance of understanding poverty issues when working with youth placed at risk.

RESULTS OF THE SCCPSS POVERTY SIMULATIONS

Description of Survey Instruments

As previously described, the teachers who participate in the poverty simulation take pre- and post-simulation surveys to help the Professional Learning Department understand how the simulation has impacted teachers and

what strategies seem to work best within the simulation. The survey instrument used was provided in the first version of the CAPS kit (2008) that was purchased by the department; the instrument has been adapted in minor ways so that it can be administered electronically both before and after the simulation. The survey instrument is used primarily by the Professional Learning Department to determine the effectiveness of the Poverty Simulation as a training method. The survey questions require teachers to rate their understanding of facets of living in poverty and have a Likert-like scale ranging from No Understanding to Almost Complete Understanding. The pre- and post-simulation surveys are nearly identical; each contains five questions that ask participants to rate their own understanding of different aspects of living in poverty. On the post-simulation survey, participants are also asked to rate the simulation experience as a whole. Additionally, both surveys provide respondents with the opportunity of sharing their thoughts on the topic and experience of the simulation. The pre- and post-simulation surveys are provided in Appendices A and B, respectively.

Statistical Results

In all, 686 teachers have completed pre-simulation surveys and 584 participants have completed post-simulation surveys since they were introduced in 2015 as a feature of the simulations, which allow the Professional Learning Department to monitor participant responses to the training experience. All surveys are conducted online using a program called Select Survey that provides anonymous data on district-constructed surveys. Teachers are invited to complete the survey when they enter the simulation and again at the end of the simulation after the debriefing time. The data from these questions has been collected and displayed in order to uncover trends in the changes in understanding experienced by teachers who attend the poverty simulation.

In the following data tables, the mean number of teachers who answered the pre- and post-simulation survey questions at each level of the Likert-like scale on the survey is presented. Each of the first four tables represents a different time period in which poverty simulations were completed. Table 1 represents data from pre- and post-simulation surveys administered before and after three simulations conducted over two days during post-planning for teachers at nine Title I schools in the district. Because of the way the survey was constructed, it was not possible to disaggregate the data for each individual simulation. It should also be noted that Table 2 represents two simulations conducted on the same day with participants at the district's New Teacher Orientation. Tables 3 and 4 display data gathered from single poverty simulations. Thus, Tables 1–4 contain the data collected for seven poverty simulations conducted with SCCPSS teachers between 2015 and 2017.

Table 5 provides a summary of the data contained in the previous four tables to show if and in what ways there are changes in understanding for teachers before and after the poverty simulation experience. Because the Professional Learning Department is interested in growth in understanding, the data summary contained in Table 5 shows the pre- and post-simulation ratings for the last two categories of the Likert-like scale: "Quite a bit of understanding" and "Almost complete understanding." By focusing on these two ratings, we are able to determine the extent to which teachers experienced growth in their understanding in the multiple aspects of life in poverty reflected in the survey questions.

FINDINGS

Discussion of Statistical Data

As seen in Tables 1–4, post-simulation surveys revealed substantial gains in understanding in simulation areas. In general, all teachers, even those new to the profession represented in the simulations at New Teacher Orientation, felt

that they had some knowledge of life in poverty; only 1–4% of respondents rated themselves as having no knowledge of selected poverty issues.

The smallest increase in understanding was in the area of "emotional stresses and frustrations created by having limited resources." This speaks to the possibility that public school teachers, particularly those teaching in Title I schools, may already have an established level of understanding about emotional stresses and frustrations of living in poverty due to their close work with students and families experiencing life with limited incomes. The largest increase in understanding was in the area of "the positive and negative impact of the social service system on people with limited resources." This implies that a large percentage of respondents began the simulation with a limited understanding of and perhaps a lack of personal interaction with the social service system. The second largest increase in understanding was in the area of "the difficulties in improving one's situation and becoming self-sufficient on a limited income." This implies that a large percentage of respondents began the simulation with a limited understanding of the difficulties of becoming self-sufficient on a limited income.

Teacher Commentary

Pre-simulation commentary. In the pre-simulation survey, teachers had the opportunity to comment on any aspect of the poverty simulation. In general, the comments on the pre-simulation were grouped into three major themes: anticipation and expectation, previous professional experience and training on the topic of poverty, and personal experiences with poverty. A brief discussion of each of these themes is provided.

Many teachers expressed genuine interest in the simulation as well as learning about the topic of how poverty affects school age children. Multiple respondents communicated anticipation of new understandings that the poverty simulation could bring to teachers,

Table 1

Results of SCCPSS May, 2015 Poverty Simulation Pre- and Post-Surveys

How I rate my understanding of . . .	None	Little	Moderate	Quite a Bit	Almost Complete
The financial pressures faced by low-income families in meeting basic needs.					
Pre-Survey	0	2	24	43	30
Post-Survey	0	1	11	43	46
The difficult choices people with few resources need to make each month when stretching a limited income.					
Pre-Survey	0	5	23	39	33
Post-Survey	0	1	13	38	47
The difficulties in improving one's situation and becoming self-sufficient on a limited income.					
Pre-Survey	0	7	28	36	28
Post-Survey	0	1	12	41	46
The emotional stresses and frustrations created by having limited resources.					
Pre-Survey	0	7	18	36	39
Post-Survey	0	1	10	42	47
The positive and negative impact of the social service system on people with limited resources.					
Pre-Survey	1	13	30	31	24
Post-Survey	0	1	14	40	45

Note. Values represent percentages; row totals may not equal 100% due to rounding error. Pre-Survey *N* = 205; Post-Survey *N* = 190

Table 2

Results of SCCPSS July, 2015 Poverty Simulation Pre- and Post-Surveys

How I rate my understanding of . . .	None	Little	Moderate	Quite a Bit	Almost Complete
The financial pressures faced by low-income families in meeting basic needs.					
Pre-Survey	1	5	40	36	18
Post-Survey	0	3	18	46	33
The difficult choices people with few resources need to make each month when stretching a limited income.					
Pre-Survey	1	7	34	39	19
Post-Survey	1	3	15	45	36
The difficulties in improving one's situation and becoming self-sufficient on a limited income.					
Pre-Survey	1	10	40	32	17
Post-Survey	1	3	16	45	35
The emotional stresses and frustrations created by having limited resources.					
Pre-Survey	1	6	30	40	23
Post-Survey	1	2	13	42	42
The positive and negative impact of the social service system on people with limited resources.					
Pre-Survey	3	21	33	30	13
Post-Survey	1	5	21	39	34

Note. Values represent percentages; row totals may not equal 100% due to rounding error. Pre-Survey $N = 351$; Post-Survey $N = 253$

Table 3

Results of SCCPSS April, 2016 Poverty Simulation Pre- and Post-Surveys

How I rate my understanding of . . .	None	Little	Moderate	Quite a Bit	Almost Complete
The financial pressures faced by low-income families in meeting basic needs.					
Pre-Survey	0	8	19	47	25
Post-Survey	0	0	11	50	39
The difficult choices people with few resources need to make each month when stretching a limited income.					
Pre-Survey	0	12	17	39	32
Post-Survey	0	0	11	48	41
The difficulties in improving one's situation and becoming self-sufficient on a limited income.					
Pre-Survey	2	5	32	37	24
Post-Survey	0	2	7	50	41
The emotional stresses and frustrations created by having limited resources.					
Pre-Survey	0	8	15	47	29
Post-Survey	0	0	11	43	45
The positive and negative impact of the social service system on people with limited resources.					
Pre-Survey	3	14	27	39	17
Post-Survey	0	2	11	48	39

Note. Values represent percentages; row totals may not equal 100% due to rounding error.
Pre-Survey $N = 59$; Post-Survey $N = 44$

Table 4

Results of SCCPSS January, 2017 Poverty Simulation Pre- and Post-Surveys

How I rate my understanding of . . .	None	Little	Moderate	Quite a Bit	Almost Complete
The financial pressures faced by low-income families in meeting basic needs.					
Pre-Survey	1	3	20	44	32
Post-Survey	0	0	8	49	43
The difficult choices people with few resources need to make each month when stretching a limited income.					
Pre-Survey	1	4	17	44	34
Post-Survey	0	0	8	41	51
The difficulties in improving one's situation and becoming self-sufficient on a limited income.					
Pre-Survey	1	8	18	44	28
Post-Survey	0	2	4	51	43
The emotional stresses and frustrations created by having limited resources.					
Pre-Survey	1	3	21	41	34
Post-Survey	0	0	10	41	49
The positive and negative impact of the social service system on people with limited resources.					
Pre-Survey	4	17	27	24	28
Post-Survey	0	0	18	37	45

Note. Values represent percentages; row totals may not equal 100% due to rounding error.
Pre-Survey $N = 71$; Post-Survey $N = 51$

Table 5

Summary of SCCPSS Change in “Quite a Bit of Understanding” and “Almost Complete Understanding” from Pre- and Post-Surveys of Poverty Simulation

How I rate my understanding of . . .	Percent of Respondents Who Chose “Quite a Bit of Understanding” + “Almost Complete Understanding”					
	May 2015	July 2015	April 2016	January 2017	Means	Change
The financial pressures faced by low-income families in meeting basic needs.						
Pre-Survey	73	54	72	76	68.8	+ 18.5
Post-Survey	89	79	89	92	87.3	
The difficult choices people with few resources need to make each month when stretching a limited income.						
Pre-Survey	72	58	71	78	69.8	+17.0
Post-Survey	85	81	89	92	86.8	
The difficulties in improving one’s situation and becoming self-sufficient on a limited income.						
Pre-Survey	64	49	61	72	61.5	+26.5
Post-Survey	87	80	91	94	88.0	
The emotional stresses and frustrations created by having limited resources.						
Pre-Survey	75	63	76	75	72.3	+15.5
Post-Survey	89	84	88	90	87.8	
The positive and negative impact of the social service system on people with limited resources.						
Pre-Survey	55	43	56	52	51.5	+30.3
Post-Survey	85	73	87	82	81.8	
Pre-Survey Means	67.8	53.4	67.2	70.6	64.8	
Post-Survey Means	87.0	79.4	88.8	90.0	86.3	
Change	+19.2	+26.0	+21.6	+19.4	+21.5	

Note. Values represent percentages.

Pre-Survey Total *N* = 686; Post Survey Total *N* = 584

which is encapsulated in this comment by one respondent: “I am looking forward to obtaining information that will allow me to better serve my students.”

A number of teachers also commented on previous training or experience they had had with this topic. Multiple respondents had previously experienced poverty simulations or had collaborated with others to host a poverty simulation. Additionally, many teachers cited their experience in high-poverty schools as indicative of their background knowledge on this topic, as evidenced by this comment, “Having taught in inner-city schools with 99.9% free lunch, I am very aware of the daily struggles that students and parents face and the obstacles that interfere with education.” Some teachers also cited specific training they had previously attended that prepared them for working with students from poverty, such as that provided by Ruby Payne (2005).

Interestingly, a majority of respondents on the pre-simulation survey commented that they had personally experienced poverty and, as a result, entered the simulation able to relate to this phenomenon. This finding could explain the reason why the survey question: “The emotional stresses and frustrations created by having limited resources” attained the highest rating of understanding out of the five questions on the pre-simulation surveys. It is logical that teachers with personal experience of poverty believed that they had a better understanding of the emotional impacts of poverty than the topics in the other questions on the survey. For some, such as this respondent, experiences with poverty were from childhood: “I am a product of low to very low income. I grew up in homeless shelters, battered women shelters, and the projects.” Others described personal circumstances in their adulthood contributing to an understanding of poverty.

Post-simulation commentary. The post-simulation comments were often lengthier and had specific feedback about how the exercise

had affected participants. One powerful effect described was the emotional impact made on teachers who participated in the simulation. The most frequently used word in the commentary related to emotional impacts was “stressful” followed closely by “frustrating.” Teachers revealed that during the simulation they felt desperate and began to see how easy it is to develop negative feelings for authority or to be tempted to act in ways inconsistent with their values. When teachers wrote about their emotions, they revealed the potent effect of simulation learning by describing their experiences as if it had really happened to them personally. For example, a teacher wrote, “We were evicted and when I saw my chair turned down, my heart dropped,” revealing the importance of role playing in the development of empathy and understanding that participation in this experience engenders.

On the post-simulation survey, many teachers also revealed new insights, perceptions, and attitudes they had acquired as a result of participating in the simulation. For some teachers, just having up to date facts about poverty statistics and situations made an impression on them that they carried away from the training. Thus, numerous participants used the phrase “eye opening” to describe their changed perceptions, with one teacher commenting, “I did not understand as much as I thought,” indicating a difference in his or her pre-simulation assumptions. Having a personal background of understanding poverty also did not preclude participants from developing new insights as a result of the simulation, as indicated by this comment:

I thought I had an idea of the struggles of living in poverty, having grown up poor myself. However, I was blessed in that my parents had transportation and were able to work multiple jobs in order to keep our family from the snowball effect that is poverty. Although just a simulation, this experience really opened my eyes to the

very thin line that people have to walk from poverty and homelessness. Just one small setback can have a tremendous impact.

Furthermore, the post-simulation comments included reports of changes in attitudes towards the poor, such as this teacher's: "It made quite an impression on me and convicted me of being so judgmental of some of my [student's] parents."

A positive trend seen in the post-simulation surveys was the propensity for teachers to begin applying their new understandings to school settings, and, in particular, their own work with students. Insights about how to better work with students that live in poverty, including avoiding punishing students for things out of their control, such as tardiness or the return of notes from home, were described by teachers as ways the simulation impacted their thinking about students who come from impoverished backgrounds. Having lived through a brief period of time in situations simulating life in poverty convinced teachers that they needed to be more patient and understanding as a result of the experience in which, "We noticed that education was the last thing on our minds while trying to secure housing and food for our family. It's hard to think about education when you have to live through situations of poverty as a student." The results of the simulation described in this section, both in the statistical data and the teacher commentary, validate the use of the poverty simulation as a relevant and meaningful professional learning experience for teachers in the district.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

As a result of the inquiry, several key findings have emerged. First, a review of the literature reveals the devastating effects of poverty on the developing mind/brain, cognition, language development and physical and social/emotional development. More children live in poverty

than any other group in American society, and tragically, that number is increasing. It is difficult to understand—in the wealthiest country in the world—why 23% of children struggle each day just to find enough food to eat.

Second, in order to meet the needs of every child, especially those who struggle to survive, teachers need to stay current regarding these findings. Third, and perhaps more importantly, teachers need to develop empathy for their students who live in poverty, which may be difficult if they have never "walked in their shoes." Being aware of false stereotypes and their own biases is a starting point. Another excellent strategy is for teachers to participate in a poverty simulation wherein they actually experience the struggles of their students and their families who are poor.

Fourth, quantitative survey data reveal increased teacher understanding of poverty and its effects on children and their families, especially the impact of social services and the difficulties of becoming self-sufficient. Qualitative survey data reveal increased teacher empathy toward their families who live in poverty. Furthermore, data also reveal that teachers plan to apply their new understandings regarding poverty and their increased feelings of empathy for their students and their families in the classroom.

The existing research on poverty and survey results in this report suggest the following implications for teachers, especially teachers working in urban settings with poor children:

- School districts and colleges of education need to increase funding and personnel, so more teachers and teacher-candidates can experience poverty simulations.
- Teachers need to reflect upon their own biases and continue to find ways to eliminate them.
- In college of education programs, there needs to be a stronger emphasis on

strategies for teaching children who live in poverty.

- Teachers working with children living in poverty need to be knowledgeable about community support services within the community (e.g., medical care offered by hospitals, clinics, dentists, Lions' clubs, and tutorial services offered by college students, etc.).
- Teachers need to understand that their *first* priority is to identify and then work to eliminate their students' existing physical and emotional challenges. Then, hopefully, their students can focus on the cognitive tasks at hand.

Having been involved in poverty simulations in southeast Georgia, dating from 2005, the authors are confident that this professional learning experience can support teachers in developing understandings needed to teach students from low-economic backgrounds effectively. As one teacher-participant put it:

I have done this simulation twice. It actually gives us a "real life" situation of families undergoing such difficulties and making decisions about day to day survival. This simulation helps me become more understanding with my students and provide them opportunities to develop their full potential despite the challenges they are facing at a young age.

Evidence such as this demonstrates the value of poverty simulations for teachers' professional learning and growth.

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Appendix A

Community Action Poverty Simulation Pretest

Please describe your level of understanding based on the following scale:

Lowest = NO UNDERSTANDING Highest = ALMOST COMPLETE UNDERSTANDING

1. The financial pressures faced by low-income families in meeting basic needs.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

2. The difficult choices people with few resources need to make each month when stretching a limited income.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

3. The difficulties in improving one's situation and becoming self-sufficient on a limited income.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

4. The emotional stresses and frustrations created by having limited resources.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

5. The positive and negative impact of the social service system on people with limited resources.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

6. Comments:

Appendix B

Community Action Poverty Simulation Posttest

Please describe your level of understanding based on the following scale:

Lowest = NO UNDERSTANDING Highest = ALMOST COMPLETE UNDERSTANDING

1. The financial pressures faced by low-income families in meeting basic needs.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

2. The difficult choices people with few resources need to make each month when stretching a limited income.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

3. The difficulties in improving one's situation and becoming self-sufficient on a limited income.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

4. The emotional stresses and frustrations created by having limited resources.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

5. The positive and negative impact of the social service system on people with limited resources.
 - No understanding
 - Little understanding
 - Moderate understanding
 - Quite a bit of understanding
 - Almost complete understanding

6. Comments:

7. What overall rating would you give today's simulation experience?
(10 = Excellent; 1 = Unsatisfactory)

1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>