

Social Justice Through Simulation: Blended Learning for Intergenerational Studies

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Abstract: This paper explains ongoing blended learning research to address awareness of Gerontology and global aging. This study established an Aging Simulation protocol mediated by blended learning technology tools for university students. Qualitative pre-event survey data and post-event reflection data was collected and analyzed by a gerontology center research team. A partnership with an educational consortium in Singapore added a customized LMS as a blended learning component. The research found a correlation between students' increased engagement, empathy, and a motivation toward social justice for Older Adults as a result of the blended learning experience. Although the growth of the aging population remains in the news, few studies, if any, offer concrete learning experiences that increase student awareness and spur student motivation toward social justice. This study's experiences using simulation and technology affordances provide transferability to other higher education departments.

1. Introduction

In the time it takes to read this sentence, seven people in the United States will reach the age of 65 years. Roughly 10,000 United States' "Baby Boomers" will celebrate their 65th birthday today and every day for the next 13 years. Projections point to at least 25 percent of the United States population at age 65 year of age and older by 2030 (Goldman, et al., 2013). The aging trend extends across the world. Globally, the number of people (aged 60 years or over) increased from 9.2 percent in 1990 to 11.7 percent in 2013. Projections of world population growth among those aged 60 years and older range from 841 million people in 2013 to more than 2 billion in 2050 (United Nations, 2013). This projection represents 21.1 percent by 2050. Further, those in older populations are projected to exceed the number of children for the first time in 2047 (United Nations, 2013) in what is described as a "situation without precedent," (World Health Organization, 2011). To reach the aging population, an intergenerational understanding of the physical, cognitive, affective, and sociological factors is needed.

The purpose of this paper is to discuss the ideation, process, implementation, and reflective process of an Aging Simulation. An Aging Simulation is a formal learning activity for university students in Occupational Therapy (OT) pre-service, pre-certification coursework at a

private university in the southwestern United States. The Aging Simulation guides university students understand the aging process by completing activities in both a face-to-face setting or in an online series of modules. The blended learning experience combined the affordances of an F2F Aging Simulation and online learning platform for learning support and summative reflection.

1.1 Substantive Background Information

The Pruett Gerontology Center (PGC) is a non-profit, research-oriented center located onsite on a university campus in the Southwestern United States. PGC advocates for Aging in Place, Lifestyle Redesign, and Role Navigation. The PGC is a “commons-based, open organization” (Benkler, 2006) in that its resources are available to anyone without membership requirement or fee. This research project began as a partnership between local university students and the on-campus non-profit Pruett Gerontology Center. The Aging Simulation aligns with PGC’s Mission Statement, which is, “The Pruett Gerontology Center offers instruction, service-learning, and partnership with faith-based and community-based programs, preparing students for leadership in the field of intergenerational aging.”

1.2 The Significance of Simulations as Learning Activities

The goals of the Aging Simulation are three-fold:

- 1.) Differentiate between social myths and realities of aging within a global society.
- 2.) Understand the aging population through personal experience and involvement in simulation activities that replicate features of growing older.
- 3.) Utilize participatory planning to build and support a formal, online, peer-to-peer knowledge network to plan and connect university students with a service learning project for older adults sponsored by the non-profit Pruett Gerontology Center.

The Aging Simulation formal learning event addresses two essential inquiry questions, “*How does it feel to grow older?*” and “*What is the best way to offer support to people in the Integrity stage to best help them avoid despair?*”

The Aging Simulation helps students experience how older adults are sometimes treated by society. Student participants voluntarily traverse through six different scenario stations. The scenario stations are Hearing, Perception of the Elderly, Social Losses, Vision, Mobility, and Memory. Each station facilitates a biological or social presence function that decreases in quality with age. Each station is also available in an online module.

In the Hearing loss station, students are given earplugs for one or both ears to approximate gradual hearing loss. In the Perception of the Elderly station, students review derogatory names or behaviors that are sometimes assigned to older adults. In the Social Losses station, each student writes down some things or people they care about on cards. Examples include: parents, siblings, children, friends, spouse, house, car, job, and hobbies. As students proceed through each additional station, they must give up one card. The process of surrendering a card represents the losses experienced during the aging process. At the end of the simulation, students have only one card left.

In the Vision Loss station, participants wear goggles that have been modified to facilitate glaucoma or cataracts. In the Mobility Loss station, students put corn kernels in their shoes to simulate nerve pain and difficulty in mobility and nerve pain. In this station, students may also choose to wrap their knees together with an ace bandage and then attempt to climb stairs to simulate difficulty in navigation. They may also choose to walk while breathing through a straw to simulate the difficulty of breathing during ordinary activities.

In the Memory loss station, a student facilitator gives participants quick, direct instructions for an action that they are expected to perform immediately. Only one recitation of instructions is given. This simulation is used to explain to the students that difficulty understanding and performing simple tasks can occur among all ages, and that task completion is not dependent on age alone.

At the end of the simulation, students reconvene for whole group debriefing with Dr. Charlie Pruett, Director the Pruett Gerontology Center. Students discuss how they felt during the Aging Simulation stations and how older adults feel when presented with the limitations of the stations in their everyday life. Students provide post-event reflections in either hardcopy or online journal space. Students may choose to make their reflections available to the class or just to their instructor. Students leave the Aging Simulation with an educated awareness of how to avoid perpetuating the stereotypes associated with aging and also with an empathetic understanding to help older adults feel valued and respected.

2. Literature Review

Gerontology is the study of aging from biological, psychological, and social stage perspectives. Erik Erikson’s research contributes to the psychological component of the study of aging through his theory of Psychosocial Development (also known as Erikson’s theory of stage development). The theoretical lens of Erikson’s (1959) “stage” approach (Figure 1) appropriately explains the aging process. Erikson’s theory of psychosocial development has eight distinct stages which develop after a period of psychological struggle. Erikson’s stages follow a progression from Trust to Autonomy, Initiative, Industry, Identity, Intimacy, Generativity, and Integrity.

Erikson’s (1959) Theory of Psychosocial Development

Stage	Psychosocial Crisis	Basic Virtue	Age Range
1	Trust vs. Mistrust	Hope	Infancy – 18 months
2	Autonomy vs. Shame	Will	Early Childhood – 3 years
3	Initiative vs. Guilt	Purpose	Play Age – 3-5 years
4	Industry vs. Inferiority	Competency	School Age – 5-12 years
5	Ego Identity vs. Role Confusion	Fidelity	Adolescence – 12 – 18 years
6	Intimacy vs. Isolation	Love	Young Adult – 18 – 40 years
7	Generativity vs. Stagnation	Care	Adulthood – 40 – 65 years
8	Ego Integrity vs Despair	Wisdom	Maturity – (65+ years)

Figure 1: Erikson's Psychosocial Stages of Development, 1959

Older adults enter the "Ego Integrity" stage of life at approximately 65 years of age. The psychological struggle at this stage involves Ego Integrity vs. Despair. The goal at this stage of life is to solidify ego integrity through sharing accumulated wisdom and avoid experiences of despair.

Traditionally, older adults had experiences to share their wisdom within the family system. Many experiences of desolation and despair were avoided in familial filial piety. *Filial piety* traditionally has referred to care of the elderly by younger family members (Lum, et al., 2015; Lo & Solomon, 2014). Projections indicate that the number of people aged 65 or older will exceed the number of children under age five years (World Health Organization, 2011). Amid these projections, the growing the responsibility of filial piety care grows beyond members of one's family to include members of the community.

Students enrolled in the Aging Studies department minor, familiar with Erikson's theory and projected population statistics, expressed interest in meeting the needs of the local older adult population. In response to their interest, participatory planning meetings began between students from student service organization, Sigma Phi Omega, student volunteers in Dr. Prueett's Sociology in Aging class and the Prueett Gerontology Center (PGC) staff.

The PGC is appropriately situated to serve as a catalyst "convening roles across complex landscapes of practice" (Wenger-Trayner & Wenger-Trayner, 2014, p. 158). Participatory discussion and planning commenced in a "communal sharing" experience (Burke, 2012) without an "authority ranking" (Burke, 2012), erasing the identity roles of "Professor" and "Student" (Wenger-Trayner & Wenger-Trayner, 2014). Our discussions distilled two essential inquiry questions, "*How does it feel to grow older?*" and "*What is the best way to extend filial piety to people in the Integrity stage to best help them avoid despair?*"

Students remembered a favorable experience with the Aging Simulation and suggested its use for their peers in Occupational Therapy (OT) studies. The Aging Simulation became a student-led, interdisciplinary, cross-curricular, formal learning event. Both sets of affiliations, students and institutional leaders, merged toward a shared formal learning goal of the Aging Simulation.

Brown, et al. (2005) described the necessity of agility in knowledge creation (p. 110). Wasko (2005) advocated for the increased social capital within electronic networks of practice. Incorporating these two ideas, the lead author and students created a series of learning materials for the Aging Simulation online module. During a doctoral cadre onsite visit, the lead author saw a demonstration of the course delivery platform called Coursemology, www.coursemology.org, created by [Ben Leong](#), Associate Professor at the National University of Singapore and demonstrated by Loo Kang WEE, a senior specialist at the Ministry of Education (MOE), Education Technology Division (ETD), Singapore. The Coursemology online portal was chosen to curate the formal learning module. Module materials include introductory content, instructional handouts, student demonstration videos, and the Aging Simulation instructions. The Coursemology platform also offers game-based features.

Learning is not merely the transmission of abstract and disconnected knowledge but rather a social process where new knowledge is co-constructed within the boundaries of the learning

group (Lave & Wenger, 1991). Further, the most effective learning scenarios are situated within an authentic, social-cultural and physical environment (Lave & Wenger, 1991). The Coursemology online module is a learning artifact and continuous reference and resource for future Aging Simulation, but it is not the learning experience. It merely narrates and curates the learning experience and convenes the components. Simulations are activity engagements that evoke more learning transformation than lectures or discussions (Wenger- Trayner & Wenger-Trayner, 2014). Required academic principles are embedded within this context. Students' landscape of practice in the Aging Simulation included both classroom learning and conversational exchanges.

3. Methodology

The project engaged four undergraduate student cohorts and one university-sponsored student service learning, social justice organization. The research tools included utilized a face-to-face Aging Simulation supplemented with introductory videos uploaded to an individualized learning platform. This research project also used the following social media tools: Google docs, email, text, blog posts, Skype IP video chat and voice call service, Coursemology learning management system, Camtasia video authoring software, and Cincopa online media player plug-in.

A literature review of current online and print sources on the issues facing older adults informed the data gathering process. An online, anonymous, pre-simulation survey queried students on their prior knowledge. A pre-event email asked students to give their opinion regarding the most pressing issue affecting older adults. The survey is contained online in Google Forms at the shortened link: <http://tinyurl.com/pgcsurvey>. The data responses were collected and analyzed by the first author and PGC staff under the supervision of Dr. Charlie Pruett. Intercoder reliability efforts were conducted through group coding sessions and discussions.

Data also included a post-event, semi-structured written interview reflection. Survey and interview questions were constructed with the intent to understand students' evolving perceptions. Of specific interest were the perceptions that emerged or changed as a result of the Aging Simulation and the landscape of practice instructional module. The interviews were viewed and analyzed by the peer-to-peer network which includes authors Pruett and Teague.

4. Results

The Aging Simulation project began with a partnership between local university students and the on-campus, non-profit known as the Pruett Gerontology Center (PGC). After a successful first event launch and an invitation to continue Reading Party concept, the student group and PGC staff decided to apply for grant funding to ensure sustainability and to recruit community group members to strengthen partnerships for successfully continued implementation.

Results reinforced the goals of the Aging Simulation:

- 1.) Students showed gains in differentiating between social myths and realities of aging.
- 2.) Students showed gains in understanding the aging population through involvement in a simulated personal experience.
- 3.) Participatory planning was used successfully to build and support a formal, online, peer-to-

peer knowledge network and to plan and connect university students with service learning projects sponsored by the non-profit Pruett Gerontology Center (PGC).

4.) Technologies, such as social media tools, (Google docs/forms, email, text, Skype, blog posts, Camtasia, and Cincopa) were successfully implemented to facilitate collaboration, knowledge capture, and sharing.

Student responses indicate growing conceptual and socio-cultural awareness. Student reflections prompted them toward empathetic pedagogy (Corneli & Danoff, 2011) of formal, peer to-peer learning via the Aging Simulation. These students became the Activity Guides for another Aging Simulation event for additional Occupational Therapy (OT) students. The authors' role as conveners extended to query students and curate their reflections. All reflections evidence *paragogy*, the extension of learning to personal contexts (Corneli & Danoff, 2011).

Paragogy occurred through peer learning and because students recognized the value in sharing their previous informal learning insights and how to situate the learning context for the OT students. Of particular importance was students' growing realization that there was a similar, yet distinctive difference with their peers due to the prior informal learning experience (Cornell & Danoff, 2011). Students listened with the empathy of their memory. They created new memories and emerging empathetic touch points through the Aging Simulation experience.

Results of our study are consistent with research indicating that comprehension and integration of learning is increased with ownership of the learning process (Wenger-Trayner & Wenger- Trayner, 2014). Post Aging Simulation event discussions also revealed that students identified their own stereotypes about older adults and recognized these attitudes as radiating from their personal experience to their peer group as well. Informal, formative discussions with students indicated that they wanted to interact locally with the residents at the assisted living center. Their discussion also echoed a desire to "leverage their expertise... and take the lead in convening others" (Wenger-Trayner & Wenger-Trayner, 2014, p. 130).

5. Evaluations and Conclusions

The goal of this paper is to summarize the ideation, process, implementation, and reflective process of an Aging Simulation formal learning activity for college students in Occupational Therapy (OT) majors in pre-service, pre-certification coursework at a private university in the Southwestern, United States.

Three primary results emerge from our study. The Aging Simulation Formal Learning opportunity provided a way for students to experience an episodic foray into the aging process. The old, humorous adage that "old age" is the age that is ten years beyond someone's current age. Students' sensitivity and reflection from the Aging Simulation formal learning event will continue to inform their awareness and help them engage empathetically with older adults. It will also mitigate for students the "dynamical instability" of transitioning to Erikson's final Integrity stage (Sacco, 2013, p. 144).

The informal learning event also achieved a social justice focus on Filial piety. Filial piety refers to honoring parents as a prime responsibility. With over 2 billion people over the age of 65 years globally expected by 2050, (United Nations, 2013), the responsibility of care grows to include members of the community. As Director Dr. Charles Pruett states, "Today is the first time

in history that the younger members of the tribe have to tell the older people in the tribe where they fit in the society.”

Sylvia Currie wrote, “Learning should be a continuous process that invites multiple perspectives, reflective practice, and new, sometimes unplanned, experiences,” (BC Campus, 2014). Aging is more than just confronting and adjusting to the effects of loss. Frames of reference for students expand as they learned empathy, strength, and resilience-based approaches. The Aging Simulation attains a transformative experience designation (Wenger- Trayner & Wenger- Trayner, 2014) because students see through a social justice lens how the aging population experiences life and their possible treatment by the general population. This activity resonates with Hein’s conclusion (2002) that transformative learning occurs when the mind is engaged in experiences of “cognitive uncertainty” (p. 38). The learning experiences challenge previously held beliefs in environments that are structured yet open enough for real discovery and exploration.

6. Future Work

Discussions with student participants reveal that students wanted to build on their “short-term wins” (Kotter, 1996, p. 117) and continue the peer-to-peer network and Aging Simulation event. The gerontology center began to increase our “Guiding Coalition” (Kotter, 1996, p. 51) by adding community members from our local library, workforce commission, and students and faculty from the Sociology and Social Work departments. Increasing our guiding coalition helped to create additional opportunities to present the Aging Simulation scenarios and added to the richness of the scenario-based simulation. It has also produced the unintended benefit of increasing areas of student community outreach to older adult populations, thereby increasing community filial piety. The Aging Simulation has expanded to include administration to undergraduate students in the departments of Social Work and Kinesiology. Our peer-to-peer network is currently pursuing grants for sustainable funding for the Aging Simulation.

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