Conversations in Isolation: A Mixed-Methods, Multi-Perspective Evaluation of Extreme Electronic Service Learning During COVID-19

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ABSTRACT

Due to physical proximity constraints imposed by COVID-19, extreme electronic service learning (e-service-learning)—instruction and service offered completely online—allowed for the safe continuation of service-learning experiences. Using a combination of surveys and an autoethnographic approach, this study describes findings of an intergenerational extreme e-service-learning project from four perspectives: students, assisted living facility residents, community partner, and course instructor. Positive impacts were noted on personal, social, and learning contexts among each of the four perspectives.

Keywords: assisted living facility, autoethnography, intergenerational program, older adults, social connection, video calls

During the COVID-19 pandemic and prior to vaccination availability, physical distancing and quarantining were essential to reduce viral transmission and spread. This was particularly important for older and immune-compromised individuals because the risk of severe illness, hospitalization, and death from COVID-19 increases with age and certain underlying medical conditions (Centers for Disease Control and Prevention, 2020). Given the airborne mode of transmission, those living in residential facilities (e.g., nursing homes, long-term care facilities, dormitories, etc.) were also at higher risk of contracting the virus and therefore isolation precautions became critical for saving lives. As such, celebrations and gatherings, community programs, religious services, and educational and job-related activities were cancelled or moved online. Although distancing efforts protect from infection, they have the unintended consequence of increasing loneli-ness and social isolation, which in turn increases the risk of depression, anxiety, poor self-rated health, and mortality (Jansson & Pitkälä, 2021; Santini & Koyanagi, 2021). This is especially true for older adults, nearly half of whom experienced some level of loneliness before the pandemic (Hawkley & Kocherginsky, 2018). Pandemic-induced lone-liness among older adults quickly became a concern across the United States and globally (Gavin, 2020; Office of Disease Prevention and Health Promotion, 2020; Ory & Smith, 2020; Span, 2020; Wu, 2020).

Intergenerational programs have been one method shown to increase social connect-edness for older adults, both free-living and in residential care (Chen, 2018; June & Andreoletti, 2020; Lee et al., 2001). Inter-generational service-learning opportunities can have the added benefits of positively changing students' attitudes towards older adults and aging, deepening students' know-

ledge of the course material, and increasing students' civic engagement, among other outcomes (Roodin et al., 2013). Yet with COVID-19, a challenge for instructors remained: Given the traditional service-learning model of on-site course instruction and service, how can we provide service-learning experiences that are safe, feasible, meaningful for students, and relevant to both the course objectives and community-identified opportunities?

Electronic service-learning (e-service-learning)—delivering course instruction and/ or service online—"frees service-learning from place-based access or geographical constraints" (Waldner et al., 2012, p. 126), including the physical proximity constraints imposed by COVID-19. Waldner et al. (2012) have proposed a typology of e-service-learning: Type 1 includes online instruction and on-site service, Type 2 provides on-site instruction and online service, Type 3 combines both online and on-site instruction and service, and Type 4 (also referred to as extreme e-service-learning) offers instruction and service completely online. Several studies suggest that e-service-learning and traditional service learning produce similar student outcomes (Lin & Shek, 2021; McGorry, 2012), though research is lacking on e-service-learning's role in the formation of virtual relationships and impact on community partners, among other gaps (Faulconer, 2021; U. S. Harris, 2017). Additional research is needed to evaluate e-service-learning from a variety of perspectives. In doing so, reciprocity—a key element of service learning that involves mutual respect, shared benefits, and balanced power among involved entities (Jacoby, 2015; Karasik, 2020; Khiatani & Liu, 2020)—can be better understood.

The purpose of this study is to describe the implementation of Video Pals (VP), an intergenerational, extreme e-service-learning project initiated between a public university and an assisted living facility in February 2021, about one year after COVID-19 was reported in the United States. Using a combination of surveys and autoethnography, we report project evaluation findings and lessons learned from four perspectives: students, residents, community partner, and course instructor.

INCEPTION AND DEVELOPMENT OF VIDEO PALS

Applied Community Nutrition is an undergraduate course for students pursuing a career as a registered dietitian. The course requires a minimum of 14 hours of service learning (the sum of orientation, direct service, and preparation time) coupled with critical reflection, and since 2016 students have been placed at over 30 different sites with assistance from the university's Center for Community Engagement (CCE). Due to the pandemic, course instruction and service-learning projects transitioned from in-person to virtual midway through the spring 2020 semester. Instruction remained online in fall 2020, though service learning was suspended.

In preparation for spring 2021, the course instructor (first author) was interested in reinstating service learning. In discussion with CCE staff, the instructor mentioned using video calls to connect with her grandmother who was quarantined at her residential facility. This led to questioning whether regular video calls from students could benefit other institutionalized adults during the pandemic. CCE staff mentioned that their partner—an assisted living facility—might be interested in such a project. What followed were several video calls between November 2020 and January 2021 to introduce the community partner (second author) and instructor, discuss community-identified opportunities and student learning goals, and determine whether and how a video call service-learning project would benefit participants. The community partner indicated that pandemic-related measures had limited residents' social interaction and receiving video calls from students could provide much needed engagement and connection. The instructor considered this a unique

educational opportunity for students to establish rapport, practice conversational interviewing skills, and reflect on how the social determinants of health (Centers for Disease Control and Prevention, 2021)—a major course concept—influenced a resident's dietary intake over their life. It was through these conversations that VP was conceived.

Following three 75-minute orientation sessions for students, a schedule was co-devised by the authors whereby VP groups met weekly over nine weeks, 35 minutes per week, via Zoom, an online video conferencing platform (2021). The first two calls were dedicated for groups to get to know each other, after which broad discussion topics and sample questions were provided by the instructor based on the social determinants of health (Centers for Disease Control and Prevention, 2021). Students were expected to spend about 30 minutes preparing for each call by reviewing their notes from the previous week and finalizing discussion questions and prompts for the upcoming call. Ten reflection papers were scheduled related to the VP discussions. The first nine used the same template and were to be completed after each VP conversation. Here, students were asked to report observational notes (i.e., what was discussed, nonverbal cues, general observations), methodological notes (i.e., things that either enhanced or impeded the discussion), theoretical notes (i.e., how the VP discussion related to the course content and vice versa), and personal notes (i.e., what the student learned about themselves from the discussion and what they would do differently next time) (McQuiston et al., 2005; Schatzman & Strauss, 1973, pp. 100–101). The final reflection required students to articulate their learning from the VP project in terms of the academic perspective, personal perspective, and civic perspective (Ash & Clayton, 2009).

As a final deliverable to the community partner, the instructor planned for students to each spend about an hour gathering residents' favorite recipes and creating entries for a recipe book that was compiled and presented to the residents and chef of the assisted living facility. Given the primary goals of VP, the chef had not been included in project planning discussions and therefore did not provide input into the recipe book. Rather, upon presenting the recipe book, the community partner and instructor asked the chef to incorporate some recipes into the weekly offerings, thereby allowing the resident participants to share some of their culture and history with their peers and provide a sense of comfort through food during an unprecedented time. In retrospect, including the chef in the recipe book planning would have been beneficial for gaining early buy-in and insight into potential implications on food purchasing, meal preparation, and residents' dietary restrictions, thereby further enhancing reciprocity in this project.

METHODS

Perspectives From Students and Residents
Recruitment and Data Collection

To assess project perspectives from students and residents, pre- and post-surveys were developed by the instructor with input from the community partner. Student pre- and post-surveys were administered anonymously online via the university's learning management system (Canvas, Instructure, 2021) during the second and last weeks of the semester, respectively. Surveys were required for all students enrolled in the course; however, each survey included an anonymous consent form allowing students to check a box to opt into the study. In other words, although all students were required to complete the surveys for course credit, only responses from students who opted into the study are included in the analysis. For residents, the community partner determined who was legally able to make their own healthcare decisions and provided them with a study recruitment letter and consent form authored by the instructor. Only residents who provided consent were given a paper survey. Resident surveys were anonymous and administered during the same

weeks as the student surveys. The community partner distributed and collected all consent forms and surveys and stored them in sealed envelopes for pickup by the instructor. Since all surveys were administered anonymously, the pre- and post-surveys included five questions each requiring answers of one or two letters or numbers. Answers were then combined into a single, unique, unidentifiable code to allow linking of pre- and post-survey data. Questions included, "What is the first letter of your middle name (if you don't have a middle name, enter X)?" and "How many older siblings do you have (living or deceased)?" Codes were removed once data were linked. The Montclair State University Institutional Review Board approved this study.

Measures

To better understand the samples of students and residents, pre-surveys asked all respondents to report their gender identity, race, ethnicity, and age in years. Closed-ended project evaluation questions were included in the post-surveys, though questions differed slightly for students and residents (Table 1). Questions asked respondents to select their level of agreement on a six-point scale of 1=strongly disagree/extremely dissatisfied/extremely unlikely to 6=strongly agree/extremely satisfied/extremely likely. Three open-ended questions elicited respondents' perspectives: "*What was the best aspect of the Video Pals project for you?*," "*What aspects of the Video Pals project would you change*?," and "*Please add any other comments you would like to share.*" Given that this research is part of a larger study, additional questions were asked on pre- and post-surveys to understand changes in allophilia, loneliness, and either social connectedness (students) or social isolation (residents); however, findings are not reported here.

Data Analysis

Demographic and closed-ended data were imported into IBM SPSS (Version 25.0, 2017) and analyzed with descriptive statistics.

Open-ended responses were imported into Microsoft Excel for Mac (2021) for content analysis using an inductive approach (J. E. Harris et al., 2009). Responses were reviewed line-by-line, segmented by distinct points, and categorized thematically. Tables were created to summarize the findings qualitatively (i.e., by theme) and quantitatively (i.e., frequencies and percentages), overall and by participant type.

Perspectives From Community Partner and Course Instructor
Data Collection

To assess project perspectives from the community partner and instructor (i.e., ourselves), we employed an autoethnographic approach. Autoethnography combines elements of autobiography and ethnography, "connecting the personal to the cultural" (Ellis & Bochner, 2000, p. 739). Although precise definition is difficult due to varying emphases and boundaries, autoethnography permits researchers to draw upon their own experiences and use self as a data source (Ellis & Bochner, 2000). Within service learning, autoethnography "allows for the community partners and faculty to articulate their lived experiences in their authentic voices" (Warren-Gordon et al., 2020, p. 19). As the facilitators of VP, we borrowed concepts of autoethnography to become participants in the research (Warren-Gordon et al., 2020) so that our perspectives could be included alongside students and residents. Whenever possible, we have used the first-person plural "we" to describe our shared perspectives throughout the manuscript. However, we refer to ourselves by our role (i.e., community partner, course instructor) whenever our analysis or discussion relates to only one of our perspectives.

Data collection began approximately two months after VP ended. Originally we planned on the following three stages: (1) agreeing to reflective questions that would frame our semi-structured conversation; (2) conducting the semi-structured conversation; and (3) individually reviewing the conversation transcript and discussing common

Table 1. *Mean (SD) Scores and Frequency of Ratings of ≥4 for Video Pals Project Evaluation*

Question	Students (n=17)		Residents (n=5)	
	Mean (SD)	Rating ≥4 n (%)	Mean (SD)	Rating ≥4 n (%)
The community engaged learning (i.e., Video Pals) aspect of this course helped me to see how the subject matter I learned can be used in everyday life.[a]	5.1 (0.9)	16 (94%)	n/a	n/a
The community work I did through the Video Pals project helped me to better understand the lectures and readings in this course.[a]	3.9 (1.3)	11 (65%)	n/a	n/a
The idea of combining work in the community with university coursework should be practiced in more courses at this university.[a]	5.2 (0.6)	17 (100%)	n/a	n/a
I feel that the community work I did through this course benefited the community.[a]	5.3 (0.7)	17 (100%)	n/a	n/a
My interactions with my Video Pal enhanced my learning in this course.[a]	4.8 (0.8)	16 (94%)	n/a	n/a
The video chats with my Video Pal helped me feel more socially connected.[a]	4.6 (1.1)	15 (88%)	5.6 (0.6)	5 (100%)
The video chats with my Video Pal reduced my feelings of loneliness.[a]	3.9 (1.3)	11 (65%)	4.8 (1.6)	4 (80%)
The video chats with my Video Pal increased my regard for older adults (asked of students)/younger adults (asked of residents).[a]	5.0 (1.0)	16 (94%)	5.2 (0.8)	5 (100%)
Overall, how satisfied were you with the Video Pals project?[b]	5.4 (0.7)	17 (100%)	6.0 (0.0)	5 (100%)
How likely are you to recommend the Video Pals project to other students (asked of students)/residents (asked of residents)?[c]	5.2 (0.8)	17 (100%)	6.0 (0.0)	5 (100%)

Note. SD, standard deviation; n/a, not asked
[a] Responses based on a six-point scale, where 1=Strongly Disagree, 6=Strongly Agree.
[b] Responses based on a six-point scale, where 1=Extremely Dissatisfied, 6=Extremely Satisfied.
[c] Responses based on a six-point scale, where 1=Extremely Unlikely, 6=Extremely Likely.

themes, similarities and differences, and the learning that this process generated between us. We intended to conduct conversations at each stage via Zoom using audio-recording and auto-transcription services. However, unforeseen personal challenges required that steps be altered to the following: (1) the instructor developed a list of possible reflection questions, and in consultation with a staff member from another state's Campus Compact (Community-Engaged Alliance, 2022), narrowed down the list to five; and (2) the instructor sent the five questions to the community partner, and each of us answered the questions independently. No further discussion was able to occur.

Measures

As our aim was to describe project implementation and impacts, reflection quest-ions explored our personal perspectives regar-ding goals, expectations, outcomes, successes, and challenges. The questions were: (1) *"What was your goal for this service-learning project at the start? What did you expect to happen during this project?"* (2) *"What actually happened? How did this compare to your expectations?"* (3) *"What challenges did you face before and during the project, and how did you handle them?"* (4) *"What went really well? What were some of the small wins?"* and (5) *"How was this experience similar or different than other times you've worked with faculty [for community partner]/community partners [for instructor] in face-to-face service-learning projects? How was it working together during the pandemic?"*

Data Analysis

Given the change in data collection methods, it was important to both authors that our voices be included without modification or interpretation. As such, each of our answers are included in the Appendix. The instructor rev-iewed both sets of answers and used content analysis (J. E. Harris et al., 2009) to determine common themes, similarities and differences, and learnings generated. This analysis was shared with and reviewed by the community partner to corroborate the findings (Schatzman & Strauss, 1973, p. 134), and no additions and changes were requested or suggested.

LIMITATIONS

Findings must be interpreted within the study's limitations. Notably, the VP project was implemented in one course at one university over a single semester during a global pandemic, thereby limiting the ability to generalize findings to other settings or time periods. Likewise, given the small sample, missing data from participants—particularly residents—who did not consent to the research may have offered additional insights that were not represented by the findings. Larger samples and comparison groups (i.e., students participating in face-to-face service learning) can confirm the findings and potentially identify which modality is more effective for various outcomes. Despite this, we were able to document and compare findings from all four perspectives, thereby providing a richer look into this context-specific experience.

RESULTS

Nineteen students were enrolled in the course, all opted into the study at pre-survey, and 17 (89%) opted in at post-survey. At pre-survey, students were primarily female (95%), non-Hispanic (84%), White or Caucasian (79%), and undergraduates (79%) with a mean age of 25.1+/- 6.8 years (Table 2). All but one (95%) attended school full-time, and most were employed at the time of the survey (74%). About one-third reported having exper-ience working with older adults in either a paid (e.g., nutrition assistant at a nursing home, personal trainer) or unpaid (e.g., volunteer at a nursing home or senior center) role.

Of the nine resident participants, only five consented to the research study (Table 2). Like the students, these five residents were predominantly female (80%), and all were non-Hispanic White. Resident respondents had

Table 2. *Demographic Characteristics of Students and Residents Participating in Video Pals*

Variable	Students (N=19)	Variable	Residents (n=5)
Age in years, mean (SD)	25.1 (6.8)	**Age in years**, mean (SD)	81.2 (13.3)
Gender, n (%)		**Gender**, n (%)	
Female	18 (94.7%)	Female	4 (80%)
Male	1 (5.3%)	Male	1 (20%)
Race, n (%)		**Race**, n (%)	
White or Caucasian	15 (78.9%)	White or Caucasian	5 (100%)
Black or African American	1 (5.3%)	Black or African American	0 (0%)
Korean	2 (10.5%)	Korean	0 (0%)
Other	1 (5.3%)	Other	0 (0%)
Ethnicity, n (%)		**Ethnicity**, n (%)	
Non-Hispanic	16 (84.2%)	Non-Hispanic	5 (100%)
Hispanic	3 (15.8%)	Hispanic	0 (0%)
Student Level, n (%)		**Education Level**, n (%)	
Junior	7 (36.8%)	High School Diploma/GED	1 (20%)
Senior	8 (42.1%)	Some College	1 (20%)
Graduate Student	4 (21.1%)	Bachelor's Degree	1 (20%)
		Master's Degree	2 (40%)
Student Status, n (%)		**Length of Stay**, n (%)	
Full-Time	18 (94.7%)	1-2 Years	1 (20%)
Part-Time	1 (5.3%)	3-4 Years	1 (20%)
		5+ Years	3 (60%)
Employed, n (%)		**Marital Status**, n (%)	
Yes, Full-Time	2 (10.5%)	Never Married	3 (60%)
Yes, Part-Time	12 (63.2%)	Widowed	2 (40%)
No	5 (26.3%)		
Work w/ Adults 65+, n (%)		**Number of Children**, n (%)	
Yes, Paid Experience	3 (15.8%)	0	3 (60%)
Yes, Unpaid Experience	3 (15.8%)	2	1 (20%)
No	12 (63.2%)	3	1 (20%)

a mean age of 81.2 +/- 13.3 years and all but one (80%) had been residing at the assisted living facility for at least three years. The highest level of education varied among the residents, with three (60%) having earned at least a college degree. Residents were either never married (60%) or widowed (40%), and two (40%) residents had children.

Given the similarities in data collection and parallels in the reciprocal relationships between students and residents as VP participants and community partner and course instructor as VP developers, organizers, and facilitators, we have organized the project evaluation findings and lessons learned within these pairings.

Student and Resident Perspectives

During the post-surveys, students and residents evaluated their VP experience as project participants. Mean scores for the Likert-scale questions are reported in Table 1. Except for two statements, scores exceeded 4.0 on a 6-point scale, meaning that on average, respondents at least somewhat agreed with the statement, were at least somewhat satisfied with VP, and were at least somewhat likely to recommend VP to their peers. Table 3 lists the themes and illustrative comments in response to, "*What was the best aspect of the Video Pals project for you?*"

For students, mean scores indicate that VP helped them apply course material in real life (x=5.1) and enhanced their learning (x=4.8), though the project was not as useful in helping students better understand course lectures and readings (x=3.9). Students agreed that VP helped them feel more socially connected (x=4.6) and increased their regard for older adults (x=5.0) but did less to reduce feelings of loneliness (x=3.9). Students also believed that their efforts in VP benefited the community (x=5.3) and that more courses should incorporate community-based work (x=5.2). Overall, students reported a high level of satisfaction with VP (x=5.4) and a high likelihood of recommending the project to other students (x=5.2). These findings are

further expanded upon by answers to the open-ended questions. For example, in terms of learning enhancement, 53% of students mentioned that VP allowed them to learn from and about someone else, and 29% identified that the best aspect was coming to a new realization or perspective. Regarding social connection, three students (18%) noted that making connections and building relationships with others was the best part, while one (6%) highlighted the act of communication as the most important outcome. For 29% of students, the most notable aspect was the ability to help someone else, especially during a time of pandemic-induced isolation.

Like the students, residents reported that VP helped them feel more socially connected (x=5.6) and increased their regard for younger adults (x=5.2). Unlike students, however, residents also indicated that the project helped reduce feelings of loneliness (x=4.8). These mean scores are consistent with the open-ended responses, whereby residents reported that the best aspects of VP were communicating with others (80%) and learning from and about someone else (40%). Overall, all resident respondents were extremely satisfied with VP (x=6.0) and were extremely likely to recommend the project to other residents (x=6.0).

In response to the question, "What aspects of the VP project would you change?" the most frequently reported theme among all respondents was "nothing." Students (24%) and residents (60%) were happy with VP and did not think anything should be altered. One student stated, "I would not change anything! I think this was a really great project and experience." Another wrote, "I wouldn't change a thing as I love every part of it!" This aligns with the high mean satisfaction scores among both groups. Additionally, four students (24%) and one resident (20%) recommended longer or more frequent calls because they felt rushed. One resident noted, "Increase the amount of time in the weekly session-a ½ hour isn't enough! It flies by!"

Table 3. *Themes and Illustrative Participant Comments Regarding the Best Aspects of Video Pals*

Theme	Frequency, n (%)	Illustrative Comments
Learning from and about someone else	Students: 9 (53%) Residents: 2 (40%) Total: 11 (50%)	"I enjoyed meeting someone with a different perspective on life and getting to know her through the lessons and stories our video pal shared." -Student 6 "…having the time to share stories and learn a little about college life these days as opposed to when I was a college student!" -Resident 4
Helping another person	Students: 5 (29%) Residents: 0 (0%) Total: 5 (23%)	"I feel that the best aspect of this project was being able to alleviate some of the isolation that everyone has been feeling as a result of the pandemic, a feeling that appears to be especially prominent in older people. Not being able to have visitors because your neighbor has the virus must be a horrible experience." -Student 7 "The best aspect of Video Pals for me, was knowing that I was providing my video pal with social interaction to some extent." -Student 14
Coming to a new realization or perspective	Students: 5 (29%) Residents: 0 (0%) Total: 5 (23%)	"The best aspect of the Video Pal project is realizing that every person is unique and special because of his/her family environment and upbringing, as well as community that existed in history." -Student 12 "It gave me a new and exciting way to look at life and growing older." -Student 13
Communication	Students: 1 (6%) Residents: 4 (80%) Total: 5 (23%)	"She may not have wanted to speak with us every week, because of a variety of reasons, but we had lovely conversations when we had the opportunity to speak with her." -Student 7 "I like when they talk to me and we discuss recipes!" -Resident 3
Making connections and building relationships	Students: 3 (18%) Residents: 0 (0%) Total: 3 (14%)	"The best aspect of video pals for me was gaining that connection and trust between a stranger. The willingness between both us and them to so eagerly get to know each other and where we come from and why we are the way we are today." -Student 1 "Being able to make the connection with someone who has lived so much longer than you and has so much more knowledge and experience than you do." -Student 3

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The remaining themes differed between students and residents. Student themes focused on project design. For example, four students (24%) provided feedback regarding the reflection templates and frequency of reflection assignments. One student expressed that the templates were "very limiting and repetitive." Several others indicated that there were too many reflection assignments, making it difficult to find something new to say each time. As one student noted, "I found that I would often not know what to write because nothing had really changed since the week before, or my video pal did not feel like talking so there would be nothing to write about." Another student felt it necessary to conduct additional research on their VP's ethnic culture and historical context to better understand the resident's beliefs and behaviors. Two students (12%) recommended meeting in person rather than virtually to increase connection, though they acknowledged that this was not possible at the time due to the pandemic. Residents provided additional feedback that centered on their student VP. Two residents (40%) had difficulty recalling their VP's names and suggested that students introduce themselves more often. One resident reflected that it would be fun to speak to students from different majors of study.

Community Partner and Course Instructor Perspectives

While students and residents were engaged in VP as project participants, we as the community partner and course instructor served as the project developers, organizers, and facilitators. Instead of surveys, we took an autoethnographic approach to explore our unique perspectives regarding project evaluation findings and lessons learned. Our individual answers to five reflective questions ([Appendix](#)) serve as the data we analyzed and further discuss below.

Interestingly, we did not emphasize the same initial project goals. Although we both indicated interest in certain *products*, how

these were conceptualized and balanced varied. For the community partner, there was more focus on a tangible product—the recipe book compiled from residents' favorite recipes. In contrast, the instructor primarily focused on intangible products: enhanced student knowledge and skills, reduced resident loneliness and isolation, and shifts in perspectives for students and residents. Yet both the community partner and instructor identified communication and relationship-building *processes* between students and residents as the necessary and desired means of achieving these product-focused goals.

Although our initial project goals were not identical, we reported similar outcomes regarding students' gaining of a deeper under-standing, be it of each other or course concepts. Of note, the instructor observed that students' ability to make connections between course concepts and their VP discussions depended on the student-resident dynamic within groups. For students in more conver-sive groups, VP transformed their perspect-ives regarding personal responsibility as it relates to the development of health condit-ions. For others whose conversations were less reciprocal, the ability to reflect and make connections between VP discussions and course concepts was more challenging. We also both reflected on the development of friendships between VPs. Whereas the comm-unity partner observed that residents gained emotional support and companionship from the students during a particularly stressful time, the instructor was taken with students' displays of caring and generosity toward the residents that went beyond course require-ments. These findings are aligned with the other two perspectives: residents noted that they enjoyed communicating with and learn-ing about the students, while students indi-cated that the best part was learning from or about someone else, helping another person, and coming to a new realization or perspective.

In terms of project challenges, we both mentioned technology-related issues that affected all participants: hardware constraints

and video call connection problems. We faced these challenges early in the project, though they did require additional work for each of us to ensure students and residents could connect and that discussions began on time. To this point, the instructor reflected that this additional work allowed her to be more available for troubleshooting during calls (e.g., technical issues within groups) and directly after calls (e.g., guiding students in making connections between VP discussions and course content). Additionally, we noted some participant-specific challenges based on our roles. For the community partner, one main challenge was working with residents who needed to reschedule or cancel their call due to physical or emotional health reasons. The instructor noted challenges for the students, such as ensuring they were prepared for their calls and able to meet learning objectives.

Regarding project successes, we each identified emotional and relational aspects relating back to what we previously identified as the communication and relationship-building processes needed to obtain product-focused goals. Specifically, we both commented on the joy and friendships we observed between the students and residents, and how well participants worked together. This was further expanded upon by the instructor, who highlighted the final event where students and residents were able to sit with and speak to each other in person for the first time. Additionally, the instructor found success in meeting both the tangible (i.e., recipe book) and intangible (e.g., student knowledge and skills) product goals, neither of which was mentioned by the community partner in reference to what went well.

Finally, we agreed that this extreme e-service-learning experience was much different from previous face-to-face experiences. The community partner felt that the virtual service option was a privilege given the larger sociocultural context. For the instructor, the virtual modality both required and allowed for more involvement with the community partner and community served, which proved helpful

in supporting students' learning and addressing challenges early. It also expanded the instructor's parameters for what can be considered relevant service, given that the service provided by the VP project (i.e., increasing social connection and decreasing loneliness) was not directly related to nutrition.

DISCUSSION

This four-perspective reflection allows for a unique 360-degree investigation of the VP project—from its origins to its outcomes on those most involved. Findings indicate that overall, each perspective was satisfied with the VP project. Each also noted that VP allowed for relationship development and increased social connection for participants, the main service-related goal. Similar themes of relationship-building and connection have been seen in other intergenerational service learning. For example, in Zucchero's (2011) study of a service-learning project between 67 undergraduate students and 66 older adult volunteers (a majority of whom were living independently), students frequently reported developing a "deep relationship" and bonding with their elder partner. Similarly, Underwood and Dorfman (2006) found that among 43 elders attending congregate meal sites or living in semi-independent living settings, assisted living settings, and nursing homes, one of the three most pervasive themes regarded personal and social interaction with the university students. The authors hypothesized that intergenerational service-learning programs can be especially beneficial for institutionalized elders who may have limited interactions due to infrequent visitors or busy staff (Underwood & Dorfman, 2006). In the case of VP, not only were older adults residing in an assisted living facility, but interactions were further stymied due to pandemic protocols. A similar argument could be made for the students, whose face-to-face interactions were limited once the campus closed. It is perhaps not surprising that relationship development was recognized as a positive outcome for students as well.

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Additionally, students indicated—and we concurred—that VP enhanced students' learning in the course, another project goal. Students reported that VP helped them apply course material in real life and enhanced their learning. Several students specifically mentioned that VP allowed them to learn from and about someone else or come to a new realization or perspective. The community partner noted that students developed a deeper understanding of themselves and others, whereas the instructor observed changes in students' knowledge of course concepts and application of communication skills.

What was not intentional, however, was the extent of reciprocal relationship building and learning that occurred for the other perspectives. For example, several residents reported that the best part of VP was learning from and about someone else. Through her observation of several video calls, the community partner was able to learn more about the residents and the students. Likewise, the instructor learned about VP participants through class discussions and students' reflection papers. Finally, we recognized only after the project was over that our relationship with each other was built virtually in the same manner as the students and residents. Our introductions and regular meetings were conducted over Zoom, which allowed us to learn from and about each other in a more personal way. Through this experience, we have built a sense of trust and mutual respect that has fostered a continued service-learning partnership ever since VP.

While much of the research on intergenerational service learning documents outcomes from face-to-face projects (Andreoletti & Howard, 2018; Counts et al., 2022; Hahn et al., 2020; Howell et al., 2021; Moinolmolki & Broughton, 2020; Underwood & Dorfman, 2006; R. A. Zucchero, 2011), the findings from our study suggest that the virtual modality of VP did not detract from participants' ability to build relationships or enhance learning. Rather, use of extreme e-service-learning addressed some of the challenges faced by in-person intergenerational projects. Documented logistical issues such as transportation, time, and location (Andreoletti & Howard, 2018; Counts et al., 2022; Howell et al., 2021) were eliminated completely as students and residents conversed from their rooms during a time that was mutually convenient (Friday mornings during students' class time and residents' activity time). If a resident had to miss a call for health reasons, the virtual modality allowed for increased flexibility in finding an alternate day and time. Video calls also kept students focused on the VP discussions instead of being asked to assist with other activities, as has been described in face-to-face projects (Hahn et al., 2020). Additionally, the ability to use Zoom "breakout rooms" allowed for VP groups to meet simultaneously, offered an easy way for students to call for assistance as needed, and convened students directly after their discussions for a debrief with the instructor and their peers.

Of course, e-service-learning is not without its challenges and concerns, particularly as they relate to intergenerational groups. Technical challenges and restrictions were highlighted in all four participant perspectives. From our views, hardware constraints and video call connection issues were the most notable concerns, and VP participants relayed their disappointment with the short length of video calls resulting from these challenges. In another telecollaborative intergenerational service-learning project, Meuser et al. (2022) similarly reported disparities in access to tablets and Internet service that served as project barriers. They also noted the need for adequate training to reduce "technology anxiety" among non-native users. This latter challenge was not something we faced with VP because the instructor managed the Zoom calls, and the community partner logged the residents in each week. Another concern expressed by some VP residents was the inability to remember students' names. Although all participant names were labeled in Zoom, the

font size was small and may have been difficult for the residents to see. In face-to-face meetings, name tags or place cards with larger font may improve name recognition.

Despite challenges, adequate planning and preparation can allow extreme e-service-learning to be a viable alternative to face-to-face programs. For example, we were intentional in providing students with several preparatory sessions and weekly discussion topics and distributing invitations to the residents that detailed VP. It is notable, therefore, that none of the four perspectives indicated feeling unprepared for the project. Prior studies documenting student (Hahn et al., 2020), older adult (Underwood & Dorfman, 2006), and community partner (Karasik, 2020) perspectives indicate the challenges that can occur when students are not prepared for their experience. Suggestions include class sessions early on that cover professionalism, communicating with older adults, effects of the aging process, and the opportunity to speak to the community partner (Hahn et al., 2020; Karasik, 2020; Underwood & Dorfman, 2006; Waldner et al., 2012). Underwood and Dorfman (2006) also suggest that older adults receive better preparation prior to service learning. Information sessions can serve to educate about project goals and expectations, as well as to engage older adults in playing an active role in the planning and organizational processes that can provide a more reciprocal experience.

IMPLICATIONS

This multi-perspective evaluation suggests that an extreme e-service-learning opportunity was, and can continue to be, a suitable means of offering community engaged learning during required distancing or quarantining measures. While not a replacement for in-person modalities, similar virtual projects could be alternatives during non-emergencies to connect individuals over large distances or to accommodate more recent desires for remote or hybrid schedules (Lu,

2022; Parker et al., 2022). Still, not all VP participants were satisfied with the online-only connection and hoped that future projects would allow for in-person interaction. For these individuals, Type 3 e-service-learning (combining online and on-site instruction and service) (Waldner et al., 2012) may be more appropriate if feasible. Yet most participants were satisfied with their experience, and their suggestions for change are relatively easy to address. Given that the service-related goals of the VP project were focused on increasing social connection and decreasing loneliness through regular conversations, similar projects could be adapted to many other majors of study. In fact, this was recommended by one participant and would allow residents the chance to discuss a variety of topics, while giving students the opportunity to apply concepts and/or skills learned in the classroom. Regardless of the service-learning modality, we recommend including the perspectives of participants, community partner, and course instructor in any evaluation to reflect on the project's process, outcomes, challenges, and successes in a reciprocal manner.

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Appendix

Reflective Questions and Responses from Community Partner and Course Instructor Regarding Goals, Expectations, Outcomes, Successes, and Challenges of the Video Pals Project

Question	Community Partner's Response	Course Instructor's Response
(1) What was your goal for this service-learning project at the start? What did you expect to happen during this project?	My main goal was to have participating residents interact and develop a partnership with their assigned VP. I expected the students and their VP to exchange information and compile all the collected data to create a recipe cookbook and at the same time experience the history and legacy from where the recipe would come from also how it was made.	From a learning perspective, I wanted to provide an experience that illustrated the course's foundational concepts in a safe and feasible way. I also wanted students to develop their conversational interviewing skills and offer an opportunity to work with older adults. From a service perspective, my goal was for students to help address loneliness and isolation, two public health concerns afflicting institutionalized older adults during this time. I kept my expectations low given the uncertainty of the pandemic, the newness of this project, and the fact that I had never worked with the community partner. I expected participants to exhibit reductions in loneliness, changes in isolation or social connection, and increases in allophilia. For students, I also anticipated an enhanced understanding of the role of multiple influences on dietary intake and the importance of knowing one's own biases when assessing clients and planning community nutrition programs.

| (2) What actually happened?

How did this compare to your expectations? | Everything that I expected by the students and even more! From my observations of the weekly video calls and discussions with students during the semester and at the final in-person event, I noticed that the students started to develop a deeper understanding than just the recipes and a cookbook project. They created friendships, relationships that brought remembrance of their grandparents in their own personal lives as they were providing the residents emotional support and companionship while the residents were in lockdown and needed to be quarantined in their own rooms during the beginning of the pandemic. | Although the initial implementation of VP had some bumps, students and residents spoke weekly and learned more about each other. Each VP group had a unique dynamic; in some groups the conversation was more reciprocal, whereas in others it was dominated by either the students or the resident. This left some students to feel as if they had very little to reflect upon each week. As a result, several students had difficulty making connections between their conversations and the course content. Yet in groups where the resident was more conversive, VP was transformative. For example, at the start of the semester, one student wrote that people are obese solely because they lack motivation. After hearing the VP's life stories and making personal comparisons, the student realized that food intake, activity, weight, and health are impacted by more than just individual choice. By the end, the student described how family, friends, religion, societal norms, policies, and more influence behavior.

What most surprised me were the ways in which several students went beyond the weekly calls to connect with residents. One student visited her VP and brought food, flowers, and other gifts. Two other students had desserts delivered to their VP. These acts were completely student-driven, and I often learned about them after the fact. |

| (3) What challenges did you face before and during the project, and how did you handle them? | Some challenges were looking to have enough laptop computer devices for each resident, technical difficulties that included trying to get into the chat rooms on time, connecting the right VPs, and when residents would not be able to attend their sessions due to an illness or due to an emotional overload due to the lockdown while being inside the facility. | One challenge was ensuring students were prepared for calls with their VP. To address this, I planned two sessions to review interviewing, oral history, and the aging process. I also invited Jennifer to our class to introduce herself, provide a virtual facility tour, offer her insights into working with older adults, and answer students' questions. Another challenge was keeping conversations focused on learning objectives. For this, I created a weekly set of questions offered as suggested jumping-off points to engage in deeper conversation. A third challenge was helping students make connections between their conversations and the course content, so I provided in-class opportunities for small and large group reflection.

There were also logistic challenges, most of which were technology-based. For one, the lack of available devices for resident use required us to change how the project ran; rather than all VP groups speaking simultaneously, groups were split into two shifts. This meant that groups had less time to speak, but it did allow everyone to speak weekly. As another example, I set up separate Zoom meetings so that each VP group could have a private conversation. After many initial issues however, I learned I could only host two active meetings at one time. Thus, I had to change the call format so that everyone was placed into "breakout rooms" in the same meeting. Although this was more work for me, it allowed me to be available to groups if issues arose. It also gave me the opportunity to speak with students right after their calls and provide them with real-time assistance in making connections between their conversations and course content. |

| (4) What went really well?

What were some of the small wins? | The logistics of the whole project and the students working so well with their assigned VP. Putting a smile and making residents laugh and creating friendships were some of the small, but greatest wins! | VP was successful in meeting its goals. By learning more about their VP's life, students were able to articulate the social determinants of health and the ways in which various levels of influence affect dietary behavior. Through their reflections, students reported an improvement in their interviewing and communication skills. Students provided positive feedback weekly and remained upbeat even when a call did not go as planned. At the end of their calls, students were eager to tell me about the conversations with their VP. Likewise, residents seemed excited to speak to the students, entering the meetings with smiles and warm greetings.
     One small win was our ability to have a celebratory end-of-semester event—most students were able to sit face-to-face with their VP! Despite the short visits, students and residents expressed joy in being with each other and seeing many of their peers and me in person for the first time in 15 weeks. As part of this event, we presented residents and the facility chef with a printed and bound recipe book authored by the students. The residents were proud to show off their recipes to the facility staff and thanked the students for capturing their memories. |

| (5) How was this experience similar or different than other times you've worked with faculty [for community partner]/community partners [for instructor] in face-to-face service-learning projects?

How was it working together during the pandemic? | This experience was sure a whole different way than the norm as I have worked with faculty than in the past face-to-face. Having to do virtual video due to the pandemic was a privilege to be able to complete the service-learning project under all the circumstances and mandates of not allowing to have any physical contact. | The only similarity between this experience and my prior onsite service-learning projects was the process of working with a community partner to co-develop and implement a service-learning opportunity. However, unlike previous projects, VP involved a single community partner and all students participated in the same project. This contrasts with past semesters, where I worked with between three and eight different community partners. The more options I offered, the less time I was able to devote to any one of them and the more reliant I was on my community partners to oversee the projects. With VP, I was more involved in project implementation, which also allowed me to adjust things as needed during the semester. Another major difference relates to the actual service students provided. In prior semesters, students' service activities focused on increasing food security and/or improving nutrition. The VP project did neither of these things. Rather, the services students provided were social connection and companionship. Although these concerns are not directly "nutrition" issues, poor mental health can negatively affect dietary intake in a variety of ways.
  I was a little nervous to work with someone new during the pandemic. However, Jennifer and I kept in regular contact via phone and video calls before, during, and after the project. By having this ongoing communication, we were able to remain transparent and flexible when things went awry. It also provided me a similar type of social connection that my students and the residents were receiving, which was much needed for me as I had less contact with colleagues and friends during the pandemic. |