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From the Editor

For hundreds of years, scholars, teachers, and researchers have known that we learn by doing. It could be as simple as picking up a piece of litter outside of our academic building, or something as complex as testing gravitational effects on plant propagation on the International Space Station. We

> It's simple, really: "…service-learning responds to community needs while enhancing student learning."
>
> Kinkead & Curtis

learn by doing. In our current climate of cultural polarization, it is sometimes easy to dismiss or not to recognize that students and scholars across the globe are working together to both better understand our current problems and to collaboratively work toward possible solutions. That is the fact of higher education and the struggle that our teachers, researchers and students face each day as they move toward understanding and global responsibility.

Welcome to Volume 8 of the Journal of Service-Learning in Higher Education. This edition, even more so than others, illustrates our shared global commitment to learning, understanding, and identifying solutions to ever-changing problems. In this edition, scholars from across the United States, Asia and the Middle East introduce us to service pedagogical approaches and opens dialogue toward solutions that are shared across our boundaries and our cultures. All of us at JSLHE are honored to share this platform.

David Yarbrough
Executive Editor

Seeking SOLE Food: Service-Learning and Sustainability in Honors Think Tank Courses

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Introduction

Do college students using campus dining services create excessive food waste or recycle with the environment in mind? Would students be interested in eating "recovered" food? Would students support a campus-based farmers' market of locally produced foods? How much food prepared by campus dining services could be labeled "real food"? How much food is wasted in food preparation? What happens to campus food waste at the end of the day? Can the amount of SOLE food-- sustainable, organic, local, and ethically produced--on campus be increased?

These are the questions that six interdisciplinary teams of Honors students sought to answer in a "Think Tank" course focused on agriculture, food, and sustainability. Students investigating campus dining services? Some might consider this biting the hand that feeds you, but this service-learning project was supported by the director of our university dining services. The director pointed out that Dining Services would like to be more sustainable in keeping with the university's participation in the American College and University Presidents Climate Commitment (ACUPCC). Research universities such as ours have the ability to undertake research of sustainability programs, educate students about the importance of sustainability, examine problems and create solutions, and provide leadership in their communities. In addition to striving for climate neutrality, another initiative is a sustainability

ABSTRACT

The value of service-learning as a high-impact educational practice in college courses is further documented here through client-centered student projects seeking to increase SOLE food--sustainable, organic, local, and ethically produced--on the Utah State University campus. Honors students enrolled in a Think Tank series of courses in Science, Social Sciences, and Arts/Humanities completed six cross-disciplinary projects focused on various aspects of dining services and food sources on campus, including recycling, food waste, food recovery, and local sourcing. Post-project student reflections indicate that students were much more aware of campus-wide sustainability issues and how they, as campus citizens, could contribute in meaningful ways. Student also demonstrated the ability to property design research projects and engage in data-informed problem solving as a result of their service-learning project. Students also learned to successfully work in groups and appreciate and encourage the strengths of each team member.

curriculum. However, sustainability programs have to be economically viable, implementable, i.e. people have to want to do it, and must have measurable positive environmental effects.

The idea for the Honors Think Tank course came from the Honors program's director and is part of the university's commitment to developing courses with sustainability content. She organized three sections of the upper-level Honors course, one focused on Science, one on Social Sciences, and one on Arts and Humanities, and then recruited appropriate faculty to teach each. The courses fulfill General Education "depth" requirements. The faculty met with their own sections, but on occasion, all three groups convened together. In the first such joint meeting, student were treated to food: cheese and crackers. When we asked, "Where do you think the cheese was sourced from?" they automatically replied that it must be local as our university is positioned in a valley well known for its dairy products. Additionally, the campus has a dairy science research and academic unit and has also won "Best Campus Dairy Herd" in the country. Disabusing them that this cheese product actually hailed from the Midwest was one of the first lessons about sustainability and local sourcing. It was actually cheaper for our campus dining services to source cheese from hundreds of miles away even though the cost in fossil fuel consumption was a negative. The section of Arts/Humanities read as one of its course texts Barbara Kingsolver's *Animal, Vegetable, Miracle: A Year of Food Life,* a narrative about how a family chooses to "live off the land" for a year. A feature of the book is the chapter inserts by Stephen L. Hopp, who contributes social, economic, and political insights. In one such insert, he points out, "Each food item in a typical U.S. meal has traveled an average of 1500 miles" (2007, p. 5). Even though, our dining services had the option of sourcing its cheese locally, it chose to use a vendor that supplies cheese from 1500 miles away.

The three course sections met jointly multiple times during the term. At the beginning of the term, the three faculty members shared agriculture, food, and sustainability themes from each of their three perspectives, giving students background on the real issues of sustainability. Students were informed of some startling statistics, such as close to 40% of all food is wasted in the United States. They kept their own food and waste log for a week to assess where their food came from and how much went to waste, recycling, or composting.

Additionally, they shared common readings: Wendell Berry's National Endowment for the Humanities Jefferson Lecture, "It All Turns on Affection" and *A Pivotal Time in Agriculture* from the National Academy of Science. They took field trips to exemplars of sustainability: a coffee-roasting facility; an organic flourmill; a local sourcing restaurant, a permaculture garden on campus, and a working direct marketing farm. They also assembled in groups to work on the service-learning project as students from across sections collaborated on specific topics. This article describes the process whereby the students moved from inception to dissemination of findings and reflection. Student project findings will be discussed on a limited basis.

Benefits of Service-Learning in the Classroom

Reports from similar course-based service-learning projects have appeared in the pages of this journal. Kulhavy and Unger (2015) described a course in natural resources in which students (also in six teams) worked with state and national organizations to develop a Firewise certification and an historical trail—among other outputs. Neese, Field, and Viosca (2013) designed a marketing class in which students provided *pro bono* research services to small firms and non-profit organizations. In the same issue, Crone (2013) developed a service-learning component in a Social Psychology class to "challenge students to apply social psychological theories to societal issues of their choosing" (p. 70).

Vavasseur, Hebert, and Naquin (2013) paired preservice teachers with fifth graders virtually to provide tutoring, helping the students and providing professional development opportunities to the college students. Stewart (2012) seems to suggest that when Honors students engage in service-learning, it may be wise to do so when they are upper division students rather than newly-matriculated. This study has implications for our article in which juniors and seniors, for the most part, enrolled in the Think Tank and demonstrated an understanding of campus and a maturity level that contributed to the final client deliverables. Van Meter, Reichwald, Blair, Swift, Colvin, and Just (2012) wrote about sustainability but not in the way in which our service-learning project was directed. Instead, they focused on developing "sustainable citizens" and enhancing civil discourse between students and community members.

The advantages of service-learning research projects in agriculture-related courses have been well documented (see Knobloch, 2003; Roberts, 2006; Parr et al., 2007; and Retallick and Steiner, 2009). For example, Curtis and Mahon (2010) found that their service-learning project enhanced student learning over other assignments, especially for those with a higher frequency of interaction with industry professionals. Additionally, students stated an improved depth of content knowledge, improved professional understanding, and a deeper awareness of their strengths as a result of the service-learning project.

The value of service-learning as a high-impact educational practice has been demonstrably assessed in the work of George D. Kuh (2008) in conjunction with the Association of American Colleges & Universities (AAC&U) and the National Survey of Student Engagement (NSSE). Kuh describes service-learning and community-based learning in this way:

In these programs, field-based "experiential learning" with community partners is an instructional strategy—and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students have to both apply what they are learning in real-world settings and reflect in a classroom setting on their

service experiences. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life. (p. 11)

Another initiative by the AAC&U is LEAP: Liberal Education, America's Promise.

Our state has been identified as a LEAP participant. Among its goals, LEAP promotes high-education practices but also projects in which students "can apply their learning to complex problems and real-world challenges" while also engaging in a "substantial cross-disciplinary project in a topic significant to the student and society" (American Association of Colleges & Universities, 2005). The Think Tank project teams were structured in just this way: cross-disciplinary teams studying complex problems in campus dining services and recommending solutions to make the campus not only a better place to live and study, but also more sustainable.

The Student Projects
The overarching themes for the service-learning projects focused on sustainable food sourcing, food waste management, and food recycling and recovery. These projects are part of a larger trend on campuses to be more mindful of food access and sustainability. Higher Education Food Summits are occurring on a state-by-state basis. Many campuses are joining the Real Food Challenge (http://www.realfoodchallenge.org/). With a goal of 20% of campus food being "Real Food" by 2020, the Real Food Challenge seeks to "leverage the power of youth and universities to create a healthy, fair and green food system." The aim is to "shift $1 billion of existing university food budgets away from industrial farms and junk food and towards local/community-based, fair, ecologically sound and humane food sources" (Real Food Challenge, "About Real Food Challenge").

To help meet the sustainability goals of our campus, the projects focused directly on campus dining services. Campus dining services had collected some data, but it was intermittent and had not necessarily been acted upon. For instance, a student intern had cataloged composting totals for dining services (see Figure 1), but follow-up was not as robust as desired. The client wanted to see clear-cut implementation plans, which was the task of the Honors Think Tank student projects.
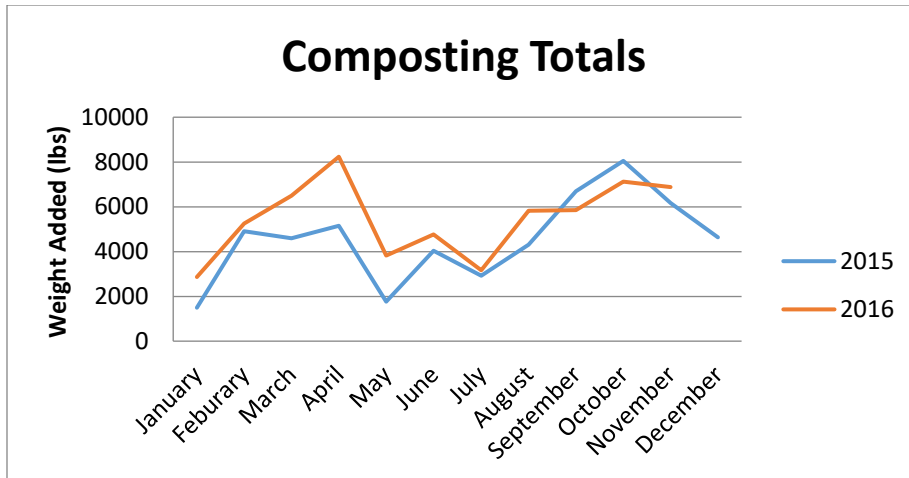
Figure 1. Composting Totals 2015-2016

Also incorporated was a food recovery program, initiated by committed students who voluntarily picked up on a daily basis leftover food that would otherwise be composted or thrown away. The Student Nutrition Access Center (SNAC) was founded in 2010 by a few students concerned about student access to food. They began by assembling recovered food in a single metal cabinet. As of this writing, the larder includes recovered food from campus dining services, canned and boxed food donated by the community food pantry, and (when available) fresh vegetables from the student organic farm. Another project focused on a weekday campus farmers' market to augment the community version, which assembles on Saturdays in a downtown location. In all cases, pursuing a SOLE food philosophy was in play.

The six student group projects included the following:

1. Dining Services food sourcing assessment and implementation plan – See Real Food Challenge at http://www.realfoodchallenge.org/
    a. Determine what portion of currently sourced food falls under the "real food" definition.
    b. Create a plan and implementation strategy to increase the portion of "real food" sourced, including timeframe, employee and user incentives, local and regional sources of "real food" in terms of companies, food types, amounts, etc.
2. Dining Services food service food waste assessment and implementation plan
    a. Determine the current portion of food provided by dining services that is wasted.
    b. Create a plan and implementation strategy to decrease the portion of food provided that is wasted, including timeframe, employee and user incentives, pricing schemes, processes, physical components of food service, etc.

3. Dining Services kitchen and preparation food waste assessment and implementation plan
    a. Determine the current portion of food sourced by dining services that is wasted in food preparation by kitchen workers.
    b. Create a plan and implementation strategy to decrease the portion of food wasted in meal preparation, including timeframe, employee incentives, processes, etc.
4. Dining Services reuse (recycling, composting) assessment and implementation plan
    a. Determine the current portion of food service products that are currently recycled, composted, and/or channeled into some type of reuse program.
    b. Create a plan and implementation strategy to increase the portion food service products channeled into a reuse program, including timeframe, employee and user incentives, processes, potential end-uses for products, etc.
5. Campus Farmers' Market feasibility assessment and implementation plan
    a. Determine potential/projected demand (community) and supply (vendor) for the market and conduct a SWOT analysis.
    b. Create a management and implementation strategy including structure, products, vendors, location, hours, incentives and promotional ideas, etc.
6. University Food Recovery Network/Student Food Pantry program assessment and expanded services implementation plan
    a. Assess the impact of the program to-date in terms of reducing food waste and student food insecurity.
    b. Create a plan and implementation strategy to expand program services in terms of food recovered, students serviced, and community partners, including timeframe, incentives, processes, etc.

Each of the six teams (3-4 students from each section, representing science, social sciences, and arts/humanities) developed a plan and implementation strategy for its focus topic. They had the opportunity to apply for a grant from the campus sustainability office to provide funding for data collection, materials, and printing. The teams presented their findings at a culminating poster presentation. Projects were evaluated by fellow students, Think Tank instructors and undergraduate teaching fellows (UTFs), project mentors, and guests.

Group Dynamics
To begin, we wanted to ensure that teams had successful experiences. Thus, we were clear about processes, particularly about working in groups, which can be fraught with tension, especially resentment of those who "pull their weight" in workload as opposed to those who don't. We began with a comic infographic (see Figure 2) to get those feelings on the table to discuss how to make a group project workable and enjoyable.

What Group Projects Taught Me

Legend:
- How Much I Hate Other People
- How To Do Entire Projects On My Own
- How To Work With Other People
- The Information
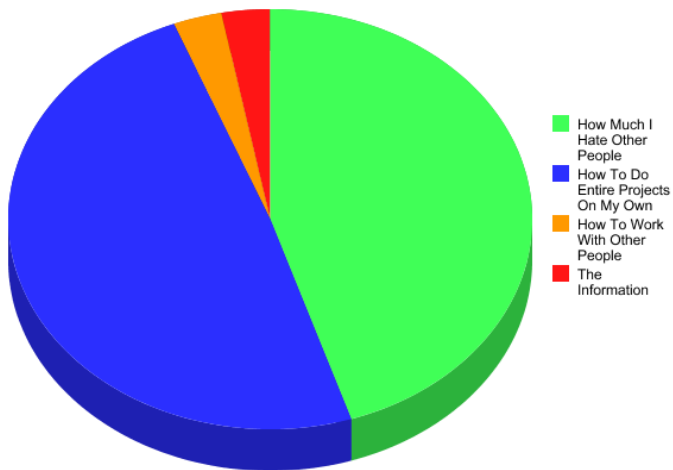
Figure 2. Avoiding Group Project Dysfunction

Source: Meme Center (2014).

Faculty members each took responsibility for oversight of two of the teams. We set up ground rules, including the following:

1. You've been assigned to one of six project working groups. The first order of business is to communicate with your team members and set up a regular time for weekly working meetings (using a Doodle poll at doodle.com may be efficient for finding a day/time that works for all team members. You'll also need to find a time when you can meet with your faculty mentor, which generally will take place during the working day.
2. Consider rotating the team lead on a weekly basis, based alphabetically on last name.
3. At your first meeting, take time to get to know each other. Come prepared to the meeting with a written response on your ideas for the project. Compare notes and come to a consensus on the content and processes of the project. Draft a timeline with an end goal of completing the poster by April 20.
4. File a brief progress report with your faculty mentor at the conclusion of each team meeting. This can be done via the university's BOX system by inviting team members and the mentor to share files/folders. Rotate the progress report writing duties among team members. The progress report should include attendance, date, time, accomplishments, and a "to do" action list. (See Figure 3 for a template of progress reports.)

5. Meet with your faculty mentor to confirm the project content and processes and adjust as needed.
6. Begin working on the project, dividing workload equitably. Consider assigning roles within the group: facilitator (keeps group on task and verifies that all contribute); recorder (takes notes and writes progress report); materials manager (keeps materials in orderly on box.usu.edu or other repository); time keeper (keeps track of time and ensures that group works efficiently, both in individual meetings and on the project as a whole); summarizer (restates the group's conclusions and responses and checks for clarity; asks if anything important has been left out); encourager (affirms contributions and actions; provides a sense of humor).
7. We also shared the evaluation rubric that each team member would fill out assessing others' contributions to the project.

Progress Report Template

Team Project: [1-6, topic]

Date/time of meeting:

Team Members Present:

Team Members Absent:

Figure 3. Progress Report Template

The Research Process

Each team developed appropriate research processes for its particular topic. One team looked at waste, which they determined required sorting through garbage. The six team members gathered three heaping black trash bags from one of the dining service venues. Wearing latex gloves, they sifted through garbage: stale bread, rotting vegetables, plastic forks and packaging. They took notes on what they found and measured: a waste audit. This project focused on the pre-consumer stage and explored ways in which kitchen operations could be more sustainable. The students were on site, observing food preparation practices. They felt that composting was not utilized as much as it could have been. They saw food items that are compostable being thrown in trash bins bound for the landfill. They needed empirical evidence to back up their eyeballing. Enter the waste audit of kitchen garbage cans. A significant amount of waste was actually compostable, reducing landfill waste. The solution? Place more composting receptacles conveniently throughout the kitchen.

Student reflections of the projects sum up well the relevant components of a service-learning research project of this nature:

"Because we were essentially creating our own research project, we had to determine what calculations to use, how to best present our findings, and how to best solve the problem at hand – namely increasing and effectively utilizing composting in the kitchen. In the end, we presented conclusions that through increasing composting receptacles and more effectively communicating composting regulations to employees, the kitchens would improve their sustainability immensely."

"As we separated into groups to tackle different parts of the issue, it was obvious some were more passionate about it than others. It was imperative those working to solve the issue were invested in it. As I developed a passion for campus sustainability, my group members, too, discovered their passion for it. Our individual classes fostered passion as we discussed more ways to solve local problems. Finally, as we presented our findings to the heads of Dining Services, we could see them catch the spark, and start developing their own passion for increasing sustainability in their kitchens. The influence of one can impact many."

"I learned several skills from this project, particularly about how to conduct research. Previously, I did not know how to formulate a meaningful question or guide the project into its next stages. I see now that it is a graduate process-it may not come all at once. Rather, it requires work and research at one step to advance to the next and eventually become more involved in research or community projects in the future, both locally and abroad."

"The project demanded that I learn how to actively communicate with others in my group. We had to share our own ideas and engage with each other to accomplish our goals, often in compromise. The variety of people's strengths and weaknesses took on a new reality in my mind. "

Project Results and Dissemination

The proof is in the pudding might be an apt metaphor for these food-related projects. As a culminating activity, teams presented their posters and ancillary materials to the clients and others. At the beginning of the project, we shared information on effective poster designs, which was repeated at the time of the actual poster development. We felt it important to describe completely the project when first assigned to avoid surprises. One half of the class members were stationed by their posters to explain while the other portion circulated among the posters, queried the researchers, and completed evaluation forms (see appendix).

The waste audit at one of the campus dining venues is the subject of the poster below (see Figure 4). In addition to students measuring waste, they staged an intervention to inform users of what materials could be recycled. The amount of recycled

materials increased by 29%. The amount of recyclable material in trash bins decreased by almost 6'5, and contamination of recycling bins decreased by almost 29%. The offered details on implementing change that could result in reduced waste and increased recycling. The teams also produced a research report. We provided a template to follow, which is included in the appendix.

Figure 4. Student Team Poster Example

Student Learning Impacts and Reflections

Rubrics can tell only part of a story. Students completed a grid evaluation form, but they also wrote a narrative about their experience with the service-learning project. What was the story behind the scenes? What was the impact of the project on each one as a learner and citizen?

The question prompts for the narrative included these:

1. This is termed a "service-learning" activity as researchers and clients form a partnership to solve problems. How did service-learning affect you as a learner and a person?
2. What did you learn by doing this project?
3. Did your communication skills improve as a result of this project?
4. What would you do differently in organizing a team project next time?
5. How did your teamwork skills improve or not?
6. What do you wish you had done differently?
7. Of what are you most proud?
8. What research skills did you learn?
9. Did your technology skills improve?
10. Did you learn more about campus as a result?
11. How might this project influence you as a student and a citizen--in the particular theme of sustainability?

Student learning reflections demonstrating the impact of the project include:

> "Effective teamwork was one of the greatest things to be learned from this project. In life, few things go according to plan. Sometimes, unseen problems occur. Other times, deadlines and regulations make a project stressful. This service-learning project helped to bring some of these situations to the forefront and allowed the chance to develop needed teamwork skills to overcome them. College provides an environment where groups of educated people come together in collaboration for a common goal. This project had a multidisciplinary aspect to it, something that closely resembles life experiences. Coming together as a team brought different talents and skills. Some brought a knack for math; others brought a gifted artistic ability. We used our unique skills to work together in gathering information, communicating that information to each other, reflecting on and documenting the information, and finally, presenting our findings in the utmost professionalism. Because our society is built on the interaction of people, these interpersonal skills are an important thing to be learned through education. Traditional lecture classes cannot offer what small, group projects can. Teams are essential in making a difference."

> "As I engaged in improving an on-campus issue, it was a process to develop a passion for our project. I have never been heavily involved in sustainability or civic opportunities, yet here I was, a student aiming to convince a university that they could be more sustainable."

> "I attended the service-learning banquet and the keynote speaker talked about the obligation we all have to be contributing members of our communities. If this project has taught me anything, it is that I want to be a better community member and do more to improve life for everyone around us. "

"This is the biggest and most effective group project I have been on. I was working on something real and of lasting value, and I was going it with a lot of intense, strong-willed people. Asking people to change their process is difficult and painful. I am so grateful that I learned how to write a grant. That will serve me well in the coming years."

In addition to course-based evaluation, our institution's Service-Learning Program asks for continuous tracking across the term and end-of-term assessment in order to gauge impact and to use feedback to improve the program. Hence, students logged service hours through an online tracking system through the term. At the end of the term, students completed a Think Take evaluation survey along with faculty and service-learning partners. Finally, the Honors Program office chronicled the students engaged in service-learning through photos at study sites, field trip sites, and the presentations session. Our two Undergraduate Teaching Fellows (UTFs) were very helpful in this regard and also wrote a blog for the Honors Program website.

Conclusions

Through the integration of teaching and research, scholarship and engagement, learning and doing, service-learning responds to community needs while enhancing student learning. Service was integrated in such a way that students applied the knowledge and skills they learned in class such as behavioral economics and food consumption to meet community needs. Students said in their post-class evaluations "The service project required to apply what we had learned," and "It helped me connect to the world and get more out of my education." Consistently, students noted in their reflections about the service-learning projects that "Working in teams with people from different disciplines helped me understand how real-world professional research will take place." That multi-disciplinary perspective was also present in comments such as this one: "It's important to have a broad range of knowledge to be able to solve problems in a more efficient and complete manner." Service-learning courses, according to another student, don't function like "normal education" but are representative of the way things "will happen regularly in my career."

The final projects offered helpful suggestions to improve current local sourcing, food waste management, and campus dining programs and were delivered to the clients. Using real world applications in the classroom greatly improved the student learning experience and made them much more aware of the quest for SOLE food as part of a sustainable campus. As one student noted in a reflection, "I can never shop in a grocery store, buy food at a café, or approach a waste bin in the same way after engaging in food and sustainability-based service-learning and research."

Our desired outcomes in these service-learning projects were that our students were much more aware of issues of sustainability and how they as campus citizens could contribute in meaningful ways. As members of a research university, we particularly wanted to imbue these service-learning projects with data-informed problem

solving that could be replicated at other campuses. A distinctive element of this service-learning initiative is that our "community" was located on our own campus. "Everyone is part of a community," according to one student reflection, "whether it is a neighborhood community or an academic community." In thinking about projects that have transformative power, we need to look also at our own campus community, which can benefit from the work and passion of students engaged in authentic research. As a student summed up the project in a reflection, "The projects we did mattered."

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Appendix:

1. Template for Research Reports

Project Assessment and Implementation Plan

Team Members

[list names with e-mail addresses]

Introduction

[Explain the research question and the purpose of the study.]

Theoretical overview and review of literature [here or later]

Context of the Study

[This section may include information about the researchers, the purpose of the research, or the origin of the research question. This may be the place to include information about the baseline information for the study. What did you find about the impact of the program to date in terms of reducing food waste and student food insecurity. What are the goals of your project?]

Method

Explain the approach of the research study.

Results and Recommendations

Create a plan and implementation strategy to expand program services in terms of

- *food recovered,*
- *students serviced,*
- *and community partners*

Implementation

- *timeframe,*
- *incentives,*
- *processes,*
- *other*

References

Appendices

Acknowledgements

N. B. Include charts, graphs, photographs as needed; don't forget to insert page numbers.

2. Oral Presentation Evaluation

Faculty ☐
Student ☐
Guest ☐

Group Name/Topic _____

Date _____

Oral Presentation Evaluation Rubric

Opening:	Stellar		Good		Needs Work	
Team members introduce themselves	5	4	3	2	1	0
Strong opening that engages audience	5	4	3	2	1	0
Provides overview/preview of project	5	4	3	2	1	0
Transitions:						
Transition from speaker to speaker handled smoothly; speakers "share floor" equally	5	4	3	2	1	0
Connection with materials presented in class noted	5	4	3	2	1	0
Sections move efficiently	5	4	3	2	1	0
Substance of Presentation:						
The significance and impact of the material is clear	5	4	3	2	1	0
Material is technically correct and appropriate for problem addressed	5	4	3	2	1	0
Technology:						
A handler for technology (separate from speaker)	5	4	3	2	1	0
Visuals are handled competently	5	4	3	2	1	0
Closing:						
Strong closing that doesn't taper off	5	4	3	2	1	0
Acknowledged help received (e.g., client, City)	5	4	3	2	1	0
Audience thanked, Questions and comments invited	5	4	3	2	1	0
Team members answer questions competently and manage comments	5	4	3	2	1	0
Timing:						
The presentation concludes within 15-20 minutes (firm cut-off at 20 minutes)	5	4	3	2	1	0
Professionalism:						
Speaking is professional *(e.g, avoided "things" and used concrete words; no grammatical errors such as using "me" as a subject; avoided ums and ahs)*	5	4	3	2	1	0
Credible clothing and appearance	5	4	3	2	1	0
Well-rehearsed	5	4	3	2	1	0
Body language:						
Connects with audience; speaks directly and audibly; good eye contact	5	4	3	2	1	0
Confidence when giving presentation *(Stood with feet shoulder width apart; did not rock back and forth or shift weight between feet. Arms comfortably at sides; not folded or partially crossed or in pockets. No gum.*	5	4	3	2	1	0
TOTAL SCORE (0-100):						

Promotion of service leadership: An evaluation of a service-learning subject in Hong Kong

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ABSTRACT

In 2014-2015, a total of 88 university students enrolled in a course entitled "Service Leadership through Serving Children and Families with Special Needs". To evaluate the effectiveness of this course, students were asked to complete a subjective evaluation form at the end of the course. Consistent with prior findings, students perceived the subject positively and found this subject to be beneficial for their personal growth. The present study showed how university students' leadership qualities could be promoted through service- learning.

Introduction

Service-Learning

Service-learning has received increased attention in higher education (Lim & Bloomquist, 2015). It is a type of experiential teaching that serves the community by identifying the needs of different stakeholders, combining classroom instruction and guiding activities for reflection, with the aim of enhancing students' learning experience and cultivating their sense of citizenship through serving the community (Sandaran, 2012). A major characteristic of service learning is the establishment of a reciprocally beneficial relationship among the stakeholders.

Specifically, community with identified needs receive service from students, (Lim & Bloomquist, 2015; Lovat & Clement, 2016), while students enjoy *"a credit-bearing educational experience in which [they] (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility"* (Bringle & Hatcher, 2006, p.12).

In service learning, students are asked to integrate and put their academic knowledge and skills into practice, which help them pursue their own career aspirations (Bialka & Havlik, 2016; Lovat & Clement, 2016). This teaching strategy has shown to have positive impact on students. For example, students' sense of caring, empathy, and altruism are enhanced through this non-traditional teaching and learning approach (Chien, Liao, Walters, & Lee, 2016). By linking theory and learning experience throughout the service delivery, students are able to critically reflect on and evaluate their own values and beliefs, which further boost their development in the emotional, social, and cognitive aspects (Cashman & Seifer, 2008). Through developing, planning, and implementing service activities, students learn how to identify the actual needs of the service recipient, design corresponding activities, and carry out the prepared activities. Furthermore, they obtain skills in liaising with different stakeholders and reaching an agreement in the context of collaboration (Ryan, 2012). To conclude, service learning provides opportunities for students to develop multicultural competencies (Bialka & Havlik, 2016) and nurture students' civic engagement and responsibilities (Konwershi & Nashman, 2002).

Service Leadership

In an era of a service-driven economy, fresh graduates are expected to possess not only professional academic knowledge, but also "soft" skills such as intrapersonal and interpersonal competences (Shek & Leung, 2015). They are expected to be equipped with leadership abilities, like knowing others' needs, demonstrating sincerity, and managing relationship with others in their workplaces and economic settings (Shek & Leung, 2015). With this in mind, the Service Leadership and Management (SLAM) Model was introduced by the Hong Kong Institute of Service Leadership and Management. Its philosophy is to develop leadership capabilities in students to enable them to provide any type of service with care and competence (Rosenkranz, 2012; Lim & Bloomquist, 2015; Lovat & Clement, 2016). According to the SLAM model, service leadership "is about satisfying needs by consistently providing quality personal service including one's self, others, groups, communities, systems, and environments. A service leader is a ready, willing and on-the-spot entrepreneur who possesses relevant task competencies. They will be judged by superiors, peers, subordinates, and followers to exhibit appropriate character strengths and a caring social disposition" (Chung, 2011). In other words, service leaders are expected to liaise with different parties and provide

services to the people in need by taking advantage of their different competences, such as caring, self-improvement, and moral competence (Shek & Leung, 2015).

Within this framework, effective leadership consists of competencies, moral character, and caring disposition (E=MC^2). Chung (2011) noted that these are essential elements for effective service leaders, who have the ability to not only lead others to achieve their goals, but also uphold high moral values and show empathy and love to their service recipients.

Promoting Service Leadership through Service Learning

Considering the increasing demand for effective service leaders, PolyU has designed a 3-credit course entitled "Service Leadership through Serving Children and Families with Special Needs" with the support of the Victor and William Fung Foundation. Students taking this course are asked to apply the service leadership knowledge and skills they learn in class, like E=MC^2, to the community. Upon completion of the course, students are expected to be able to a) address the needs of the service recipients through service delivery; b) link their service experiences with academic course materials; c) increase openness to the diversities of the communities; d) appreciate and respect people from diverse backgrounds; e) integrate academic learning (e.g., knowledge on service leadership) into the service experience and activities; f) illustrate moral characters through service delivery; g) apply academic skills and knowledge when handling difficulties in the service setting; and h) reflect on their service leadership qualities through service learning; and collaborate with different parties (e.g., students, teachers, family and community partners) when preparing and delivering service. Previous studies have shown that students reported positive changes after taking a service leadership course (Shek & Liang, 2015; Shek, Liang, & Zhu, 2016; Shek, Lin, & Liu, 2014; Shek, Lin, Liu, & Law, 2014a; Shek, Lin, Liu, & Law, 2014b; Shek, Law, & Liu, 2015). However, little is known whether these positive effects were due to learning through the experiential education approach of service learning. This study attempts to assess students' perception on their learning experience, in terms of curriculum content, lecturers, and subject effectiveness. Furthermore, the effect of this course in nurturing university students' leadership skill and cultivating them to be a future service leader is explored.

Methodology

The study was conducted in the 2014-15 academic year, in which a total of 88 students enrolled in the course "Service Leadership through Serving Children and Families with Special Needs". In this course, students were asked to deliver 40 hours of service to adolescents with emotional and behavioral problems from two local secondary schools.

To ensure a comprehensive understanding of the results, multiple data sources were collected. First, during the final workshop of the course, students were invited to complete a 38-item course outcome evaluation form, which assessed the course in

three different aspects, including perceptions on the program (10 items), perceptions on the lecturers (10 items), and the effectiveness of the program (18 items). Second, qualitative data were selected from students' reflective journals and further discussed. Descriptive statistics were derived using SPSS version 23.

Results

The descriptive statistics and internal consistency of each aspect are shown in Table 1. In general, students perceived the course positively, as the percentage of a rating of 4 or above on a 5-point Likert scale ranged from 55.7% to 86.4% for the various items measured. About 83% of students reported that this course has clear objectives, and a majority of students (over 80%) found that the lecturers demonstrated professional skills and knowledge and were well-prepared for the course. Also, students expressed that this course was able to help improve their leadership skills, such as social competence (85.2%), emotional competence (73.9%), and critical thinking skills (77.3%). Overall, they found that this course helped them become successful service leaders (72.7%).

Apart from completing a subjective outcome evaluation form, students' reflective journals were analyzed using qualitative approaches, such as identifying themes and setting up codes. Results show that students became more aware of other people's needs, and were able to apply the major components of service leadership through service delivery.

Table 1. Summary of students' perceptions toward the subject (N=88)

Item	Mean	N (%)
Curriculum content (α = .93)		
1. The objectives of the curriculum are very clear.	3.89 (.58)	73 (83.0%)
2. The content design of the curriculum is very good.	3.52(.68)	49 (55.7%)
3. The activities were carefully arranged.	3.63(.70)	57 (64.7%)
4. The classroom atmosphere was very pleasant.	3.89(.60)	71 (80.7%)
5. There was much peer interaction amongst the students.	3.92(.68)	66 (75.0%)
6. I participated in the class activities actively (including	3.93(.64)	71 (80.7%)
7. I was encouraged to do my best.	3.90(.64)	65 (73.9%)
8. The learning experience enhanced my interests towards the	3.66(.77)	60 (68.2%)
9. Overall speaking, I have a very positive evaluation on the	3.68(.69)	59 (67.1%)
10. On the whole, I like this course very much.	3.64(.73)	59 (67.0%)
Lecturer (α = .95)		
11. The lecturer(s) had a good mastery of the course.	3.97(.58)	72 (81.8%)
12. The lecturer(s) was (were) well prepared for the lessons.	4.06(.61)	74 (84.1%)
13. The teaching skills of the lecturer(s) were good.	4.01(.62)	72 (81.8%)
14. The lecturer(s) showed good professional attitudes.	4.05(.64)	74 (84.1%)
15. The lecturer(s) was (were) very involved.	4.08(.59)	76 (86.4%)
16. The lecturer(s) encouraged students to participate in the activities	4.08(.63)	76 (86.3%)
17. The lecturer(s) cared for the students.	4.07(.60)	75 (85.2%)
18. The lecturer(s) was (were) ready to offer help to students when	4.14(.65)	75 (85.2%)
19. The lecturer(s) had much interaction with the students.	4.05(.59)	75 (85.2%)
20. Overall speaking, I have a very positive evaluation on the	4.11(.67)	73 (82.9%)
Subject benefit (α = .97)		
21. It has enhanced my social competence.	3.97(.69)	75 (85.2%)
22. It has improved my ability in expressing and handling my	3.82(.80)	65 (73.9%)
23. It has enhanced my critical thinking.	3.81(.66)	68 (77.3%)
24. It has increased my competence in making sensible and wise	3.86(.66)	69 (78.4%)
25. It has helped me make ethical decisions.	3.89(.72)	69 (78.4%)
26. It has strengthened my resilience in adverse conditions.	3.81(.77)	63 (71.6%)
27. It has strengthened my self-confidence.	3.82(.77)	64 (72.8%)
28. It has helped me face the future with a positive attitude.	3.82(.78)	66 (75.0%)
29. It has enhanced my love for life.	3.65(.77)	57 (64.8%)
30. It has helped me explore the meaning of life.	3.58(.71)	55 (62.5%)
31. It has enhanced my ability of self-leadership.	3.76(.73)	61 (69.4%)
32. It has helped me cultivate compassion and care for others.	3.84(.77)	68 (77.2%)

Note: All items yielded positive responses (i.e., ratings above 4). Items are rated on a 5-point Likert scale with 1 = unhelpful, 2 = not very helpful, 3 = slightly helpful, 4 = helpful, 5 = very helpful.

Table 1. (con't)

Item	Mean (SD)	N (%)
33. It has helped me enhance my character strengths	3.80(.78)	65 73.9%)
34. It has enabled me to understand the importance of situational task competencies, character strength and caring disposition in successful leadership.	3.99(.70)	73 (82.9%)
35. It has promoted my sense of responsibility in serving the society.	3.91(.71)	71 (80.7%)
36. It has promoted my overall development.	3.86(.73)	69 (78.4%)
37. The theories, research and concepts covered in the course have enabled me to understand the characteristics of successful service leaders.	3.81(.74)	64 (72.7%)
38. The theories, research and concepts covered in the course have helped me synthesize the characteristics of successful service leaders.	3.80(.79)	64 (72.7%)

Note: All items yielded positive responses (i.e., ratings above 4). Items are rated on a 5-point Likert scale with 1 = unhelpful, 2 = not very helpful, 3 = slightly helpful, 4 = helpful, 5 = very helpful.

For example:

Demonstrating care and compassion

- "Putting ourselves into others' shoes is difficult because we always have our own stands and opinions. This course helped us improve our social competence and interpersonal skills. I found that empathy is very important in forming our social network and communicating with others."

Showing respect to others

- "After getting feedback from the teachers and the service recipients, we made adjustments to our activities. I realized that being respectful and having effective and active listening skills are very important if we would like to improve on our service quality."
- "I think being respectful is very important when we conduct the service activities. We need to get in touch with secondary school students. If we show our genuine respect and take proactive action on them, they will be more willing to participate in our activities."

Strengthening their sense of self

- "When I was conducting the service activities, I tried to be active and respond to my students quickly in order to let them feel comfortable in an unfamiliar environment. After being a helper for several times, I found myself more confident in communicating with my service recipients."
- "Before taking this course, I did not think I could be a leader. However, after this course, I think that everyone can be a leader and show his or her leadership in any context. Leadership is very important in our daily lives."

Developing moral competence

- "Having moral character is very important for my future career as a nurse, since I will be handling many patients and their medical records. I should respect my patients and their records the same way I treated my service recipients and protected their privacy."

Increasing awareness of civic responsibilities

- "If the school or service recipients still need my help in the future, I will help them immediately, as I really care about their needs. I think I should bear greater responsibility when providing service, compared to voluntary work."
- "From my point of view, contributing to society is not just pursuing social responsibility or higher profit. The crucial thing is to help the needy when we have the ability and availability."
- "In my opinion, social responsibility and contribution are crucial. We should help the needy no matter what."

Better preparation for their future career

- "From participating in the service, I learned that I should not interact with everyone using the same communication method or skill. I learned to be more flexible. I will apply what I learned in this course to my future career."
- "As an engineer, I should continue to constantly strive to improve others' lives; as a citizen, I am obliged to help those in need, since we are part of the same society."

The qualitative findings above provide evidence for the improvement of students' personal growth in terms of intrapersonal and interpersonal competencies and the connection between the course and service experience. The results support the integration effects of service learning and service leadership on students' learning outcomes.

Discussion

The purpose of the present study is to assess how service leadership courses promote positive changes among university students in terms of leadership qualities, moral character, and caring disposition. Empirical findings support the positive effects of service leadership and service learning. Results also shed light on possible directions for future research to refine and expand on present findings.

The course "Service Leadership through Serving Children and Families with Special Needs" offers a valuable opportunity for university students to learn about service learning and service leadership. Data collected from both qualitative (students' reflection journals) and quantitative (students' subjective outcome evaluation) approaches lead support to the positive outcomes of service learning (i.e., development of students' interpersonal and intrapersonal competence), which are beneficial to transforming students into successful service leaders. Specifically, the quantitative

results show that the majority of students responded positively toward the course, and the qualitative comments are constructive, clearly showing the positive effects of learning about leadership attributes through students' reflective journals. These results demonstrate the improvement in university students' leadership competencies, including moral competence, social competence and caring dispositions, as well as leadership effectiveness ($E=MC^2$) after they have taken this course. Such positive impacts show that service leadership can provide new insights and help nurture university students to become future service leaders who are equipped with various competencies.

Given the service-driven economy and the demand of service leader, university students in Hong Kong are expected to equip themselves with different leadership competencies, so they can readily take on challenges in this ever-changing society. With the support of the SLAM initiative, service learning programs are being implemented in tertiary education sectors to prepare university students to become future leaders armed with various competencies, social responsibilities, and an ethic of service. In Hong Kong, there are only a few tailor-made service leadership courses that aim at serving underprivileged children and families with special needs, and the course in the present study is one of them. Our findings reflect that leadership qualities and competencies are well-incorporated into the course and delivered through service activities. The hands-on application of knowledge taught in the classroom is clearly, concretely, and systematically connected to society. The sustained commitment to social justice and civic responsibilities demonstrated by students who have completed this course provides evidence of the benefits of learning about service leadership.

Service learning has been adopted by a growing number of higher education institutions and universities in North America and Asia (Ho & Lee, 2012; Lee, 2011; Lim & Bloomquist, 2015; Ngai, 2006; Rosenkranz, 2012; Vogel, Seifer, & Gelmon, 2010). It would certainly be beneficial if faculty members could continue to explore how service leadership can be applied to nurture students who might not be ready when entering the workforce. More research on the impact of service leadership among university students should be carried out by adopting a longitudinal design. Also, future study should be conducted to extend the understanding on factors related to the impact of service learning among university students. For example, whether students' attitude towards service leadership discipline varies by their discipline or how the content, design and implementation of the service activities influence service effectiveness.

Although the findings of current study are encouraging, two limitations should be noted. First, the sample size was small, as there were only 88 subjective outcome evaluation forms collected. A larger sample should be recruited in the future. Second, students' reflective journal was one of the assessment methods being employed in this course. Other evaluation methods, such as interview, focus group, or longitudinal research can be used in future studies.

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Measuring Impact While Making a Difference: A Financial Literacy Service-Learning Project as Participatory Action Research

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ABSTRACT

The growth of service-learning as an educational approach in colleges and universities has led to the use of more advanced pedagogical techniques in service-learning programs. This article describes a financial literacy service-learning program that a team of undergraduate business students completed while following a participatory action research perspective in the planning, implementation and measurement of a financial literacy event for high school students. This approach fits in the literature on ethics, financial literacy and service-learning and provides an illustrative example of how to incorporate this participatory action research perspective into future financial literacy service-learning initiatives.

Financial Literacy and Service-Learning

Teaching financial literacy through service-learning is an increasingly popular instructional method in undergraduate business programs (Sabbaghi, Cavanagh, & Hipskind, 2013). In financial literacy service projects, undergraduate business students typically provide a short-term financial literacy education program to peers, community members, K-12 students, or underserved populations. This type of service-learning project is an excellent fit for undergraduate business students, since it challenges students to apply their extensive training in matters related to financial literacy. Engaging undergraduate business students in financial literacy service projects has shown mixed positive impacts in learning outcomes for business students and project participants (DeLaune, Rakow, & Rakow, 2010), which demonstrates that this approach has potential both for financial literacy and as an effective academic tool particularly for undergraduate business students. Beyond the financial literacy education component of these programs, additional research has shown that financial literacy service-learning projects improve undergraduate student leadership

competencies and awareness of social justice issues (Rosacker, Ragothman, & Gillispie, 2009).

A recent study by Goetz, Durband, Halley and Davis (2011) documented significant increases in undergraduate student understanding of the specific needs and interests of the various populations that were targeted in the financial literacy education program.

Historically, financial literacy programs first started to appear as service-learning projects in colleges and universities during the economic crisis of 2008, as numerous individuals from a wide variety of backgrounds suffered adverse personal financial consequences during the economic downturn (Willis, 2009; Wolfe-Hayes, 2010). The financial recession also raised a great deal of media attention toward specific financial problem areas such as predatory lenders and the easy access to credit. The media attention to financial literacy matters has continued with a focus on such matters as escalating student debt, the nationwide negative savings rate, high credit card debt, and limited retirement savings (Mandell & Klein, 2009; Willis, 2009). A 2010 study by Lusardi, Mitchell and Curto revealed that only 27% of American respondents could correctly answer a basic set of questions on financial literacy. A national survey conducted in 2013 indicated that the majority of Americans have low financial literacy (Hastings, Madrian, & Skimmyhorn, 2013). More recently, in a 2015 national study of personal financial literacy, more than 63% of participants answered three or fewer items correct on a five question test assessing basic finance and economic knowledge encountered in everyday life (FINRA Investor Education Foundation, 2016). The consequences of the widespread lack of basic financial knowledge are particularly severe for vulnerable population segments (Braunstein & Welch, 2002). In particular, low-to-moderate income households, minorities, and recent immigrants exhibit lower rates of open bank accounts and higher usage rates of predatory financial services such as check-cashing, payday loans, and high-cost remittance services, which carry greater cost and risk (Wolfe-Hayes, 2010).

In response to the financial recession and data indicating low financial literacy in America, national policy initiatives have been directed at improving financial literacy levels (Willis, 2009). The Dodd-Frank Act mandated the creation of the Consumer Financial Protection Bureau (CFPB) and the establishment of the Office of Financial Education as federal agencies that are tasked with the development of financial literacy programs (Hastings et al., 2013). In response to national directives, state-level education departments and educational organizations such as the JumpStart Coalition for Personal Financial Literacy were developed and offered programs in communities across the country (JumpStart Coalition for Personal Financial Literacy, 2017; Pennsylvania Department of Education, 2016). This national movement to incorporate financial literacy into educational programs has also led to a focus on financial literacy in service-learning programs in colleges and universities. In particular, given the relevance of topics related to core curriculum content in finance, accounting and economics, financial literacy service-learning programs are a common area-of-focus in undergraduate business programs (Hagedorn, Schug, & Suiter, 2016).

The rise of financial literacy programs is complemented by trends showing a growing attention to service-learning as a common educational approach in

undergraduate business education. For undergraduate business programs, service-learning typically consists of students working on projects in areas related to their coursework in accounting, finance, management and marketing that is aimed at building capacity for a community partner. Course content objectives are taught through a combination of dynamic real world service project experiences and assignments that lead students to engage in critical reflection on how the service experience impacts their personal and professional development (Bryant, Schonemann, & Karpa, 2011; Godfrey, Illes, & Berry, 2005; Kenworthy-U'Ren & Peterson, 2005; Martin, 2015). A substantial body of literature documents significant increases in student learning outcomes from the skillful application of service-learning, including advances in cognitive, social, and leadership competencies (Bryant et al., 2011; Celio, Durlak, & Dymnicki, 2011; De Leon, 2014; Niehaus & Crain, 2013; Rama, 2011; Vogelgesang & Astin, 2000; Yorio & Ye, 2012).

A more advanced version of service-learning combines a traditional service-learning project with participatory action research to enable students to engage in service-learning projects while utilizing and developing research skills. Undergraduate research enhances students' critical thinking, problem-solving abilities, analytical abilities, content knowledge, and intellectual curiosity (Buff & Devasagayam, 2016; Levenson, 2010). Undergraduate research also improves students' professional skills, resumes, references, understanding of major, and college graduation rates (Buff & Devasagayam, 2016; Craney et al., 2011). Several studies of the impact of undergraduate research have demonstrated the benefits of conducting student research through service-learning, but surprisingly, this has been somewhat absent within the business education literature (DeHaven, Gimpel, Dallo, & Billmeier, 2011; Gray, Galvan, & Donlin, 2017). Furthermore, research on financial literacy outcomes is particularly relevant as academics are increasingly calling for more critical financial literacy research (Bay, Catasús, & Johed, 2014; Fernandes, Lynch, & Netemeyer, 2014; Mandell & Klein, 2009).

The current research on the impact of financial literacy documents mixed results regarding the efficacy of financial literacy education and an overarching need for more research on the development of innovative approaches to financial literacy and the measurement of financial literacy outcomes. Reviews of the impact of educational programs on financial literacy by Gale and Levine (2010) and Hastings et al. (2013) show both significant and non-significant results in learning outcomes for participants after going through financial literacy programs. Fernandes et al.'s (2014) meta-analysis found that financial literacy intervention explain 0.1% of variance in financial behavior; however, the researchers observed that many interventions did not include enough details on methodology to code for the influence of extraneous variables that could influence results (such as a detailed assessment of the participants' prior financial knowledge). DeLaune et al. (2009), Hagedorn et al. (2016), and Rosacker et al. (2009) documented positive improvements in financial literacy test scores following intervention. Lusardi et al. (2010) observed a significant correlation between financial literacy and educational attainment. The JumpStart survey did not find significant results between high school students receiving personal finance courses and those not receiving the course; however, students who played a stock market game did

significantly better than other students on the financial literacy exam (Mandell, 2008; Mandell & Klein, 2009). In response to the mixed results, Mandell (2008) recommended additional research on the quality of financial literacy education and the systematic identification of best practices in financial literacy programming. There is a need for more research on the outcomes of financial literacy as current studies lack methodological rigor and consensus regarding validity of measurements (Brunstein et al., 2015; Fernandes et al., 2014).

A Program in Leadership and Ethics for Undergraduate Business Students

Financial literacy is a viable topic for undergraduate business education, particularly in educational programs that take an experienced-based learning approach. The University of Pittsburgh's College of Business Administration developed a unique a 16-credit Certificate Program in Leadership and Ethics (CPLE) since 2004. There are typically 30-40 students who pursue the program each year, as students apply to the program in the second semester of their freshman year and go through the program as a cohort starting in the first semester of their sophomore year. Students must be enrolled in the College of Business Administration in order to apply for the program and students from all majors within the business school are eligible. The CPLE uses a competency-based approach focusing on student development across five key areas: ethical awareness and decision making, relational leadership, high impact communication, project team management, and civic/social engagement.

The interface between leadership and ethics is the distinctive content feature of the CPLE and each of the five required courses have an experience-based learning component through a service-learning project in which students do various class projects for clients from businesses, alumni, university offices, and community organizations who are involved in various local communities all throughout the City of Pittsburgh. The program is based on the assumption that an emphasis on leadership, without proper consideration of ethics, will not generate leaders who approach their roles with a sense of responsibility and accountability. By the same token, an emphasis on ethics, without proper consideration of leadership, will not produce leaders with the necessary tools to develop and implement their vision and understanding of ethics. The certificate offers undergraduate business students an integrated and sustained program of study into the relationship between leadership and ethics, and contributes to a student's preparation for a career in business by providing hands-on experience into the complex nature of ethical leadership in modern business environments. The program's pedagogical strategy reflects models of service-learning (Eyler, 2002) and Kolb's (1984) theory of experiential learning. The use of an experiential learning approach has also been cited as an effective tool for teaching ethics in business management curriculum (Laditka & Houck, 2006). The CPLE curriculum is designed so that students go through an experience-based exposure to ethics and leadership in different organizational settings in the five required courses.

One of the five required courses in the CPLE is *Service Learning in Organizations*, in which participants work in small teams (3-to-5 students) of consultants on projects with clients (local businesses, alumni, community organizations, university offices, etc.) who are doing interesting work in the community. The students spend the first half of

the semester in a traditional academic format learning principles of servant leadership that they apply to themselves in a personal reflection paper and a mid-term examination. In the second half of the course, the students work in their project teams and are expected to provide value for their clients in particular areas-of-expertise that are appropriate for second semester sophomore business students, such as social media planning, benchmarking and best-practices research, market segmentation analysis, and program needs assessments. The course finishes with students writing a second personal reflection based on peer feedback from the project experience.

Service-Learning with an Emphasis on the Measurement of Community Impact

A service-learning course of second semester sophomore business students reflects several of the fundamental challenges to service-learning. While there are many pedagogical tools and techniques available to promote the students' learning outcomes, the initiative must take into account the basic challenge of ensuring that the service-learning exercise is actually achieving democratic and social justice outcomes for the community (Kliewer, 2013; Meens, 2014; Mitchell, 2013). Service-learning has a natural tension between the importance of delivering value to members of local communities while meeting the learning objectives of the program within the greater aim of generating civic engagement and properly reflecting relevant social justice matters (Morton & Bergbauer, 2015).

Interestingly, the high level of emphasis on self-reflection (Kolb, 1984) and personal leadership development in an effective service-learning project can actually lead to a disconnect between the academic work in the course and the impact of the project on the community (Eyler & Giles, 1999). The impact on the community can be less clear (Sandy & Holland, 2006), particularly given the fact that a class service-learning project might have clearly defined expectations and duties for the students, with the community simply being framed as the target of the service project or client of the learning activity. The educational setting can actually create a context in which students can focus heavily on tasks and assignments that push their individual and team leadership development, but without ultimately holding themselves accountable for the impact of the project on the community. While it is laudable to state that the participants need to have some level of concern for the impact of the project on the community, we contend that this commitment to community impact should be built into every stage of the project, from design and planning to implementation and evaluation.

The growing body of literature on participatory action research (Giles, 2014; Lewis, 2004; Marullo & Edwards, 2000; Reardon & Shields, 1997) is one of the most useful models for designing a service-learning project that has an emphasis on the impact of the project on the community. In this model, student participants work in a community-oriented research project that facilitates ongoing dialogues among the students and community stakeholders to ensure that the needs and interests of specific actors in the community receive attention throughout the duration of the research project. As such, it is not enough for a group of business students to simply deliver a service event or recommend a software program for a community entrepreneur. Instead, the students must engage project stakeholders as active participants throughout every stage of the research project. The focal point is to engage community members directly through

collaborative work between the students and community members over the course of the entire project (Hardina, 2006). It is also important to understand ethics within a realistic context that is dynamic, complex, and does not confirm to an easily solved problem or dilemma.

A Participatory Action Research Project on Financial Literacy

Service-learning initiatives in undergraduate business programs have great potential for participatory action research projects, as the fundamentals of business administration can have value for community partners who are already doing work in local communities. A new entrepreneur could benefit from a social media plan that marketing students develop to target an underserved consumer segment. Alternatively, for accounting students with a background in audit, a small non-profit organization could benefit from a review of cash management and reconciliation practices. In a similar vein, one of the business school's alumni approached the CPLE faculty with a request for assistance from students who have a strong finance or accounting background for a spring 2017 financial literacy education event for students in the City of Pittsburgh's Public School system (PPS). This request soon evolved into a financial literacy project for one of the student consulting teams in the CPLE *Service Learning in Organizations* course. In the course, there are typically 5-to-7 different client projects, each with a specific area-of-focus for the respective client. Three of the students in the course selected this project and worked on an agreed upon set-of-deliverables that had to be completed by the end of the spring term. The student team met with the client and the client's partners in PPS and agreed on a project to design the financial literacy curriculum of the event, and then measure the impact of the event on the PPS student participants' knowledge of financial literacy. The student team had milestones in planning, implementation, and assessment that required ongoing communication with the client from mid-February through the final client presentation in April.

Financial literacy is a strong fit for a participatory action research project, since a program in which undergraduate business students provide high school students with information and perspectives to enhance financial literacy is a focused form of youth mentoring. The undergraduate business students utilize their expertise in financial matters to take ownership for the financial literacy learning outcomes of high school students. The literature on youth mentoring programs as a form of service-learning shows how this area has the potential to become as an excellent tool for community and civic engagement (Brady & Dolan, 2009). The idea of the undergraduate students taking ownership for the financial literacy outcomes of the participants actually "raised the stakes" of the project, in that the undergraduate business students quickly learned that they could not simply appear at an after school event and expect to have an impact on student learning. The student team faced a number of compelling matters throughout the course of the project that pushed them to remain in close contact with their client and the client's partners, from planning meetings on the design of the event, the long process of recruiting and engaging the high school student attendees, and in-depth discussions of expectations for the impact of the event and the set-of-tasks necessary to measure this impact.

Statistical Analysis on the Financial Literacy Outcomes of the Event

At the spring 2017 financial literacy event for PPS, the three undergraduate business students on the CPLE consulting team designed, administered, and tabulated a financial literacy pre-test and post-test. Thirty-eight high school students were included in the analysis. Participants included 9th, 10th, 11th, and 12th grade students from 8 high schools in the City of Pittsburgh School District. The CPLE consulting team ran descriptive analysis and calculated the means for the overall test score and the 12 individual question scores. Out of a possible 12 point score, the mean pre-test score for students was 5.37 and the mean post-test score for students was 8.08.

The pre-test and post-test each contained the same 12 questions covering the following topics: Question 1-credit agencies; Question 2-credit reporting; Question 3-credit card use; Question 4-credit card protection; Question 5-loan interest rates; Question 6-loan procedures; Question 7-student loans; Question 8-savings accounts; Question 9-trust funds; Question 10-fixed expenses; Question 11-variable expenses and Question 12-ideal credit score range. An Independent-Samples T Test was conducted by the authors using SPSS for each of the questions. The findings are presented in Table 1. Students scored significantly higher on the mean post-test (M= 8.08, SD= 3.129) than the mean pre-test (M=5.37, SD=1.496), t (72) = -4.801, p = .000. These results indicate the financial literacy event had an immediate impact on the financial literacy knowledge of the high school student participants in the specific areas-of-focus of the curriculum.

Table 1. Independent Samples T Test of Survey Questions

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Q1 - Credit Agencies	2.958	.090	-3.804	72	.000	-.408	.107
			-3.814	71.908	.000	-.408	.107
Q2 - Credit Reporting	2.262	.137	-6.317	72	.000	-.596	.094
			-6.339	71.589	.000	-.596	.094
Q3 - Credit Card Use	8.828	.004	-1.421	72	.160	-.126	.088
			-1.432	68.078	.157	-.126	.088
Q4 - Credit Card Protection	1.316	.255	-1.142	72	.257	-.133	.116
			-1.142	71.579	.257	-.133	.117
Q5 - Loan Interest Rates	.058	.810	-5.845	72	.000	-.567	.097
			-5.841	71.596	.000	-.567	.097
Q6 - Loan Procedures	29.578	.000	-3.194	72	.002	-.333	.104
			-3.219	68.313	.002	-.333	.104
Q7 - Student Loans	3.281	.074	.913	72	.364	.096	.106
			.910	70.243	.366	.096	.106
Q8 - Savings Account	.440	.509	-.331	72	.741	-.037	.110
			-.332	71.951	.741	-.037	.110
Q9 - Trust Funds	6.782	.011	-1.395	72	.167	-.154	.110
			-1.391	70.031	.169	-.154	.110
Q10 - Fixed Expenses	1.572	.214	-2.116	72	.038	-.241	.114
			-2.113	71.370	.038	-.241	.114
Q11 - Variable Expenses	6.054	.016	-2.375	72	.020	-.266	.112
			-2.369	70.489	.021	-.266	.112
Q12 - Ideal Credit Score Range	.664	.418	.428	72	.670	.050	.116
			.428	71.629	.670	.050	.116
Total Test Score	23.387	.000	-4.801	72	.000	-2.715	.565
			-4.719	49.603	.000	-2.715	.575

Significant, p < 0.05

For question "Q1-credit agencies," students performed significantly higher on the post-test (*M*=.75, *SD*=.439) than the pre-test (*M*=.34, *SD*=.481), *t*(71.908) = -3.814, *p* = .000. This suggests the financial literacy workshop improved students' knowledge regarding credit agencies. For question "Q2-credit reporting," students performed significantly higher on the post-test (*M*=.83, *SD*=.378) than the pre-test (*M*=.24, *SD*=.431), *t*(71.589) = -6.339, *p* = .000. The results suggest that the financial literacy workshop effectively increased students' understanding of credit reporting.

For question "Q5-loan interest rates," students performed significantly higher on the post-test (*M*=.78, *SD*=.422) than the pre-test (*M*=.21, *SD*=.413), *t*(71.596) = -5.841, *p* = .000. The score improvement in question 5 indicates that the financial literacy workshop enhanced students' knowledge of loan interest rates. For question "Q6-loan procedures," students performed significantly higher on the post-test (*M*=.83, *SD*=.378)

than the pre-test (*M*=.50, *SD*=.507), *t*(72) = -3.194, *p* = .002. The results indicate the financial literacy workshop adequately taught students about loan procedures.

For question "Q10-fixed expenses," students performed significantly higher on the post-test (*M*=.58, *SD*=.500) than the pre-test (*M*=.34, *SD*=.481), *t*(71.370) = -2.113, *p* = .038. The finding suggests the financial literacy workshop improved students' knowledge of the financial topic of fixed expenses. For question "Q-11-variable expenses" students performed significantly higher on the post-test (*M*=.56, *SD*=.504) than the pre-test (*M*=.29, *SD*=.460), *t*(72) = -2.375, *p* = .020. The score improvement suggests that the financial literacy workshop increased students' knowledge concerning variable expenses. The results for the other questions were not statistically significant, which led the student consulting team to recommend a specific set of revisions for the instructional delivery of the next iteration of the financial literacy event. The student consulting team also recommended that the client expand the instruction beyond the workshop setting for the financial literacy topics in the areas of credit card use, credit card protection, student loans, savings account, trust funds, and ideal credit score range.

Educational Impact of the Project on Undergraduate Business Students

In addition to measuring the impact of the event on the financial literacy outcome of the high school student participants, the mutual learning effort between the undergraduate business students on the student consulting team and the high school students attending the event creates a unique learning opportunity. This is also consistent with other peer-based financial literacy and youth mentoring programs, as the high school student participants have the chance to benefit from the specific expertise that the undergraduate business students have developed with respect to the specific dimensions of financial literacy. While it is one thing for high school students to hear lectures on keeping good credit and managing their money using techniques from budgeting, it is another thing to interact with a group of slightly-older students who are well-versed in these topics and committed to delivering a memorable and impactful educational experience. In a similar vein, it is highly-beneficial for the undergraduate business students to be challenged to apply something that is well within their area-of-expertise in financial literacy in a way that can be applied to high school students who do not necessarily have the same level of knowledge and appreciation of the topic. These undergraduate business students have career aspirations in finance and as managers in organizations. This is a worthwhile exercise to focus on topics like this with an audience who has the potential to benefit from the topic, but requires an engaging and immersive exercise to demonstrate the concepts.

Conclusion

The implementation of a peer-based financial literacy program is a productive area for additional research. This type of participatory action research generates ongoing dialogues with project partners throughout the planning, implementation, and measurement of the event, as well as challenging the undergraduate business student team to be "on the ground" with the high school students both in terms of the content of the event and in terms of having them carry the measurement piece all the way through

to administering the pre- and post-test surveys, tabulating the results, and presenting these results to our partners with a plan for growing and improving the event and its impact in subsequent years. The student team does not merely deliver on a project and walk away. They have to remain invested and hand off a workable plan for our partners to move forward in future versions of the event.

The limitations of this exercise are that it is a one day program that is done outside of school, so everyone has to have reasonable expectations for what can be done – both in terms of the scale and scope of the event and in terms of the level of content that can be covered. This limitation extends to the measurement of the impact of the event, as the students can only realistically measure what impact the event had on the high school students that day. It is not feasible to expect an afternoon financial literacy event to fundamentally change financial literacy outcomes for the high school students. As such, it is not realistic to attempt to measure the long-term impact of this event on the high school students.

The example of this program can be used to develop financial literacy programs on other campuses. A peer-based program is promising because it creates shared value both for the high school students going through the program and the undergraduate business students who are designing the program and facilitating its curriculum. The clearly defined student roles in designing, implementing, and measuring the impact of the program creates a high level of individual and collective accountability for the undergraduate business student team.

This work also has implications for how we approach teaching complex and critical concerns such as ethics to undergraduate business students. Previous research is clear that teaching ethics within the classroom requires a focus relevant both to students and within the business or social context (McDonald and Donleavy, 1995). This suggests that experiential learning tools such as our participatory action research approach within the service-learning project provide an effective tool for making ethics more relevant. In fact, some research explicitly argues that teaching of ethics is most effective when an experiential learning framework is employed (Brinkman & Sims, 2001). Action-orientated experiential learning methods may present a particularly useful tool for teaching of ethics as this actively engages students in the learning process and increases students' awareness of ethical attitudes, values, and decision making in complex ethical situations (Sims and Sims, 1991). For undergraduate business students who must face ethical dilemmas within complex and dynamic work environments, the use of service-learning as an experiential learning tool may have unique advantages as it allows students to consider the competing pressures that ethical dilemmas provoke as well as how to find effective solutions within a safe classroom environment (Sims, 2002). Our financial literacy project and the work within the CPLE for the past 15 years provides additional evidence that experiential learning tools can be an effective way to build key competencies among undergraduate students as well as demonstrate the importance of recognizing and addressing ethical issues in the workplace and within society.

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Guided vs. Open-Ended Journals: A Comparison of Two Reflective Writing Models for Undergraduate Service-Learning Experiences

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ABSTRACT

Reflection is a key component for integrating meaningful collegiate service-learning experiences with a student's personal and professional growth. The purpose of this mixed methods study was to compare two types of reflective journal writing (guided and open-ended) utilized in undergraduate Communication Disorder courses. A comparison of pre- and post-Service-Learning Survey (SLS) data and reflective journal writing samples indicated value for both types of written reflection.

Service-learning acts as a bridge between classroom and community; it is a valuable tool to increase student learning (Molee, Henry, Sessa, & McKinney-Prupis, 2010.; Sedlak, Doheny, Panthofer, & Anaya, 2003; Warren, 2012;). A deeper understanding of course content is developed through service-learning by providing students opportunities to consider their experience and how it is relevant to their coursework and beyond (Ash, Clayton, & Atkinson, 2005; Hatcher, Bringle, & Muthiah, 2004; Molee et al., 2010). Bridging the gap between class content and real-world experiences is arguably one of the more challenging components in developing meaningful service-learning assignments; this connection is not automatic for students. For this reason, one of the key responsibilities for an instructor incorporating service-learning into collegiate courses is developing appropriate opportunities for meaningful reflection. Peters (2011) identified reflection as "the cornerstone of the service-learning experience." Reflection is deliberate thought regarding one's experiences; one considers the learning objectives driving the experience during reflection (Bringle & Hatcher, 2003).

While reflection is a significant component of the service-learning experience, criterion for reflection is challenging to quantify. Eyler, Giles, and Schmiede (1996)

developed "The Four C's" to help guide reflection practices within service-learning. The Four C's standards suggest that reflection is: *continuous* (ongoing; before, during and after experiences), *connected* (to both academic and intellectual experiences), *challenging* (helping students learn in a different manner), and *contextualized* (linking the experience with course content) (Eyler et al., 1996). Using these guidelines, several options exist for incorporating valuable reflection opportunities.

One method for including student reflection in service-learning experiences is journal writing (Collier & Driscoll, 1999; Mills, 2001). Journal writing allows students freedom and is a way for students to personalize their experiences and connections to class content (Bradley, 1995; Fisher, 1996; Mills, 2001). In addition, reflective journals demonstrate evidence of critical thinking (Sedlack et al., 2003); in particular, this is specifically documented within the Communication Disorders (CDIS) field (Chabon & Lee-Wilkerson, 2006; Goldberg, Richburg & Wood, 2006).

Various types of reflexive journal writing exist; one example of journal writing that can be used for reflection within service-learning experiences is a guided journal. For the purpose of this study, the guided journal was one in which students were assigned specific topics/prompts related to course content that they connected to their service-learning experience (Peters, 2011). Journal topics were presented to the students prior to the experience, so they were able to review the topics before interacting within the community. This format was implemented with the intent of guiding the students' experiences towards key components of the course in which they were enrolled.

Another form of reflective writing related to service-learning experiences is an open-ended journal. Within this study, open-ended journals required more active connections on the part of the student to link class content to his/her service-learning experiences. For open-ended journals, students were required to "keep double-entry journals in which they describe their service-learning experience, personal thoughts, and reactions on one side of a page and link those to the course concepts, readings, PowerPoint presentations, and other types of course content on the opposite side of the page" (Peters, 2011). This type of journal was implemented with the intent that students would independently relate their experiences to key concepts from the classroom.

Each of these reflective journal-writing conditions (guided and open-ended) were intended to positively impact student learning. Participation in service learning experiences utilizing these reflective writing opportunities was anticipated to result in greater self-efficacy, or confidence in one's capabilities to understand and apply course content. Student self-efficacy towards class content was considered in the current study, as self-efficacy is related to student motivation and achievement (Bandura & Locke, 2003). Those with higher self-efficacy are more motivated to work harder, for longer, and handle related situations better emotionally than those with lower self-efficacy for the task at hand (Zimmerman, 2000). The goal of each of these service-learning courses was for students to not only learn concepts discussed in class, but to also witness and apply information from class about the topics of interest (i.e. normal language development, adolescent language development and disorders). With greater

self-efficacy of course content, students would likely be more motivated to put forth the effort required to comprehend and apply concepts from class. Demonstrating higher post-service learning experience self-efficacy for course content would indicate greater achievement as related to comprehension and application of course concepts.

The purpose of this mixed methods study was to compare the use of two types of reflective journal writing assignments for service-learning experiences in undergraduate Communication Disorders classes. It was hypothesized that:

a.) Reflective journal writing would have a positive impact on students' self-efficacy towards course content.
   a. It was anticipated that students engaged in service learning experiences using a reflective writing journal would demonstrate improved course content self-efficacy from pre- to post-service learning experience, as this learning opportunity would lead to students feeling more confident in their understanding of course concepts following the opportunity to see the concepts in action (service learning experience) and actively reflect upon these experiences (journal writing).
b.) Students would perceive open-ended journals as more beneficial towards learning as compared to those utilizing guided journals.
   a. It was anticipated that students assigned to the open-ended journals would indicate greater learning as this type of reflective writing was believed to foster more independent, critical thinking as compared to the guided journal format (where topics were pre-selected for participants).
c.) Students' reflective writing would be stronger and more closely related to course concepts when utilizing the guided journal format.
   a. It was anticipated that students assigned to the guided journal writing condition would demonstrate writing more closely aligned with course content as they were provided specific topics to write about and apply to their service learning experiences (as compared to the open-ended journal condition where students were responsible for making these connections independently).

Method

Participants

The current study received Institutional Review Board (IRB) human subject approval prior to recruitment of participants. A total of 47 undergraduate college students at a small, Midwest university voluntarily participated in this study; one participant was removed from the study following limited contributions (i.e. an incomplete journal assignment). Participation required students to be enrolled in one of two CDIS courses with service-learning components (Course 1: Normal Language Development; Course 2: Adolescent Language Development and Disorders); the same instructor taught both courses. The majority of the participants were female (97%), and

they ranged from sophomore to graduate-level status. All students enrolled in the two CDIS service-learning courses were invited to participate; students were not required to participate in the study, however, the service-learning experience and written reflections were required for successful completion of the courses. See Table 1 for a summary of participant demographic information.

Table 1

Participant Demographics

	Gender (% female)	Major field of study (% CDIS)	Under-class Enrollment (% freshman, sophomore status)	Upper-class Enrollment (% junior, senior or graduate status)
Course 1 (n = 28)	100% (n=28)	92% (n = 26)	18% (n = 5)	82% (n = 23)
Course 2 (n = 19)	94% (n = 18)	100 (n = 19)	0% (n = 0)	100% (n = 29)

Procedures

At the beginning of the semester, participants completed the Service-Learning Survey (SLS; see Appendix for SLS items) which included a self-efficacy rating scale demonstrating student confidence regarding concepts from the class, as well as open-ended questions intended to identify expected learning outcomes, and attitudes towards service-learning prior to this experience. Expectations for the service-learning assignment (i.e. placements, expectations, time commitments) were established, and then participants were randomly assigned to a reflection assignment (guided or open-ended journal writing) with explanation and examples demonstrating each type of reflection and clarification regarding reflection assignment expectations (see Table 2 for directions provided to participants for each journal writing condition). Following random assignment, 22 participants were assigned to complete guided reflection journals (Course 1: n = 12, Course 2: n = 10; see Table 3 for examples of guided journal topics provided), while 25 participants were assigned to complete open-ended reflective journals (Course 1: n = 17, Course 2: n = 8).

Over the course of the semester, students completed their service-learning assignments and engaged in reflective writing utilizing their assigned format. Following completion of assigned service-learning hours and electronic submission of reflection writing assignments at the end of the semester, students again completed the SLS (see

Appendix for survey items). The post-service-learning experience SLS included the original self-efficacy scale showing participants' confidence in course content, as well as open-ended questions demonstrating knowledge gained from the experience and participants' impressions of the experience. In addition, the post-service-learning experience SLS included a reflection rating which included 4 statements; students responded to these items using a five-point scale ranging from Strongly Agree to Strongly Disagree (see Appendix for reflection rating items). The statements (and scale, in general) were based on the "Four C's" (Eyler et al., 1996) of service-learning reflection and required students to consider the *continuity*, *connection*, *challenge* and *contextualized* quality of their assigned reflective journal assignment. This data informed the researcher of participants' assessment of the assigned reflective writing assignment and allowed for direct comparison of participants' impressions from each condition (open-ended and guided journal writing).

Table 2

Directions for Each Journal Writing Condition

Guided Journal Writing Directions	"Your particular journal assignment involves responding to a variety of topics posed by the instructor. You will want to familiarize yourself with these topics prior to visiting your community organization in order to observe/pay special attention to topics posed for your journal entries. Following each visit within the community agency, you will then be required to complete journal entries to receive credit for this portion of the service learning assignment."
Open-Ended Journal Writing Directions	"Your particular journal assignment involves completion of a double-entry journal. This requires you to complete your journal in a T-note style where one side of your document will include a summary of your observations from each visit, and the opposite side will link comments you made to class content. This format encourages connections to be made between classroom discussions, lectures and the textbook to actual individuals you interact with throughout the community."

Table 3

Sample Topics Provided to Participants Assigned to Guided Journal Condition

Course 1 Sample Topics	Course 2 Sample Topics
When interacting with children who are learning to use language to communicate, what do you see driving their efforts? Do you see this development from more of an emergentist view or a functionalist view? Explain and provide examples from your interactions.	If you were to complete an assessment on one of the adolescent's that you have observed, what would it include? (What formal/informal assessment tools would you utilize?)
Based on your interactions, identify which model of language development (or components of various models) makes the most sense to you now. Identify examples of what you saw in the children to lead you to defend your opinion.	Share how your adolescence compares to that of the adolescents that you have worked with over this semester. Think about the different areas of development that we have discussed, different experiences you may have had, etc.
With the infant population, identify the level of intentionality witnessed in one (or more) of the children. Describe what you saw/experienced that lead you to this conclusion.	Analyze your experience this semester. What have you enjoyed and learned from this experience? What would you change? Any suggestions for me should I use this assignment in future classes?
Did you find yourself using infant-directed speech (IDS) when working with the infant population? How about other adults in the area? What did you notice about the use of IDS and how this impacts the infants? Include what was said and a description of how it was said.	What new ideas, opinions, thoughts do you have about working with the adolescent population since participating in this service learning experience?
What preschool language-learning strategies did you witness when interacting with this population? Provide specific examples.	Based on your experiences with this opportunity, what are some of the biggest challenges present when working with adolescents?

Note. Course 1 placements included local developmental daycare centers where students assisted teachers in daily tasks and engaged with children of varying ages allowing them to witness developmental aspects of communication. Course 2 placements included local community-based organizations which provide services for disabled individuals and/or at-risk youth and adolescents; this opportunity supported these community services while allowing students the opportunity to engage with and provide support for adolescents (while also observing their development and communicative skills).

In addition to pre- and post-SLS data, participants' reflective journal writing entries were analyzed. Two raters (the researcher and a graduate assistant trained to analyze the writing samples) assessed each participant's journal entries using a rubric created for this study (see Table 4 for rubric content). The Service-Learning Reflective Writing Rubric (SLRWR) was used to analyze each of the students' journal entries (10 total required for each class, reflective journal assignment) according to four areas: 1.) Course Content (relationship to concepts from class), 2.) Concept Clarity (clear definition of concepts with thorough explanation provided), 3.) Examples (specific examples used to express ideas), and 4.) Overall Writing (appropriate writing mechanics used throughout). Ratings were completed on all journal entries for each participant following the completion of the course.

Table 4

Service-Learning Reflective Writing Rubric

Journal	1	2	3	4	5	6	7	8	9	10
Course Content: **2 points**: Relates directly to concept(s)covered in class **1 point**: Relates indirectly to concept(s) covered in class **0 points**: Does not relate to concept(s) covered in class										
Concept Clarity **2 points**: Content clearly defined, thorough explanation **1 point**: Some content clearly defined, lacking thorough explanation **0 points**: content not clearly defined										
Examples Provided **2 points**: specific examples used to express ideas **1 point**: limited examples used to express ideas **0 points**: no examples provided										
Overall Writing **2 points**: appropriate grammar, spelling, punctuation, etc. used throughout **1 point**: 1-3 errors in any of the above areas **0 points**: more than 3 errors										

Results

Self-Efficacy in Course Content

Participants in each course assigned to each journal condition completed pre- and post-service-learning self-efficacy scales related to their confidence with course content. The self-efficacy scale (adapted from Bruning, Dempsey, Kauffman, McKim, & Zumbrunn, 2013) utilized a 100-point scale in which participants rated their confidence towards key aspects of course content. In order to compare participant self-efficacy ratings between the two courses, repeated-measures ANOVA were completed. This analysis revealed there was not a significant difference between pre- and post-service-learning experience measures of student self-efficacy in course content for each class [$F(1, 42) = 3.122$, $p = .085$]. Table 5 provides combined mean pre- and post-service-learning experience self-efficacy ratings.

Table 5

Mean Combined Pre- and Post-Service-Learning Experience Self-Efficacy Ratings

Pre-Service-Learning (n = 46)	Post-Service-Learning (n = 46)
M (SD)	M (SD)
59.13 (17.21)	81.12 (9.71)

Additional analyses were conducted to further explore the data. Post hoc Bonferroni tests indicated that post-test ratings of self-efficacy were significantly higher than pre-test ratings in both classes (Course 1: Mean Difference = 25.89, $p = .000$; Course 2: Mean Difference = 15.20, $p = .0020$). Table 6 presents pre- and post-service-learning experience mean self-efficacy ratings across courses.

In addition, post hoc Bonferroni tests indicated pre-test self-efficacy ratings were significantly higher in Course 2 (Mean difference = 14.9, $p = .004$). The post-test self-efficacy ratings in each class, however, were not significantly different (Mean Difference = 4.216, $p = .148$). There was also no significant difference between post-test self-efficacy ratings when considering journal condition (Mean Difference = 5.202, $p = .069$). Table 7 includes mean post-service-learning experience self-efficacy ratings by course and journal writing condition.

Table 6

Mean Pre- and Post-Service-Learning Self-Efficacy Ratings by Course

Course 1 Pre-Service-Learning (n = 28)	Course 1 Post-Service-Learning (n = 28)	Course 2 Pre-Service-Learning (n = 18)	Course 2 Post- Service-Learning (n = 18)
M (SD)	M (SD)	M (SD)	M (SD)
53.17 (17.79)	79.75 (7.87)	68.41 (11.45)	83.26 (11.97)

Table 7

Mean Post-Service-Learning Experience Self-Efficacy Ratings by Course and Condition

Course 1 Open-Ended Journal (n = 16)	Course 1 Guided Journal (n = 12)	Course 2 Open-Ended Journal (n = 8)	Course 2 Guided Journal (n = 10)
M (SD)	M (SD)	M (SD)	M (SD)
82.76 (6.16)	75.74 (8.35)	85.31 (10.92)	81.62 (13.09)

Reflection Ratings

Participants' post-service-learning survey responses included reflection ratings indicating how the students perceived the quality of their reflective journal assignments. One-way ANOVA were conducted to compare participants' feelings regarding the reflective nature of their assigned journal format across journal types (open-ended vs. guided). This analysis revealed no significant differences between the means of student reflection survey ratings for the two journal types [$F_{(1, 44)} = .023$, $p = .881$]. Table 8 includes mean reflection ratings by journal condition.

Table 8

Mean Reflection Ratings by Journal Condition

Open-Ended Journal (n = 24)	Guided Journal (n = 22)
M (SD)	M (SD)
1.55 (.44)	1.53 (.36)

Note. Post-SLSs included a 4-item self-reflection section regarding the quality of participants' reflective journal assignment. Response options were provided: Strongly Agree (1), Agree (2), Neutral (3), Disagree (4), Strongly Disagree (5). The low averages across journal condition indicate that participants primarily indicated both reflective journal assignments offered continuous, connected, challenging and contextualized opportunities for reflection.

Writing Quality

SLRWR ratings for journal writing quality (e.g. Course Content, Concept Clarity, Examples Provided, and Writing Skills) from both raters were compared to insure reliability. Two-way mixed effects model intraclass correlation coefficients for the SLRWR ratings indicated very high agreement between the two raters (Cronbach's alpha = .975).

One-way ANOVAs were conducted to compare the two raters' assessment of participants' journal entries across assigned journal type conditions (open-ended vs. guided). This analysis revealed no significant differences between the means of each variable for the two journal types [Course Content, $F(1, 45) = .740$, $p = .394$; Concept Clarity, $F(1, 45) = .183$, $p = .671$; Examples Provided, $F(1, 45) = .097$, $p = .757$; Writing Skills, $F(1, 45) = .346$, $p = .559$]. Table 9 provides the combined raters mean writing quality ratings for each SLRWR item.

Table 9

Combined Raters Mean Writing Quality Ratings

Course Content		Concept Clarity		Examples Provided		Writing Skills	
Open-Ended Journal	Guided Journal	Open-Ended Journal	Guided Journal	Open-Ended Journal	Guided Journal	Open-Ended Journal	Guided Journal
M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
16.28 (4.20)	15.22 (4.17)	14.70 (4.21)	15.20 (3.82)	15.42 (3.80)	15.77 (3.95)	14.82 (3.65)	14.14 (4.32)

Note. Course Concept was rated on a 0-3 scale (3 = relates directly to concepts covered in class, 0 = does not relate to concepts covered in class). *Concept Clarity* was rated on a 0-2 scale (2 = content clearly defined, thorough explanation, 0 = content not clearly defined). *Examples Provided* was rated on a 0-3 scale (3 = specific examples used to express ideas, 0 = no examples provided). *Writing Skills* was rated on a 0-2 scale (2 = appropriate grammar, spelling, punctuation, etc. used throughout, 0 = more than three errors). Maximum scores for 0-3 scales = 30; maximum scores for 0-2 scales = 20.

Student Reactions

The SLS (pre- and post-service-learning experience) contained open-ended questions aimed at capturing students' beliefs regarding service-learning before and after their experiences. Their responses to questions regarding what they expected to learn from their experience as well as perceived benefits and drawbacks of service-learning were transcribed, coded and emerging themes were identified. Two raters reviewed the qualitative data to insure validity; each individually reviewed and coded the responses, then the two met together with their results and generated common themes. When disagreement occurred, they discussed their differences and reviewed the data and their coding until consensus was achieved. Prior to service-learning experiences, participants from each course, and both journal conditions expressed commonalities. Following the experience, however, differences between participants varied more by course than by journal condition. The themes are explained in the following sections; Table 10 provides a summary of the themes and support for each.

Table 10

Summary of Student Reactions

Theme	*Interpretation*	*Journal Condition*	*Supporting Evidence*
"You can only learn so much from a book"	Participants reported enhanced learning from the service-learning experience	Both journal conditions across classes reported greater understanding of course content.	Course 1, open-ended journal: "I learned about how children develop by seeing it with my own eyes. It helped to see it while discussing it in class."
		Course 2, across conditions expressed increased ability to interact with target populations as evidence of enhanced learning from this assignment	Course 2, guided journal: "This experience gave me more confidence in working with this population."
"Learning is maximized"	Participants reported benefit from the service-learning experience	Both journal conditions across classes reported application of course content as a benefit of this assignment.	Course 1, open-ended journal: "The biggest benefit for me was being able to relate what we were talking about in class to real life experiences."
		Course 2, guided journal condition reported benefit in developing relationships and helping others.	Course 2, guided journal: "We can discuss a lot in class, but I think the true learning occurs out in the real world. When you connect the two, learning is maximized."

"The downfall is trying to fit it into my busy schedule…."	Those reporting drawbacks related to this assignment were primarily time/schedule-oriented issues.	Course 1, across journal condition reported scheduling frustration.	Course 1, guided journal: "I would think it would be most beneficial to have students participate in the service-learning as it would coincide with each chapter."
	Others reported no drawbacks associated with this assignment.	Course 1, across journal condition (predominately open-ended journal condition) reported no drawbacks to this experience.	Course 1, open-ended journal: "I don't believe there were any downfalls to the hours or the journaling. I really enjoyed my time there."
		Course 2 reports varied greatly. Some guided journal condition indicated time/schedule constraints; some open-ended condition reported limited access to the target population within their experience.	Course 2, open-ended journal: "The only downfall is that some experiences did not allow for interactions with adolescents. This made it difficult to draw connections back to class in the journals."

"You can only learn so much from a book" Prior to their service-learning experience, participants across class and journal type expressed similar perceived learning from such an experience. In general, participants expressed belief that service-learning experiences would enhance their comprehension of course material and provide them exposure to the target population relevant to the course content (i.e. adolescents). One participant from Course 1, reported, "I think that I will learn a lot about how kids should be speaking at a certain age. I haven't taken any classes on this yet, so seeing it firsthand should be very helpful. You can only learn so much from a book. I believe you need to experience most of this as well."

As predicted, post-service-learning experience SLS results indicated that participants from both classes and both journal type conditions reported that service-learning lead to greater understanding of course content. One student in Course 1 assigned to the open-ended journal condition explained, "I learned about how children develop by seeing it with my own eyes. It helped to see it while discussing it in class."

Another common theme among Course 1 participants following the experience indicated that students were better able to apply information from class due to their service-learning experience. To illustrate, one student in the guided journal condition expressed, "From this service-learning experience I gained a better understanding…seeing the examples in real-life situations showed me how complex it [language development] really is."

Course 2 participants, however, reported more of an emphasis on the value of learning to interact with the target population during their service-learning experience. One student in the guided journal condition describe this by stating, "I have a better knowledge now of how to communicate with adolescents. I was also able to view how adolescents interact with each other."

While there were not noteworthy differences across journal type condition for either class, it seems that this difference between classes is likely due to the nature of each of these courses. Course 1 focused on typical language development of children and it makes sense that the students from this class appreciated seeing this firsthand in their service-learning experience. Course 2, on the other hand, was related to adolescent language development and disorders; while these students valued the experience and how it deepened their understanding of course content, another concept stressed in this course is the need for exposure and experience with this population. Therefore, the instructor of this course (the researcher) may have influenced this response from the participants in Course 2. One student expressed this exact sentiment in her response, "I learned that my beliefs about adolescents was not accurate. Honestly, I wanted no part of adolescents, but now I feel I could work with them and be confident in what I'm doing."

"Learning is maximized" Again, prior to service-learning experiences, participants across courses and journal type responses were primarily in agreement. Students' perceived benefits of service-learning primarily concerned enhanced learning and the opportunity to apply class concepts in the real world as well as the opportunity to gain community involvement. This was captured in the following students' pre-SLS results: "The biggest benefit is applying the information you learn in the classroom to real world scenarios…. this should give excellent practice for observation and connecting classroom material to what we see at our service-learning site" (Course 1 student); "I believe there are substantial benefits of participating. Service-learning teaches us about interacting with different populations and allows us 'to give back' to the community (Course 2 student).

Once again, participants' beliefs were confirmed following their service-learning experience, as post-experience SLS responses indicated that students from both classes and journal conditions believed service-learning had a positive impact on their learning by allowing them to apply course knowledge in the field. One participant from Course 2 assigned to the guided journal condition explained, "We can discuss a lot in

class, but I think the true learning occurs out in the real world. When you connect the two, learning is maximized." This was further explained by student in Course 1, guided journal condition, "The benefits were immense. Being able to communicate and try different techniques from class was very educational and helped me absorb the information better. The experience was practical and gave us the opportunity to gain confidence interacting with kids and hints on what to look for to monitor their language development."

A subtle difference emerged in students' opinions regarding what they learned from their experience, however. Students in the guided journal writing condition in Course 2 differed from others in this regard, as a handful of them expressed educational value in developing relationships and offering help to others through their service-learning experience. The other participants' (all of Course 1 and the open-ended journal condition group of Course 2) responses addressed the learning and application that occurred. It is unclear as to why this difference emerged; however, the researcher believes that the service-learning placements within the community may have fostered this belief more in Course 2 than in Course 1. Furthermore, within Course 2, differences between the journal conditions may have lead to this difference as well. The guided journal condition may have required less active thinking during the experience (as reflective writing topics were provided), and allowed the participants in this condition to relax and relate more to others throughout their experience. The open-ended condition, however, may have required more active thinking, as the participants in this condition could have been more focused on finding connections to class during their experience as opposed to truly engaging with others throughout their experience (as their reflective writing topics were not provided).

"The downfall is trying to fit it into my busy schedule…." Participants approached service-learning assignments positively from the beginning of the semester. Initial concerns about these assignments were primarily time-oriented across class and journal condition. One student in Course 2 indicated, "The downfall is trying to fit it into my busy schedule, but it will be worth it in the end." Some participants in each class initially thought that there would be no drawbacks to service-learning, and others expressed varied concerns such as not having enough time during the experience, and the quality of learning not being as strong when "required" to complete service-learning tasks.

Following service-learning experience, the responses from all participants in either class and journal condition were quite variable. Little consensus was found; this is where the most differences emerged in student responses. Participants in Course 1 across journal conditions indicated scheduling frustration, as their service-learning experience was not aligned with the schedule of the course. One indicated, "We didn't learn the material with the visits so we would have to remember or go back in our notes." While this was inconvenient, from the participants' perspective, this was

beneficial for extending learning, as intended by the instructor. Several participants within Course 1 indicated that there were not any drawbacks to this experience; there were more within the open-ended journal condition that expressed this belief. One stated, "I don't believe there were any downfalls to the hours or the journaling. I really enjoyed my time there." Less criticism from this group (open-ended journal condition) may be due to the fact that they were not restricted by provided writing prompts throughout the experience; this freedom may have enhanced the quality of their experience.

Participants within Course 2 indicated varied limitations regarding their experience; a few within the guided journal condition reported scheduling/time constraints, and a few from the open-ended journal condition reported frustration due to limited access to the target population within their service-learning experience. This was indicated by comments such as, "The only downfall is that some experiences did not allow for interactions with adolescents. This made it difficult to draw connections back to class in the journal." Overall, there was great variability in the responses regarding drawbacks to service-learning, and most responses were truly related more to issues with the course as opposed to actual issues with service-learning.

Discussion

The purpose of this mixed methods study was to determine if any substantial differences existed between open-ended and guided service-learning reflective journal assignments. Through the use of quantitative and qualitative methods, a variety of data was collected and analyzed to explore and explain potential differences between these two writing formats.

Self-Efficacy in Course Content

Prior to this study, it was hypothesized that reflective journal writing, in general, would positively impact students' self-efficacy towards course content. This hypothesis was confirmed, as each class showed significant gains in self-efficacy from pre- to post-service-learning experience despite the fact that there were no significant differences between the two journal types. Furthermore, neither reflective journal format was related to greater gains in students' confidence with course content. Participants across class and journal condition also reported greater confidence interacting with the target populations for each class. These findings indicate that both reflective journal types had a positive impact on students' self-efficacy related to course materials.

This finding is important, as one's self-efficacy, or confidence in domain-specific success, has incredible implications for education (Bandura, 1986, 1993). Self-efficacy beliefs have been identified as significant contributors toward student motivation and achievement (Bandura & Locke, 2003). Individuals with higher self-efficacy are more motivated to work towards their goals, which results in better outcomes. With this in mind, it makes sense that educators would strive for improved efficacy among students

as related to course objectives. The results from this study indicate that service-learning experience with reflective open-ended or guided journal assignments may help establish such domain-specific confidence in students potentially leading to greater motivation and outcomes within the course.

Reflection Ratings

Participants assigned to the open-ended journal assignment were expected to perceive greater reflective quality in their assignments due to the demands for more independent thinking (less structure) within their assignment. However, participants' responses to post-service-learning reflection rating items related to the quality of reflection within assigned journal types revealed no significant differences between open-ended and guided journal participant ratings. Again, the ratings from both classes showed students experienced positive opportunities for reflection through their assigned journal type, indicating that both open-ended and guided journal writing offered *continuous*, *connected*, *challenging* and *contextualized* reflection. With these ratings in mind, again, instructors should consider the use of open-ended and/or guided reflective journal writing assignments within service-learning courses in order to enhance student experiences.

Writing Quality

The quality of participant writing also demonstrated support for each type of journal. Two raters assessed participants' writing using the SLRWR; the average rating across the four categories (e.g. Course Content, Concept Clarity, Examples Provided, and Writing Skills) did not differ significantly between the two journal types. It was hypothesized that students' writing would be stronger within the guided journal format as more structure was provided regarding content. However, the data does not reflect this difference, and again, speaks to the potential value in both journal types being used for reflective service-learning writing assignments. Conclusions from these results suggest the importance of reflective journal writing, whether open-ended or guided, as a positive component for instructors of service-learning courses to implement.

Qualitative Findings

As previously mentioned, participants reported increased self-efficacy for course content as well as enhanced learning through their service-learning experience. Additional themes captured in this qualitative data included: "You Can Only Learn So Much From A Book" (participants indicated the service-learning experience added to their learning in a positive way), "Learning is Maximized" (participants shared that the service-learning experience allowed them to apply information from class to the real

world), and "The downfall is trying to fit it into my busy schedule…" (participants revealed few limitations to the service-learning experience beyond time constraints). When closely examining this data for differences across class and journal condition, a few class-oriented differences surfaced (related to the content and focus of the class) yet there were no drastic contrasts between participants assigned to open-ended versus guided journal writing assignments. In general, participants valued the experienced and reported the service-learning experience as a positive influence on learning. Other than time constraints and scheduling issues, very few limitations of the service-learning experience were reported, and several participants across class and journal condition reported that there were no drawbacks related to the service-learning experience. In general, participant responses suggest that incorporating reflective journal writing in either open-ended or guided format positively contributed to the service-learning experience.

Limitations

While this study provides valuable information regarding the use of reflective journal writing in undergraduate Communication Disorders service-learning courses, there are limitations to the findings. This study includes a limited sample as far as size (n = 47) and diversity (97% female, 95% academic major in Communication Disorders, etc.) are considered. Furthermore, the results of this study are limited as there was not a control group; having a control group would help clarify if students' beliefs (specifically self-efficacy ratings) and learning were impacted by the reflective journal condition alone, or if participation in the class without such experience would have lead to similar findings. Each journal type has its own limitations as well; guided journals are limited in that the topics provided may not align with students' experiences, and open-ended journals lack structure that insures key course concepts will be considered during reflection. Furthermore, the quality of students' service-learning experiences was also a limitation within this study in that the experience did not always clearly align with course content, requiring students to struggle to complete their reflective journals in a manner that demonstrated knowledge of course concepts.

Future research in this area should explore results across larger samples with more diverse students (across gender, location, field of study, courses, etc.) and the use of a control group to provide more concrete evidence supporting the use of open-ended and/or guided reflective journal use within service-learning experiences.

Conclusion

 The results of this study provide preliminary support for the use of guided and open-ended journal writing as a means for reflection during service-learning experiences within undergraduate Communication Disorders courses. The data collected provides promise that both of these journal types may lead to increased self-efficacy with course content, perception of quality reflection opportunities and sufficient writing quality demonstrating valuable learning within service-learning experiences.

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Appendix

Service Learning Survey Items

Course 1: Self-Efficacy Rating Items	Confidence About Identifying Typical Language Development Skills in Children

Students differ in how confident they are about identifying typical language development skills in children of various ages. In relation to typical language development, rate how confident you are that you can do each of the following by indicating a probability of success from 0 (no chance) to 100 (complete certainty). The scale below is for reference only; you do not need to use only the given values. You may assign any number between 0 and 100 as your probability.
I am able to explain typical development of the components of language including semantics, syntax, morphology, pragmatics and phonology.

0	10	20	30	40	50	60	70	80	90	100
No Chance	Very Little Chance		Little Chance		50/50 Chance	Good Chance		Very Good Chance		Complete Certainty

1. I am able to explain different theories and models of oral and written language development.

2. I am able to explain social, cognitive, neurological and physiological bases of language and communication.

3. I am able to identify skills involved in the progression of typical oral and written language development from birth to adulthood.

4. I am able to explain similarities and differences in first and second language acquisition.
I am able to identify cultural differences in language acquisition and use.

Course 2:
Self-Efficacy
Rating Items

Confidence About Identifying Adolescent Language Development & Disorders

Students differ in how confident they are about identifying components of adolescent language development and disorders. In relation to adolescent language development and disorders, rate how confident you are that you can do each of the following by indicating a probability of success from 0 (no chance) to 100 (complete certainty). The scale below is for reference only; you do not need to use only the given values. You may assign any number between 0 and 100 as your probability.

0	10	20	30	40	50	60	70	80	90	100
No Chance	Very Little Chance		Little Chance		50/50 Chance	Good Chance		Very Good Chance		Complete Certainty

1. I am able to explain typical adolescent development of the components of language including semantics, syntax, morphology, pragmatics and phonology.

2. I am able to explain different theories and models of oral and written language development in adolescents.

3. I am able to explain social, cognitive, neurological and physiological bases of language and communication in the adolescent population.

4. I am able to identify skills involved in the progression of typical oral and written language development during adolescence.

5. I am able to explain similarities and differences in bilingual adolescents' language development.

6. I am able to identify cultural differences in adolescent language development.

Course 1 & Course 2	
Pre-Service Learning Experience Survey Items	What do you think that you will learn from this service learning experience?
	What do you believe are the benefits of participating in service learning experiences?
	What do you believe are the downfalls of participating in service learning experiences?
Post-Service Learning Experience Reflection Ratings	The assignment fostered continuous reflection (before, during and after service experience).
	The assignment fostered connected reflection (it is linked to classroom experiences).
	The assignment fostered challenging reflection (it required you to think in new ways).
	The assignment fostered contextualized reflection (it relates well to the course content, and the service experience).
Post-Service Learning Experience Survey Items	What did you learn from this service learning experience?
	What do you believe were the benefits of participating in this service learning experience?
	What do you believe were the downfalls of participating in this service learning experience?

Note. Self-Efficacy Rating items were based on a 100-point scale. Participants completed self-efficacy ratings regarding their confidence in course content knowledge pre- and post-service learning experience. Pre- and post-service learning experience survey items were open-ended questions. Post-service learning reflection ratings utilized the following response options: Strongly Agree (1), Agree (2), Neutral (3), Disagree (4), Strongly Disagree (5).

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Service-Learning: A Case Study of Student Outcomes

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ABSTRACT

With origins as a critical pedagogy, service-learning has potential to facilitate students' development as active citizens. However, whether critical service-learning occurs in practice still remains unclear. In this study, we explored service-learning practice by examining students' perceived outcomes within at a midsize urban university in New England. The number of service-learning hours completed, course professor, and primary service site significantly associated with both academic and civic student outcomes. A narrative analysis found only a third of student responded from a critical learning frame. While students demonstrate perceived benefits of traditional service-learning, its efficacy as critical pedagogy remains unclear.

Service-learning is a complex pedagogical and philosophical tool involving numerous stakeholders, including students, faculty, university administrators and community partners to support student learning and civic engagement, community development and university community collaborations. Researchers identify open communication between all stakeholders, institutional support, and thoughtful, structured reflection as keys to effective service learning experiences (Hullender, Hinck, Wood-Nartker, Burton, & Bowlby, 2015; Cooper, 2014; Harkins, 2013). Service-learning originated as a critical pedagogy, with a focus on integration and reflection of service and learning (Giles & Eyler, 1994). Since its inception, service-learning meets a wide range of goals across educational contexts.

Universities and faculty incorporate service-learning into institutional and departmental curricula for many reasons including: to meet university goals and to align with civic missions; to facilitate student growth and development; and to share university resources with surrounding communities. Demonstrated benefits include life skill development (Astin & Sax, 1998); greater integration of university members into their local communities (Wolff & Tinney 2006); enhanced learning outcomes (Bettencourt, 2015); and student personal growth (Giles & Eyler, 1994; Hullender et al., 2015).

Service-learning offers unique experiences beyond those available through other service activities (e.g., volunteerism, practica, and community service). For example, an efficacy study at the University of California Los Angeles found participation in service-learning activities positively correlated with student increases in cognitive abilities, critical thinking skills, and personal values (Astin, Vogelgesang, Ikeda, & Yee, 2000). Importantly, service learning as part of an academic course produces more pronounced effects than individual or extracurricular service participation. Successful service-learning leads to improved learning outcomes for students, increased critical thinking skills, and the ability to meet university-wide goals of sustainable and productive relationships with their surrounding community.

Recent meta-analyses indicate many student outcomes reliably associate with service-learning participation. For example, Celio, Durlak & Dymnicki (2011) analyzed 62 evaluations of service-learning programs, finding significant gains in civic engagement, social skills, academic performance, and attitudes in areas such as self, school, and learning as compared to controls. Similarly, Yorio & Feifei (2012) conducted a meta-analysis of 40 studies revealing significant, positive associations between service-learning and understanding social issues; personal insight; and cognitive development. Several significant moderators identified included cognitive measures, required or voluntary service, and type of reflection. Research consistently demonstrates a wide range of benefits to students, with significant implications for factors such as course structure and the nature of the service requirement.

However, these benefits merely graze the surface of the original goal of service-learning as critical pedagogy. Mitchell (2008) distinguishes "traditional" from "critical" service-learning, arguing that critical service-learning holds social change as a larger goal. Within this perspective, critical service-learning engages students in the process of dismantling unjust systems, rather than encouraging participation in ameliorative service projects. As an example, a "traditional" program might offer students the opportunity to volunteer in a soup kitchen several hours a week with structured reflection around food insecurity and homelessness. A "critical" program would direct its primary aim at the sociopolitical structures creating and reinforcing food insecurity and homelessness. Students in such a program might serve at an advocacy organization founded and governed by individuals who have experienced homelessness, assisting with advocacy and awareness raising.

When explored in the literature, "critical benefits" are often examined using students' outcomes related to diversity and civic engagement. For example, Holsapple (2012) critically reviewed 55 studies to examine the relation between service-learning and openness to diversity. Their analysis revealed that in most studies, students reported confronting their own previously held stereotypes; recognized the served population as a heterogeneous group; and reported an increased understanding of marginalization and oppression. Holsapple concludes that "diversity outcomes arise from service-learning participation," but typically reflect context-specific and short-lived outcomes (Butin, 2010).

Research and experience suggests that while students, instructors, and programs may *believe* they participate in critical service-learning, their intentions often do not align with impact or outcome. For example, a study analyzing faculty discourse

around service-learning found even faculty with a strong commitment to service-learning failed to demonstrate engagement with a transformative pedagogy. Instead, faculty discourse remained enmeshed in traditional models, with descriptions clearly painting the faculty member as the authority and students or community partners as beneficiaries of service-learning relationships and experiences (O'Meara & Niehaus, 2009).

Some practitioners and theorists acknowledge service-learning's failure to live up to its full potential (Ehrlich & Jacoby, 2009). Despite significant advocacy for service-learning from *Campus Compact* as well as various research-demonstrated benefits, service-learning faces many obstacles. *Campus Compact* reports more than 1,100-member schools, which is less than 17% of the total number of higher education institutions in the United States (Digest of Education Statistics, 2015). *Campus Compact* also reports that in 2008, only about 30% of students at member schools participate in service or civic engagement activities—and not all member schools offer courses that involve service learning (Campus Compact, 2008). Relatively few universities in the United States participate in service-learning, and service-learning may not be available even at universities with a commitment to the pedagogy.

A study of faculty experiences in service learning found that some instructors view service learning as too time and resource intensive; worry that service learning will interfere with more "relevant" course learning; and fear negative effects on tenure or promotion directly resulting from service-learning-based curricula (Cooper, 2014). These faculty represented disciplines ranging from education and liberal arts to nursing and engineering, suggesting obstacles unrelated to a particular department or discipline. Thus, even with dissemination of service-learning benefits, political and sociocultural factors present significant obstacles. To be fully effective, full cooperation and a commitment to service learning must be present among all stakeholders at all organizational levels. If faculty and universities fail to effectively facilitate service-learning even as a traditional pedagogy, then meeting service-learning's original goal—to engage students in civic engagement and social change remains impossible.

This study examines a service-learning program as it exists within a mid-sized urban university, illuminating student outcomes as traditional versus critical. By examining the impact of several well-established variables in the context of a critical pedagogy, we seek to tease apart benefits that merely enhance student ability from benefits that transform student worldview and encourage participation in social action and change. Unlike other studies in the literature that look at single courses or compare pilots that impact ecological validity, we look at the effects of a service-learning program implemented by an urban university. Our research examines student outcomes and perceptions from an existing program, rather than from a single class designed to explore service-learning's potential. Besides offering a glimpse into an existing service-learning, this research offers possible strengths and weaknesses not captured by pilot studies or experiments, elucidating how critical pedagogies shapes student experiences.

While our research was largely exploratory, we identified three target variables based on the literature: the number of service-learning hours completed; the course professor; and the primary service site. Number of service-learning hours completed

consistently demonstrates an impact on the quality and strength of students' personal and cognitive outcomes (Astin et al., 2000). Similarly, the course professor associates with student outcomes, and determines factors such as the type and frequency of reflection as well as the integration of the service component into the course (Cooper, 2014; O'Meara & Niehaus, 2009). The service site contributes to student outcomes depending on the nature of the organization, its issue area, and available resources and support for student volunteers (Harkins, 2013; Mitchell, 2008).

We hypothesized that students' perceived outcomes would significantly relate to number of service-learning hours completed, course professor, and primary service site. Additionally, we explored evidence of students' critical outcomes. We conducted two phases of analyses. In phase one, we evaluated the quantitative relationships between factors and outcomes. This first phase revealed discrepancy between service-learning intention and impact. In phase two, we conducted qualitative analysis to examine whether students demonstrated critical learning outcomes.

Phase One Method

Four hundred eighty-seven student surveys collected over six semesters by the university's community engagement office were analyzed. Surveys were not originally collected for research purposes, so we have limited student demographic information. Available demographics included: student-reported number of community hours completed; course professor; and sites where students completed service hours.

The survey consisted of open-ended and Likert-type items designed to assess students' experiences in a service-learning course. Two versions of the survey existed in the archive with one update in the fall semester of 2013, including an additional seven Likert-type items and two open-response items.

Phase One Results

Table 1		
Demographic characteristics of student respondents		
Characteristic	<u>n</u>	<u>%</u>
Semester of course		
Spring 2011	82	16.9
Fall 2011	1	0.2
Spring 2012	152	31.3
Fall 2012	86	19.8
Spring 2013	20	4.1
Fall 2013	43	8.8
Spring 2014	93	19.1

Departments reported included: Education, English, Environmental Studies, Government, Philosophy, Psychology, Sociology, and Spanish. However, department was only reported on three semesters. Service sites included soup kitchens, environmental clean-up and protection organizations, youth mentoring programs, refugee and immigrant tutoring programs, homeless empowerment organizations, and

animal shelters. Students reported completing an average of 27.15 hours (SD = 30.94), with a mode of 10.

To better understand the relation between our target variables and student outcomes, we conducted quantitative analysis using multivariate analyses of variance (MANOVA).

Table 2
Significant perceived student outcomes related to target variables

	df	F	p
	Number of service-learning hours completed		
Intention to participate in future volunteer/service activities	(30, 137)	1.742	.021*
	Course professor		
Connectedness to other students	(9, 137)	2.442	.013*
Intention to take another service-learning course	(9, 137)	3.505	.001**
Service-learning improved understanding of course material	(9, 137)	2.562	.01*
	Primary service site		
Perception that work benefited the community	(18,137)	2.389	.003**
Enhanced understanding of diversity and social justice	(18, 137)	2.298	.004**
Intention to take another service-learning course	(18, 137)	3.505	.003**
Intention to participate in future volunteer/service activities	(18, 137)	1.778	.036*

*Note. *p* < .05. **p* < .01.*

To investigate our hypothesis that number of hours completed positively impacts student's perceived personal development, we examined the number of hours of service performed during the course of the semester using a multivariate analysis of variance (MANOVA). As expected, number of service hours significantly associated with intention to participate in future volunteer or service activities, F(30, 137) = 1.742, *p* = .021.

Several students offered suggestions or critiques, primarily identifying the challenge of fitting a commitment to a service organization into a busy schedule. While some students requested fewer hours required, others noted that the solution may lie not in fewer hours, but in expanded options with only one student who requested "more options provided so that it's easier to make time and schedule outside of class."

Next, we analyzed the relationship between student development and course professor. Results of the MANOVA indicated that connectedness to other students, F(9, 137) = 2.442 (*p* = .013), and intention to take another service learning course in the future, F(9, 137) = 3.505 (*p* = .001) significantly associated with course professor. In addition, course professor significantly associated with the degree to which students

believed the service-learning component improved understanding of course material, $F(9, 137) = 2.562$, $p < .01$.

While some course professors mentioned in these surveys rely on the community engagement office to organize and manage service opportunities, other course professors maintain close relationships with their community partners. This difference in course professor involvement may account for these significant relationships.

Finally, we investigated the relationship between primary service site and student's perceived personal development using a MANOVA. Results indicated that primary service site significantly associated with students' perception that their work benefited the community, $F(18, 137) = 2.389$, $p < .01$, and that through their service work, enhanced understanding of diversity and social justice occurred, $F(18, 137) = 2.298$, $p < .01$. In addition, primary service site significantly associated with students' intentions to take another service learning course in the future, $F(18, 137) = 2.368$, $p < .01$, as well as intention to participate in future service activities, $F(18, 137) = 1.778$, $p < .05$. A two-way MANOVA between course professor and service-site revealed no significant interaction between these two variables.

We explored narrative data from the survey to determine if students' descriptions of their experience related to these quantitative findings. In response to the prompt "Overall, how did you feel?" some students identified their primary site as central to their experience. One student answered, "I thought [my site] was a great place to work. The refugees and workers/employers were friendly. The refugees were eager to learn most of the time." Another student similarly shared, "I'm glad I could have helped such a quality organization help more people." While students were happy to help and felt they learned much, these comments suggest that students' reflections focused almost exclusively on their own experience, with little to no change in a transformed worldview.

Such comments permeated throughout students' narratives about service-learning. In exploring student comments to substantiate the quantitative findings, a pattern of incongruence emerged: While the data revealed that students perceived significant growth resulting from their service-learning experiences, the narratives within their comments failed to reveal the kind of transformative growth expected of successful service-learning programs. That is, we can see benefits associated with "traditional" service-learning with little evidence of "critical" service-learning.

Phase One Discussion

Our results align with the current literature on service-learning: As anticipated, we found benefits and growth outcomes associated with participation in a semester of service-learning. We also found that three key variables—number of hours completed, course professor, and primary service site—significantly associated with student outcomes. These findings corroborate the current research literature on variables that affect quality of service-learning and associated outcomes (Astin et al., 2000; Cooper, 2014; Harkins, 2013).

Number of hours completed or required appears throughout the literature as a crucial variable, with a positive relationship between number of hours completed and student growth (Astin et al., 2000). Service-learning typically takes place over a relatively brief period, limiting the potential depth of engagement and relationship

building. Research on service-learning curriculum building calls attention to this limitation, suggesting that faculty carefully structure time to maximize contact and engagement between the student and community partner (Maddrell, 2014). Our data bore out this relationship between number of hours completed and student perceived outcomes, underscoring the importance of maximizing contact and participation to optimize outcomes.

The literature provides suggested reasons as to why course professor significantly affects student outcomes resulting from service-learning experiences. Cooper (2014) suggests that faculty experience obstacles that affect their willingness to implement service-learning as well as a perceived inability to integrate service-learning pedagogies into their curricula. These obstacles may differ across faculty members within a university or even within a department depending on factors such as tenure status resulting in varied service-learning experiences across professors. In addition, researchers find that type of reflection and course structure likely vary according to course professor (Yorio & Feifei, 2012). This suggests that while the professor likely contributes to variance in outcomes, other contributing factors might include amount and type of reflection within the course curriculum.

Similarly, our findings regarding the impact of service site on student outcomes aligns with previous research. Maddrell (2014) argues that the partnership with a community organization strongly influences students' experiences with service-learning. To facilitate critical outcomes, the service site must also provide opportunities for students to be exposed to and engage with unjust social structures (Mitchell, 2008). Exposure to social inequality may as a function of service site, such that some students may not experience sufficient interaction with inequality for transformative learning to occur. Thus, while some students have ample opportunity to engage with and learn from underserved populations, others may find themselves engaging in ameliorative activities not conducive to critical outcomes.

Initial analysis of the narrative data suggested that despite reports of strong positive outcomes, students did not demonstrate changes in worldview or commitments to social change. This discrepancy aligns with prior studies. For example, in one study, students reported enhanced professional skills, but failed to demonstrate changes in diversity awareness and sadly increased patterns of victim-blaming (Houshmand, Spanierman, Beer, Poteat, & Lawson, 2014). Instead of changing perspectives on poverty or initiating an interest in social change, many students reported that their experiences confirmed negative expectations about the community partner. In an evaluation of critical outcomes resulting from a service-learning course, Hullender and colleagues found that only 50% demonstrated transformative learning resulting from the experience (Hullender et al., 2015). These patterns raise concerns about service-learning's potential to reinforce or even strengthen power imbalances. With these concerns in mind, we turned to the narrative data to investigate whether students reported changes in worldview, attitudes, or commitment to social change was based on their service-learning experiences.

Phase Two Method

Phase Two involved exploratory narrative analysis of student comments on the open-ended response items of the questionnaire. Our primary research question in this phase explored evidence of "critical" outcomes (or a lack thereof). This phase included the surveys with responses to more than one open-response item (N = 472). Each narrative consisted of all open-ended item responses for each survey submission.

We implemented the consensual qualitative research (CQR) method, which uses a team of coders to first identify salient domains and themes and then develop a narrative coding system based on consensus (Hill, Thompson, & Williams, 1997). Our coding team consisted of three coders and one auditor; the three coders met in-person to identify themes and develop a coding system, and the auditor reviewed these themes and system.

Phase Two Results

The coding team first identified two primary domains: community and non-community. "Community" responses included mention of a specific community partner or group or indicated collaboration or reciprocity with another party. Community-coded narratives included responses such as "meeting the clients, helping them and reading poetry out loud *with* the class." "Non-community" narratives did not include mention of collaboration or the community or used vague and superficial language such as "helping others" or "giving back." For example, a narrative that consisted of "learning new information" was coded as non-community.

70% of surveys (n = 333) were coded as community, with the remaining 30% (n = 145) coded as non-community. An independent samples t-test revealed a significant mean difference in the number of hours completed between the community-coded (M = 31.22, SD = 51.30) and non-community-coded narratives (M = 22.90, SD = 23.52), t(460.74) = 2.4, $p < .05$.

Table 3
Community salience in student narratives

Domain	Responses coded to domain	Percentage	Example phrases
Community	333	70%	*learning from them and hearing their stories* *being a part of the community*
Non-community	145	30%	*learning new information* *helping others*

Within these two domains, the coding team then identified salient themes to explore critical learning through collaboration and development of reciprocal relationships. Two major themes within the community domain emerged: One-way relationships and two-way relationships.

"One-way" narratives were defined as responses that included descriptions of unidirectional relationships, where examples or language moved *either* from student to partner or from partner to student, but not both. Such narratives included language like

"learned from the students," or "helped the clients." but not both in the same response. 165 narratives, or 50% of the community subsample, were coded as one-way.

"Two-way" narratives included language implying or describing bidirectional relationships with collaboration or reciprocity. These responses either included multiple unidirectional phrases that together implied a bidirectional relationship (e.g., "teaching the students and learning about their cultures"), or single phrases that evoked collaboration and/or reciprocity (e.g., "connecting with the ESL students"). 160 narratives, or 48% of the community subsample, were coded as two-way.

Eight narratives in the community subsample, or 2%, were coded as "other." These narratives either mentioned relationships only as a description of roles and duties or described community-building that involved the environment or animals rather than people. Interestingly, not all narratives describing environmental work were coded within the "other" theme, as some described reciprocal and collaborative relationships with peers or community members in addition to environmental service.

Table 4
Relational themes within the Community domain

Relational Themes	Responses coded to theme	Percentage	Examples
One-way	165	50	*learned from the students helping the homeless*
Two-way	160	48	*See that your positive actions have an impact on the environment. make new friends, be more connected to {university}s communities being able to truly listen to the people I was working with and them being able to tell me their stories*
Other	8	2	*Very interesting experience. Loved all the people at [the site].*

We next investigated group differences and characteristics between the one-way and two-way relational themes. A MANOVA revealed no significant differences between one-way and two-way themes in terms of learning outcomes and personal development, though perceived likelihood to participate in future service activities trended towards significance, $F(1, 5) = 3.61$, $p = .061$. An independent samples t-test revealed no significant differences in mean number of hours completed between one-way-coded (M = 27.52, SD = 57.90) and two-way-coded (M = 35.98, SD = 44.42) narratives. Similarly, a chi-square test revealed no significant association between relational theme and primary service location. However, a chi-square test revealed a significant association between relational theme and professor, $\chi^2(12, N = 152) = 26.91$, $p = .008$.

Within professors who prioritize and work towards critical service-learning, student narratives revealed student exploration of social injustice and demonstrated preliminary understandings of privilege and inequality. For example, one student reported "awareness of societal oppression" as a way in which they had personally grown, while another student of the same professor described the most rewarding aspect of their service-learning as "Help[ing] the community, learning different ways to help the people through empowering them and using our privledge [sic] to help them do this." On the other hand, student narratives within a professor less associated with critical outcomes focused on their own growth in areas such as cooking, and as one student described, "I learned effective ways to cope with a group of children." These narratives focused on interpersonal and professional skills alone, while narratives within "critical" professors contained an additional, deeper layer of social awareness.

Phase Two Discussion

Our findings aligned with the literature on critical outcomes of service-learning experiences. Three-quarters of student narratives referred to a community partner or party they served with, and of those narratives, only half described two-way relationships. This corroborates a prior study's findings that approximately 50% of students in a service-learning course demonstrated transformative learning (Hullender et al., 2015).

Mitchell (2008) describes three critical outcomes resulting from service-learning: A social change orientation; working to redistribute power; and development of authentic relationships. While remarkably few student narratives described the first two components, narrative analysis revealed evidence that students were developing reciprocal and collaborative relationships with community members, particularly within community partner organizations. Two-way responses provided evidence of development of authentic relationships, suggesting that students demonstrating this relational theme experienced critical outcomes. One-way responses did not provide sufficient evidence of such relationships, and therefore did not suggest any critical outcomes.

Further investigation revealed that despite this difference in critical outcome, the relational themes did not differ in terms of traditional outcomes. This suggests that traditional service-learning outcomes may remain stable across students, regardless of whether they experience critical outcomes in addition to traditional gains. Our findings suggest that critical outcomes occur above and beyond the gains associated with traditional service-learning.

While these relational themes (and inferred critical outcomes) were not associated with the number of hours completed or the primary service location, they significantly related to the course professor. Importantly, this suggests that faculty serve instrumentally in determining quality of service-learning and implicates faculty as a key leverage point with regards to facilitating critical outcomes. Our findings suggest that professor- or course-level variables may more closely relate to critical outcomes than amount of contact or other site-level variables such as service type or quality.

The literature offers possible reasons for these findings, demonstrating that obstacles at the faculty level may prevent critical outcomes and transformative learning.

Faculty may be cautious to implement service-learning with goals of critical outcomes, fearing that this pedagogy may be perceived as "too political" and impact future promotion or tenure (Cooper, 2014). Faculty may also *believe* they are implementing service-learning as a critical pedagogy but remain entrenched in a traditional service-learning model (O'Meara & Niehaus, 2009). If faculty do not have sufficient training, nor thorough understanding of service-learning pedagogy, or full institutional support, students may fail to experience the benefits of critical service-learning.

To further examine these possible explanations, we compared several professors whose students' responses were more often coded as one-way benefit from student responses coded as two-way benefit. Two professors with the greatest proportion of two-way students were professors of psychology with longstanding commitments to and expertise in service-learning. Both of these professors incorporate structured critical reflection into their courses in multiple formats, including class discussion, journal entries, and reflective essays. Both professors also have longstanding relationships with their students' primary service sites. Conversely, two professors with the greatest proportion of one-way students are professors in the business and government departments, respectively. While these professors have longstanding commitments to service-learning, neither typically maintains a direct relationship with their students' service sites, and the reflection components as delineated in syllabi consist of broad open-ended journal assignments. From this brief review of these four professors, a pattern emerged in which professors with experience in critical pedagogies and deeper investment in the service component were more likely to be associated with critical outcomes than professors with less experience or investment in service-learning. Future research on critical outcomes should more closely examine the effects of professor discipline, pedagogical philosophy, and relationship to service-learning on critical outcomes.

General Discussion

Overall, our results support the service-learning literature indicating that number of hours completed, course professor, and primary service site significantly impact student outcomes. However, narrative analysis of student perceived outcomes suggests that only a small proportion of students experienced world view perspective changes and engagement in social change consistent with critical models of service-learning. This finding also aligns with the current research literature, suggesting that transformative learning is not a given in service-learning contexts. Instead, t certain conditions must be met for service-learning to result in critical learning. Research points to structured critical reflection as a key component to facilitate transformative learning (Guthrie & McCracken, 2014). Faculty are also noted throughout the literature—and in our findings—as significantly influencing student learning (O'Meara & Niehaus, 2009; Cooper, 2014).

Limitations of this study relate primarily to the nature of the data, which was originally collected for institutional program review. Demographic information is not available, limiting the ability to control for or investigate variables such as student age, race, ethnicity, and gender. In addition, this dataset does not include demographic variables about professors that may contribute to student learning outcomes, such as

the professor's race, age, or gender. The survey explores students' perceived outcomes, and does not include validated measures of academic success, openness to diversity, or attitudes towards community engagement. Our investigation is also limited to students and their perceptions of service-learning. The literature indicates that all stakeholders in service-learning from community partners to university administrators should be considered in evaluating the strengths and weaknesses of a service-learning program (Butin, 2010). More research is needed exploring how demographic information from students, faculty and community partners may interact to influence critical service-learning outcomes.

Our findings have important implications for the development and maintenance of service-learning programs. The data reveal students benefit from service-learning and enjoy it – the phrases "I loved it!" and "It was a great experience" permeated throughout responses. Some students demonstrated critical outcomes, providing support for service-learning as an effective means by which universities can inspire community engagement strongly suggesting that institutions should continue to support service-learning as a valuable pedagogy.

At the same time, our findings suggest that barriers exist that must be addressed in order for service-learning to meet its full potential for all students. Universities should evaluate what training and resources are available to faculty who wish to implement service-learning and minimize the possibility of negative repercussions. Faculty should build curricula and syllabi that implement key considerations highlighted in the literature, such as fostering strong relationships with community partners and utilizing effective, ongoing critical reflection (Maddrell, 2014; Harkins, 2013). Institutions should continue to evaluate student progress and outcomes resulting from service-learning, and work to identify variables that facilitate or inhibit success.

Several directions should be pursued given these findings and limitations. First, further quantitative analysis may explore statistical models that predict relations between student or course variables and student outcomes. Additionally, faculty and community partner surveys from this institution may be evaluated in tandem with student data, to form a more complete picture of how service-learning functions at this university. Analysis of outcomes by discipline or department may elucidate other key variables or factors that affect the quality of service-learning and its role in transformative learning. Finally, further investigation of factors related to critical outcomes will not only reveal mechanisms for transformative learning, but also provide key considerations for developing effective service-learning courses and programs.

Service-learning as a pedagogy holds great potential for students and communities, but in practice may be falling short of its promise towards preparing students towards active citizenship. Key variables such as the number of hours completed, course professor, and primary service site affect the quality of service-learning and need to be explored in more depth to understand how to inspire transformative civic learning.

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ABSTRACT

Research on service-learning with English Language Learners has blossomed over the last two decades, but the literature is not well known outside the field of Teaching English to Speakers of Other Languages (TESOL). This is unfortunate in a world where issues related to globalization and immigration are common in public discourses. This literature review is intended to provide readers with a succinct overview of an area of growing importance. Using a previously published bibliography of the field, supplemented by searches of ERIC, MLA, and WorldCAT databases and Google Scholar, a meta-analysis of the literature was conducted. Results and representative reports are summarized for higher education settings, from language institutes and two-year colleges to graduate teacher education courses. The findings show service-learning leads to small but significant gains in second language teaching and learning, and has positive impacts on the communities in which English Language learners and teachers serve.

Advances in Service-Learning Research with English Language Learners

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INTRODUCTION

While the use of service-learning and other forms of experiential education is well represented in foreign language education (e.g., Beebe & De Costa, 1993; Bloom & Gascoigne, 2017; Burke, 2013; Grabois, 2007; Hellebrandt, Arries, & Varona, 2004; Hellebrandt & Varona, 1999), its application in TESOL (Teaching English to Speakers of Other Languages) is less well known. This is unfortunate since scholars in both fields are sensitive to the nuances of language and culture and thus can contribute to public discourse on immigration, globalization, education, and civic engagement. Readers who live or work in culturally and linguistically diverse communities and settings can benefit from the insights gleaned from this literature base.

METHODS

A 2013 special issue of the *TESOL Journal* focused on service-learning. It included 11 articles and a list of over 50 other published reports in the field, including five edited collections. Using that bibliography as a starting point and supplemented by searches of ERIC, MLA, and WorldCat databases and Google Scholar, a meta-analysis of the literature was conducted. Since a recent review article (Swacha, 2017) used a similar data collection method but limited results to published journal articles with a focus on second-language writing, this review includes books, articles, theses, and dissertations that focus on service-learning with English Language Learners

(ELLs) in domestic and international settings, with a particular focus on works that can inform the design and assessment of programs for linguistically and culturally diverse learners in academic and community settings.

LITERATURE REVIEW

The literature on service-learning in TESOL has not only increased our collective understanding of engaged teaching and learning in diverse settings, but also demonstrated increased theoretical maturity by systematically applying empirical methods to examine a range of assorted research phenomena. Key articles in the existing research base tell us powerful stories about language, culture, race, nationality, and can contribute to public discourse on immigration, globalization, education, and civic engagement, to name a few of the issues to which English Language Learners and their teachers can contribute. Because linguists are trained to notice nuances in language, researchers and teacher-scholars in the field are skilled at using a variety of methods to analyze discourse systematically. Analyzing student reflection journals using both qualitative and quantitative methods to triangulate data is common, but discourse includes oral, institutional, and socio-historical texts too, and a growing number of TESOL researchers demonstrate sophisticated understandings of how language and culture are inextricably represented in interviews with students and community partners and the teaching and learning spaces within which they interact. The shift in focus from communicative competence in the target language to intercultural competence in multilingual communities is described in the introduction of a recent edited collection on service-learning in TESOL (Perren & Wurr, 2015) and summarized in Figures 1 and 2.

Summarizing the shifts in theory over time in the field, the editors note, "Whereas the first generation of SL [service-learning] in TESOL scholarship tended to view the learner and society in two dimensional terms, generally transacting across two languages and cultures, the second generation of SL in TESOL scholarship accepts multilingualism and multiculturalism as the norm and views the teaching and learning space as dynamic, contested, and interconnected. Thus the 'social turn' in the Humanities (Block, 2003; Trimbur, 1994) heralded the 'multilingual turn' (May, 2014) in much of the scholarship today" (Wurr & Perren, 2015, p. 5).

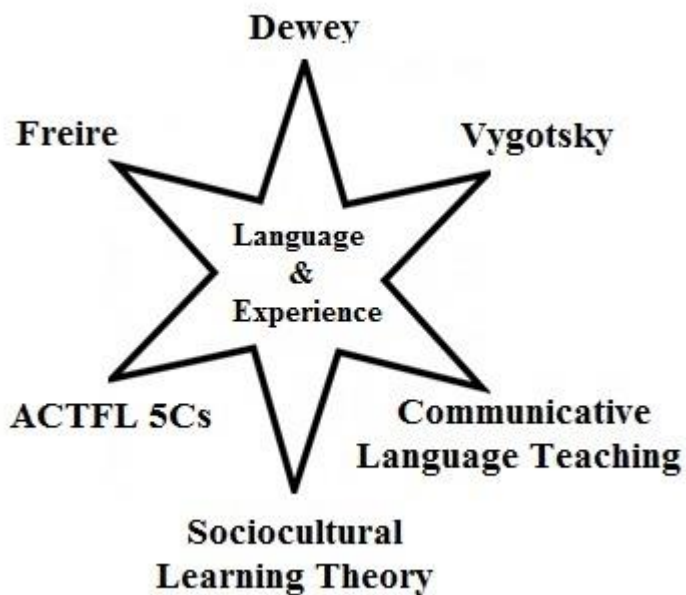| **Figure 1.** First Generation SL TESOL: Experiential Education, CLT, Sociocultural, Interactionist, & Critical Theories. Republished from Wurr & Perren (2015, p. 5) with permission from authors and publisher.	**Figure 2.** 2nd Generation SL TESOL: Experiential Education, Ecological, Sociocultural, Interactionist, & Critical Theories. Republished from Wurr & Perren (2015, p. 5) with permission from authors and publisher.

Points of Contact: Intensive English and Bridge Programs

Intensive English Programs (IEP) are tasked with preparing students for mainstream college classes in English. Most include courses in listening, speaking, reading, writing, grammar, and culture for learners at different English language proficiency levels. Depending on course goals and the types of community engagement fostered, experiential learning offers ELLs with enhanced opportunities to improve upon all language skills. In one of the more impressive IEP studies to date, Askildson, Kelly, and Mick (2013) used series of quantitative and qualitative data, including pre- and post-language proficiency tests of all basic skills and intercultural sensitivity measures, to demonstrate the degree to which service-learning added substantive gains to students' linguistic development as well as their ability to use such language gains in socioculturally meaningful ways. They found students improved their English language skills at three times the rate normally associated with traditional language learning programs (p. 424). Additionally, results showed the service-learning component affected students' understanding of social service providers and how issues of social justice can be addressed in their home cultures and countries, an important learning objective given the expectation that they create service projects to implement in their home countries upon their return.

Another IEP study, conducted at the University of Maine (Sousa, 2015), used the American Council on the Teaching of Foreign Languages *Standards for Foreign Language Learning* (ACTFL, 1999), or the "5 Cs," to analyze learning outcomes. This influential policy guideline from a leading professional language education organization includes as one of its five goals the need for language learners to participate in multilingual communities at home and around the world, a natural fit for service-learning. Sousa uses this endorsement of practice, quantitative survey data, along with qualitative document analysis and observation to show positive impacts on students and community partners. The ESL students participating in the project recognized the meaningful educational experience, in part for the development of their language skills, and also for their contributions to the local community school in promoting cultural awareness.

Finally, Perren, Grove, and Thornton (2013) each conducted separate and independent studies of ELLs at each author's respective university IEP, yet found remarkably similar outcomes with regards to impacts on learners. The researchers conclude "community engagement can promote a sense of empowerment in ESL students. This is accomplished by making them feel part of their community, allowing them to work cooperatively to develop authorial voice, increasing their audience awareness in writing, and fostering critical reflection that leads to a better understanding of social problems and civic responsibility" (p. 463).

Bridge programs are designed to help ELLs transition from Intensive Language Programs to mainstream college classes. Miller and Kosta (2015) describe an intergenerational service-learning project that formed the cornerstone of one bridge program in the U.S. For eight weeks, students conducted semi-structured interviews with multilingual low-income older adults and compiled data about their adult partners' rich life experiences. Students then constructed a literature review based on a thematically-charged social issue that emerged from the interviews and wrote an oral

history narrative based on their interview findings. The researchers use Lave and Wenger's (1991) communities of practice framework to illuminate the converging and diverging experiences of students, staff, and instructors as they participated in and reflected on this project. This theoretical framework has only recently been adopted by TESOL researchers (e.g., Avineri, 2015; Curtis & Curran, 2015; Stewart, 2007) but aligns well with experiential learning theories because participation in communities of practice embody meaningful action, interaction, and collaboration among participants (Kolb & Kolb, 2005). The authors conclude by providing suggestions for conducting oral histories with English language learners and older adults and for service-learning projects that are intergenerational and intercultural following Perren's (2013) seven-step model for designing service-learning projects with ELLs: 1. Planning and logistics; 2. Obtaining Materials and Background Information; 3. Preparing for Field Experiences; 4. Implementing Field Experience and Civic Engagement; 5. Reflecting and Connecting; 6. Diversifying and Repeating; and 7. Expressing Gratitude and Evaluation.

Maybe I'll stay awhile: Service-Learning at Two-Year Colleges

   Whereas international students at four-year colleges often plan to return to their home countries after graduation, English Language Learners at two-year colleges are often immigrants who have lived in the country for several years and have more integrative motivation with regards to learning the host language and culture. Initial reports on using service-learning with community college students found they gained academically and socially by having authentic contexts for learning about the target language and culture (Arca, 1997, Seltzer, 1998; Steinke, 2009). More recently, Sharon Bippus' (2011) doctoral study presents six case studies of adult ESOL students in a semester-long community college ESOL course that included service-learning. She notes that "the students, many of whom held professional titles such as doctor, engineer, architect, and journalist, in their home countries" (p. 4) believed their language skills at the beginning of the course prevented them from participating more fully as citizens in their new home, but gradually came to develop what Whittig and Hale (2007) call a "confidence to contribute":

> Students gained communicative competence while developing confidence in themselves. Although the participants were nervous about working in the community initially, they overcame their anxiety by using various strategies. They realized they do have the ability to communicate successfully with English speakers in the 'real world,' and have valuable skills that they can offer the community. Additional benefits to the students included increasing their knowledge of American culture and history, developing a higher level of motivation, and forming connections to target community members. (Bippus, 2011, pp. iii-iv)

   When the target community is the university community, service-learning projects with ELLs can impact retention. Maloy, Comeau-Kirchner, and Amaral (2015) describe a web-based, service-learning project with advanced ESL composition students at Queensborough Community College. Students researched and wrote about human rights issues for university website on the topic. While assessments of the students' writing showed marked improvements in all areas, the authors argue that an equally

important benefit for ELLs was positioning them as knowledgeable, contributing members of the university community:

> Much like the project Perren et al. (2013) described, our students achieved similar goals and learner outcomes. The digital component of this project also provided numerous opportunities for language learning, teamwork, and ownership of the written products and corresponding design of those products. Moreover, as our students acquired more audience awareness about how those final products would be utilized outside of the classroom, they were better able to educate their fellow QCC students on human rights curriculum. (p. 263)

The research and discussion of human rights in groups of diverse learners and the feedback associated with multi-drafted writing assignments helped students to interact with and learn from others. One student wrote in a survey at the end of the semester, the project "is a good opportunity to give my ideas and listen and learn from other people with different culture. Also, it's a good opportunity to see how I can behave in a group of people and work in a team" (Maloy, Comeau-Kirchner, & Amaral, 2015, p. 264).

The positive impact that positioning ELLs as service providers can have on learners' identities and sense of belonging is an encouraging and robust finding in the research base to date. Glass, Wongtrirat, and Buus (2015) argue that cultivating a sense of belongingness is critically important for international students: "Belongingness assumes greater importance, for example, in social contexts in which individuals are more likely to experience isolation or loneliness or to feel invisible as they reconstruct support networks in a new cultural and linguistic environment" (p. 83).

Can I have that in Writing?

Writing instructors were among the first in higher education to embrace service-learning (Adler-Kassner, Crooks, & Watters, 1997; Deans, 2000; Author, 1999) and the writing students produce for instructors and community partners alike provides an excellent means of assessing the impact of instruction.

A useful typology of the types of writing students in service-learning courses can produce is Deans' (2000) description of writing *about*, *for*, or *with* community partners. Initially, Deans (1999) contrasted John Dewey's pragmatism with Paulo Freire's Critical Pedagogy to posit that Dewey's theories were better suited to projects in which students write about their service-learning experiences since the empirical approach Dewey promoted in using experience as the source of learning fit best with the types of research and writing typically taught in first-year college composition courses. Freire's critical pedagogy suggested students should write to support and promote changes in society; that is, to write *for* community partners rather than *about* them even though the documents typically produced, such as websites, three-panel brochures, public service announcements, and grant applications, were more practical in nature and often better suited to more advanced writing courses. Deans' (2000) well-received book, *Writing Partnerships*, expanded on this theoretical framework by adding projects in which students write *with* community partners to produce oral histories and other

collaboratively written products. These three theoretical perspectives form the cornerstone of the first generation of service-learning research (Kolb, 1984), as illustrated in Figures 1 and 2 above, and although Deans' model is most commonly applied to teaching contexts, he has used the typology to identify promising areas of research too. TESOL researchers have adapted the model to address questions in their field as well, as shown in Table 1

Wurr's (2001) dissertation provides a useful model for the type of comparative, evidence-based research studies service-learning researchers (Eyler & Giles, 1999; Gelmon, Furco, Holland, & Bringle, 2005; Zlotkowski, 2007) say are needed to add rigor to the research base and attract potential funding agencies. He compared native and non-native English speaking students enrolled in introductory-level first-year college composition courses that did and did not include service-learning. The main research question was, "Does service-learning contribute to improved student writing? If so, in what ways?" Linguistic and rhetorical features commonly identified as affecting judgments of writing quality such as cohesion and grammatical accuracy were compared to holistic essay ratings to determine the impact of different teaching and learning contexts on writing performance. Results show a significant difference (p<.001) between the writing produced in service-learning and traditional writing sections, with service-learning essays being rated about 5% better than ones produced in traditional classes. Two other studies (Feldman et al., 2006; Hamstra, 2010) have replicated significant parts of Wurr's research design and arrived at similar conclusions. These results accord well with the bulk service-learning research to date, which generally shows a small but significant benefit to incorporating service-learning into the curriculum.

Service-learning projects in which ELLs tutor or share cultural information with children are also common. Meier (2015) describes one such project in a basic writing course at a large midwestern research university in which international students shared stories and artifacts from their home countries with elementary school students. Using field observation, surveys, and student reflections, she found the children obtained cross-cultural knowledge in alignment with the third-grade social studies curriculum, while the college students honed language skills and gained intercultural knowledge of the local community and U.S. culture more broadly. Meier's work highlights many of the qualities that make a successful service-learning project with ELL learners: one that provides real audiences and purposes, prepares ELLs well beforehand, and allows them ample opportunity to reflect on its meaning afterward.

Table 1: *Potential Research Questions to Assess Service-Learning in TESOL* (adapted from Wurr & Perren, 2014)

ELL Practices & Processes (*About*)	Teacher Practices (*With*)	Community Practices (*For*)
• Which discourses and language skills are most common in SL settings? Common master narratives? Patterns in formal or stylistic features? • What can we discern about the SLA processes and strategies of students in SL courses? Differences between SL and non-SL courses with respect to language acquisition and use? • Who interacts with the students? Students' sense of self and audience when doing community-based work? Other rhetorical concerns? • Who sees the students' texts? Who comments and how? How much gets shared, and with whom? How much goes public? • Do students evince any significant changes in identity or agency as they communicate for, about, and with the community? • How does SL impact motivation/investment to continue language learning? Volunteering? What is the source and nature of the motivation/investment? • How do students articulate the connections between formal classroom learning and natural acquisition in the community? Any evidence of improved meta-awareness of communicative competence?	• How do TESOL teachers prepare students and community partners for working with each other? • Do SL instructors arrange academic schedules differently? Patterns in sequencing of language skills and SL assignments? • What do instructors typically give up or de-emphasize to include SL? What assignments, classroom activities, and rhetorical concerns do they add or emphasize more? • Do instructors comment on SL projects differently as compared to typical academic assignments? • Do grading practices change in any discernible ways? • Do ways of student/teacher conferencing or mentoring change? Ways of talking about language, society, or self?	• What kinds of community partners are typically working with ELLs? Pre- and in-service TESOL teachers? • How do community partners feel about working with ELLs and their teacher(s)? How about agency's clientele? • What type of service projects are typically employed in TESOL contexts? • What role(s) do community partners play in crafting assignments, choosing genres, and advising students? • What kinds of comments do community partners make on student work? How does feedback impact revision? • What other role(s) do community partners play in shaping students' language form and use? • Do community partners value the relationship more than the actual texts? Other services provided more than the texts?

Going Global: Service-Learning in Language Teacher Education

Teacher education has always been well represented in the service-learning literature. Typically, university pre-service teachers tutor K-12 and adult ELLs (Hutchinson, 2011; Miller & Gonzalez, 2009; Moore, 2013). In doing so, pre-service teachers gain experience with ELLs, a population many fear due to their lack of TESOL knowledge. For example, Jesse Moore's (2013) study charts a shift in TESOL students' perceptions of ELLs as the TESOL students move from identifying them as an "other" with whom they would have "encounters" in the discrete spaces of ESL classrooms to seeing ELLs as potential students in their future content classes. With this familiarity came a sense of advocacy; as one student notes, "Because of the service-learning aspect, I believe I will not only be a better and more aware teacher and citizen, but a stronger advocate for ELLs!" (p. 563).

Integrating service-learning into pre-service education courses tends to have a strong impact on the career choices of Education majors. As far back as the 1980s, students were telling researchers at Portland State University that participating in service-learning projects in their Education courses confirmed or challenged their decision to be teachers as they learned first-hand what it means to interact with the public on a daily basis (B. Holland, personal communication, April 14, 2011). This ultimately led the researchers to devote an entire section of the student learning outcomes survey they developed to probing the impact of service-learning on career development (Driscoll, Holland, Gelmon, & Kerrigan, 1996; Gelmon, Holland, Driscoll, Spring, & Kerrigan, 2001). More recently, Miller and Gonzalez (2009) investigated the impact of participating in domestic or international service-learning (ISL) on pre-service teachers' career commitment, understanding of ELL issues, and knowledge of the local community. They found positive outcomes for both groups on all dimensions, but slightly stronger ("Extremely positive" rather than "Positive") outcomes for ISL participants, who also noted an increased interest in working with ELLs in the future. "[R]esults indicated larger gain scores regarding interest in working with ELLs for international than domestic service learning participants. In this context, the international service experience appeared to have an enhancement, rather than questioning, effect on participant attitudes" (Miller & Gonzalez, 2009, p. 6).

On the international front, Wu and Ursuline (2015) report on a service-learning project in Taiwan in which undergraduate English majors tutored students at an elementary school in language arts and science using locally relevant resources. The study is one of the few to employ Amanti, González, and Moll's (2005) Funds of Knowledge as a theoretical framework, and one of a growing number of service-learning reports undertaken by and for stakeholders in non-Western countries (see Xing & Hok Ka Ma, 2010, for more works of this nature).

Kassabgy and El-Din (2013) provide another example of service-learning research in non-Western cultures, this time in Egypt. They investigated the impacts of an undergraduate experiential education course on the development, attitudes, and perceptions of the co-learners involved in the experience. Undergraduate students majoring in linguistics tutored university custodians and staff in English as a foreign language. The researchers used mixed methods to answer research questions related to academic achievement, civic engagement, and personal growth. Results were strongest in career development, with both groups reporting enhanced understanding of

teaching and learning in international contexts. Students also reported better understanding of applying theory to practice as a result of experiential learning tasks. Both groups also reported feeling closer to one another than they had previously; barriers between students and staff had been reduced as a result of working together for an extended period of time. Other reports (Dubinsky, Welch, & Wurr, 2012; Pietrykowski, 1996; Spack, 1997) in the literature base provide anecdotal evidence of service-learning's potential to reduce stereotypes of the "Other."

On the domestic front, Bloom and Gascoigne's (2017) edited collection, *Creating Experiential Learning Opportunities for Language Learners*, contains many reports on how foreign language and pre-professional students can "study abroad" in their own communities by partnering with immigrant groups and communities. Burke's chapter on expeditionary learning theory (Burke, 2013, Klein & Riordan, 2011) provides a clear outline of how the practices effectively developed in Outward Bound can be applied to foreign language education. Some projects described in the chapter partner migrant farm workers and foreign-language students in local high schools and colleges to increase intercultural awareness and understanding. Other chapters describe internships, externships, and other domestic experiential learning opportunities that immerse students in dynamic spaces for intercultural language learning.

Avineri (2015) reports on another teacher education course for graduate students in TESOL that, because of its focus on intercultural communication and use of qualitative research methods, can inform the work of others interested in developing students' skills in working and communicating across languages and cultures. Using action research and content analysis of reflection materials, augmented by pre- and post-course surveys, reading responses, in-class interactions, group meetings, and presentations, Avineri reviewed each of the four reflections in the course, coded for themes (e.g., knowledge and identities) and subthemes (e.g., specific knowledge and identities) as they were described by the students. Results show positive gains in students' knowledge (e.g., local history and issues, critical pedagogy, civic engagement), skills (communication, team-building, project management, grant writing, and leadership), and attitudes (awareness, creativity, collaboration). Collectively, she argues these outcomes develop a sense of "nested interculturality" in students due to the ways "in which layers of culture complement and inform one another" (p. 207). Survey results suggest students are able to apply these skills and knowledge to their career development and future professional practices.

CONCLUSION

Service-learning in TESOL has come a long way over the last few decades. The research to date indicates that service-learning gives ELLs insight on U.S. culture, provides authentic speaking and listening situations, enhances literacy skills, and has a positive effect on retention (e.g., Askildson, Kelly, & Mick, 2013; Bippus, 2011; Hamstra, 2010; Maloy, Comeau-Kirschner, & Amaral, 2015; Whittig & Hale, 2007; Wurr, 2002). When incorporated into TESOL teacher education programs, service-learning enhances pre-service teachers' understanding of ELLs, language learning theories and practices, and the communities in which they serve (Hutchinson, 2011; Lund, Bragg, & Kaipainen, 2014; Miller & Gonzalez, 2009; Moore, 2013). Becoming more familiar with this important body of research can help inform future work with linguistically and culturally diverse learners in academic and community settings.

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